Common S60 Operator Display Data And Layout

Specification
4

Owner:
Function:
Approver:
Location:

Contents

1 General

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1.2 Using The S60 Field Test Displays

INTRODUCTION

Abstract

FieldTest is a utility for field testing S60 phones. FieldTest application replaces the previously used FTD and FtTool applications [Figure 1]. FieldTest contains the same features the FTD and FtTool used to have:

- Common FTD displays
- Custom FTD displays
- Alarms

The biggest improvement in FieldTest compared to FTD and FtTool is internal application architecture and security issues. The features visible to user have not changed much. FieldTest is used in S60 phones. S40 phones still have their own FTD application.

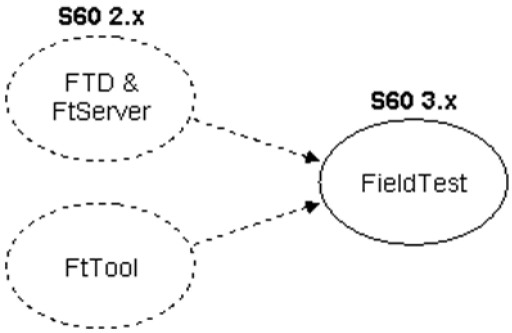


Figure 1 Field testing applications

This document introduces the application for field test engineers and other possible users. Document describes menu options, views and functionality of the application. Document gives an overview of the whole application, describes the common FTD view, consentrates to the custom FTD view and introduces the alarms view.

Common FTD displays are described in detail in this document. The same specification is used for both S60 and S40 phones. FieldTest application implements common FTD displays for S60 phones.

GENERAL

FieldTest application contains the same features FTD and FtTool applications used to have. In FieldTest, the application has been organized into following views.

Common FTD view: This view is about the same as S60 FTD application used to be. Common FTD view contains the common FTD displays, as they are specified later in this document.

Custom FTD view: This view allows user defined displays. Displays can be added and removed. Subblocks can be added and removed from displays. All this can be done by the user.

Alarms view: This view allows user to define and use alarms. An alarm is a set of subblocks. When a subblock value changes the specified number of times, the alarm starts alarming: it plays a tone and displays a notification.

Installing and uninstalling FieldTest application

If the FieldTest application has not been included in ROM, it must be installed from SIS file. Installation can be done to phone memory or memory card.

FieldTest can be uninstalled the same way as any installed S60 application.

Starting and stopping FieldTest application

FieldTest is started like any other S60 application from the applications menu [Figure 2]. The exact location of the FieldTest in phone application menu may be different in different phones.

Figure 2 FieldTest in applications menu

Starting up the FieldTest application takes some time because it needs to read a large amount of configuration data in the beginning.

FieldTest installation usually contains configuration for more than one version of the phone. At startup the application asks the phone about the current version, and then selects the appropriate configuration data. This way the same application version may work in multiple phone versions. In case the application can't find a configuration for given phone version, the application warns the user about mismatch and possibly wrong information displayed on screen.

If the FTD mode set in the phone is IDLE, then the FieldTest application won't start at all. In any other mode (RD, INFRA or OPERATOR), the application allows user to see only the subblocks allowed for the mode.

The application is stopped the usual way. There is an Exit softkey on each main view and an Exit menu option. It is safe to stop FieldTest application at any time.

Menu options

Some menu options are available in all views. Other menu options are view specific.

View

FieldTest application has three main views: Common FTD, Custom FTD and Alarms. The menu option Options->View is used to choose the view [Figure 3].

Figure 3 Select view

Activating or selecting a view does not deactivate the previous view. If, for example, an alarm is activated on the alarms view, then the alarm remains active even if user changes to common FTD view.

Info

FieldTest application has two main info: About and Servers. About notification shows the FieldTest version, release date and copyright. Servers notification shows servers that are used in Common FTD.

Figure 4a About

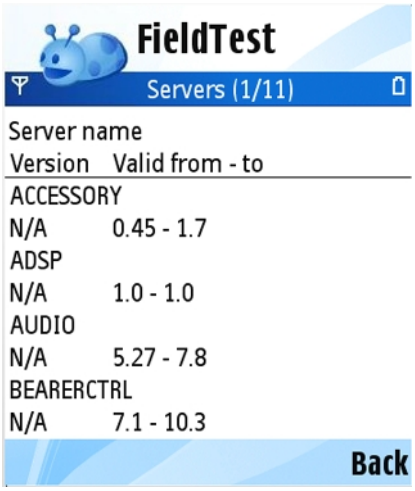


Figure 4b Servers

Exit

Options->Exit is the last general menu item. It exits the FieldTest application.

COMMON FTD VIEW

On common FTD view, fields are organized to predefined displays and groups as specified in this document. The same specification is used in all phones. It is however product specific, which groups and displays are included into the configuration.

Unlike the custom FTD view, in common FTD view the display content can not be modified at runtime. The content of the same display remains the same in all products.

View content

The layout of each common FTD display is specified separately, but there are few constant components.

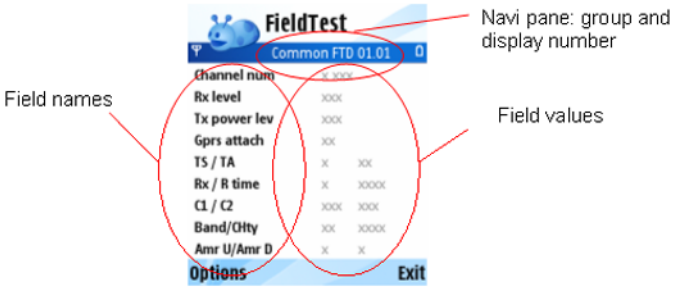


Figure 6 Common FTD view

The navi pane on the screen contains the text "Common FTD" followed by the group and display numbers. Field names are printed in solid black, usually on the left side of the screen. Field values are printed usually to the right side of the screen.

The status of the field value is indicated by the color. Status colors are the following:

- **Black:** The value is OK.

- **Gray:** The real value is missing and a default value displayed instead. The default value just indicates there should or could be a real value here.
- **Green:** The value has changed recently. A green color turns black in few seconds.
- **Red:** Indicates an error in the value. The error may be for example an error in processing the field value.

Display navigation

Moving from display to display is done by arrow keys or the "Change display" menu option. They arrow keys are used as follows:

- **Down:** Move to next display. After last display of a group moves to first display of the next group.
- **Up:** Move to previous display. After first display of a group moves to last display of the previous group.
- **Right:** Move to first display of the next group.
- **Left:** Move to first display of the previous group.

Menu options

Common FTD view has the general menu options: View, Info and Exit. There are also some view specific menu options.

Change Display

"Options->Change display" prompts user for a group and display number to move to. The group and display number is entered as one number, the leftmost digits presenting the group number, the rightmost digits presenting the display number. For example

- Change display 12: moves to grop 1, display 2
- Change display 1203: moves to group 12, display 3
- Change display 301: moves to group 3, display 1

Figure 7 Change display

In case there is no group and display with the given number, an error notification is given and the current display remains active.

Execute

Some displays contain an executable command. To perform the executable, there is an Options->Execute menu option on the display. Choosing the execute option does one of the two things depending on the type of the executable.

If the executable does not require any user input, then the executable is performed immediately when the menu option is selected.

If the executable requires user input, then an input type specific query dialog is displayed. User enters the desired input value. Then the executable is performed with the input.

Figure 8 Input for executable

CUSTOM FTD VIEW

On Custom FTD view user can define own displays at runtime. User can create, modify and remove self-made custom displays.

Custom display view

This is the view that shows the custom displays as they have been defined. The other view, the edit view, is used for modifying displays.

View content

Below is an example of a typical Custom display.

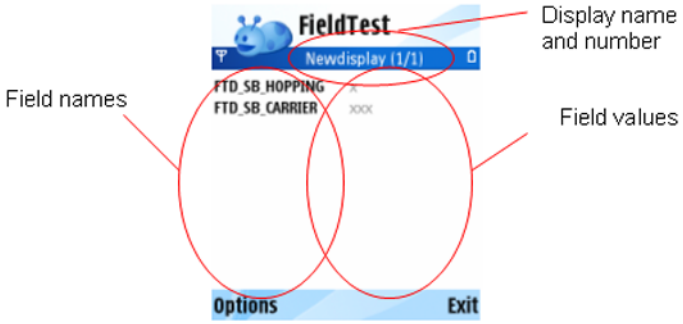


Figure 9 Custom display view

The navi pane on the screen contains the name of the custom display. The name is followed by two numbers, the former is the number of the active display, the later is the count of all custom displays.

Field names and values are displayed almost the same way as on Common FTD view. These two views have a bit different approach for field names. On Common FTD view the labels are adjusted for the display layout. On Custom FTD the labels can not be modified. The same color encoding is used for field values on both views.

Display navigation

Moving from display to display is done by arrow keys as follows:

- **Down:** Move to next display. After last display move to the first display.
- **Up:** Move to previous display: After first display move to the last display.
- **Right:** Same as Down.
- **Left:** Same as Up.

On Custom display view there is no Change display menu option or any other way to move to another display.

Menu options

Custom display view has the general menu options: View, Info and Exit. There are also some view specific menu options.

Edit Display

Menu option "Options->Edit Display" opens the current custom display in the edit view. This allows user to modify custom display settings and add and remove fields in the display.

Add Display

Menu option "Options->Add Display" creates a new empty custom displays and opens the edit view for the new display. This allows the user to set the display settings and add fields on the display.

Delete Display

Menu option "Options->Delete Display" opens a dialog to confirm the display removing. If user accepts the delete operation, the custom display is removed.

Figure 10 Delete custom display

Custom display edit view

View content

This view contains a list of all fields included in a custom display. The view is used to modify custom display settings and to add and remove fields from the display.

Figure 11 Custom display edit view

Menu options

Add field using list FTD display

Menu option "Options->Add field->List FTD display" opens a list of common FTD groups. After the group is selected, a list of common displays in the group is displayed. After the display is selected, a list of fields on the common display is shown. It is possible to select more than one field from the list. All the selected fields are added to the custom display.

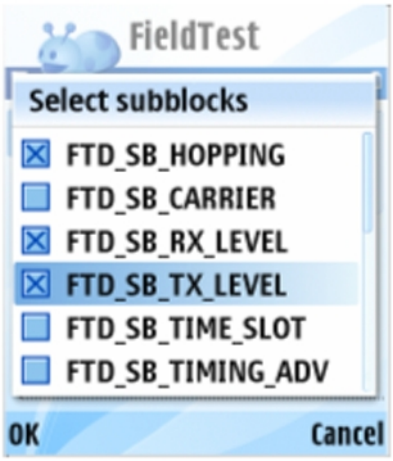


Figure 12 Add field using List FTD display

Add field using Enter FTD number

Menu option "Options->Add field->Enter FTD number" opens a query for user to enter the common FTD group, display and field number. The specified field is then added to the custom display.

Figure 13 Add field using Enter FTD number

Add field using List Server

Menu option "Options->Add field->List server" opens a list of servers. After a server is selected, a list of fields within the server is displayed. It is possible to select more than one field from the list. All the selected fields are added to the custom display.

Figure 14 Add field using List Server

Delete field

Menu option "Options->Delete field" opens a dialog to confirm the field removing. If user accepts the delete operation, the field is removed from the custom display.

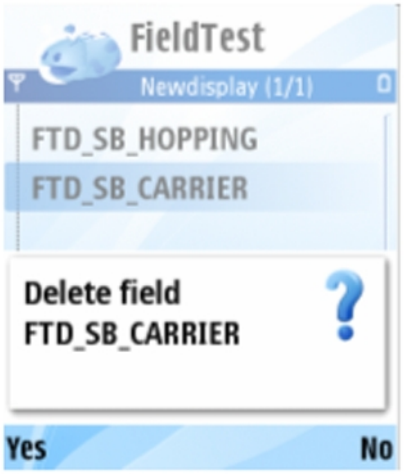


Figure 15 Delete field from a custom display

Settings

The settings dialog found in Custom display edit view is used to edit the current custom display only.

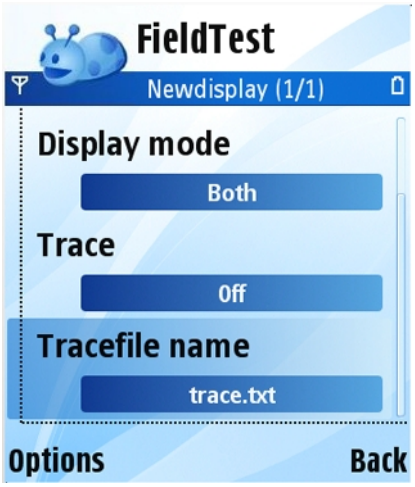


Figure 16 Custom display edit view settings

Display name

Display name setting is used to define the name of the custom display. The name is visible on the navi pane of the custom display view.

Display mode

Display mode setting defines the layout of the custom display. Setting has three values:

- Names: Show only the field names on custom display
- Values: Show only the field values on custom display. Values are shown in two columns.
- Both: Show both field names and values on custom display. Names are shown on the left column, values on the right column.

Trace

Trace setting determines if the subblocks on custom display should be written in trace file or not. If the trace is turned on, the file is defined in the following tracefile name setting. If the trace is turned off, then the tracefile name is ignored.

Tracefile name

Tracefile name is the file to use if trace is turned on. Trace file can be found from C:\data\fieldtest.

ALARMS VIEW

An alarm is a set of fields that has a name and condition when it alarms. In FieldTest application the alarm condition can be defined in terms of number of changes in field values. When an alarm alarms, a notification is displayed and optionally a tone is played

Alarms are used to notify user about changes in values of certain fields. User can add, modify and remove alarms at runtime.

Alarms list view

This view shows all alarms on a list. The other alarm view, the edit view, is used to modify a single alarm.

View content

Below is an example of an alarm view.

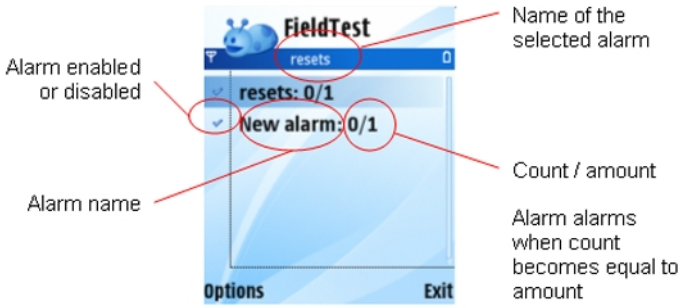


Figure 17 Alarms list view

Navi pane contains the name of the active alarm.

Each alarm is presented on its own line on the list. The check symbol at the front of the line indicates the alarm is enabled. If the check symbol is not present, then the alarm is disabled and the field changes are not monitored.

Alarm name is followed by two numbers separated by a slash character. The left side number is the current number of field value changes. That is, how many times all the fields in alarm have changed in total. The right side number is the condition, the number of changes required to start alarming.

Keyboard shortcuts

Alarms view has some keyboard shortcuts to perform actions on alarms.

Enable and disable alarm

The select key can be used to toggle alarm enabled and disabled.

Menu options

Alarms view has the general menu options: View, Info and Exit. There are also some view specific menu options.

Deactivate all alarms

Menu option "Options->Deactivate all alarms" allows user to turn all alarms off at once. Alarms can be later turned on one by one.

Edit alarm

Menu option "Options->Edit alarm" opens the current alarm in the edit view. This allows user to modify alarm settings and add and remove fields in the alarm.

Add alarm

Menu option "Options->Add alarm" creates a new empty alarm and opens the edit view for the new alarm. This allows the user to set the alarm settings and add fields to the alarm.

Delete alarm

Menu option "Options->Delete alarm" opens a dialog to confirm the alarm removing. if user accepts the delete operation, the alarm is removed.

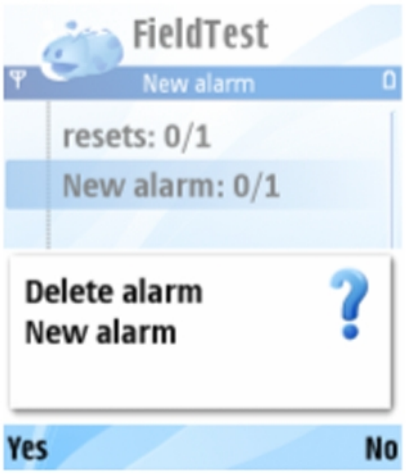


Figure 18 Delete alarm

Alarms edit view

View content

This view contains a list of all fields included in an alarm. The view is used to modify alarm settings and to add and remove fields from the alarm.

Figure 19 Edit alarm view

Menu options

Add field

Menu option "Options->Add field" has the three submenu options familiar from edit custom display view. The options are:

- List FTD display: Select common group, then display, then fields
- Enter FTD number: Enter the number of common group, display and field
- List server: Select server then fields

Delete field

Menu option "Options->Delete field" opens a dialog to confirm the field removing. If user accepts the delete operation, the field is removed from the alarm.

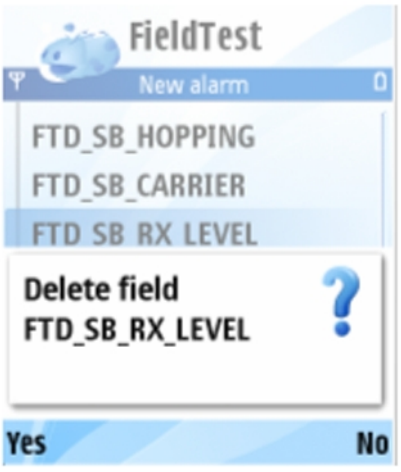


Figure 20 Delete field from alarm

Settings

The settings dialog found in Alarm edit view is used to edit settings of the current alarm only.

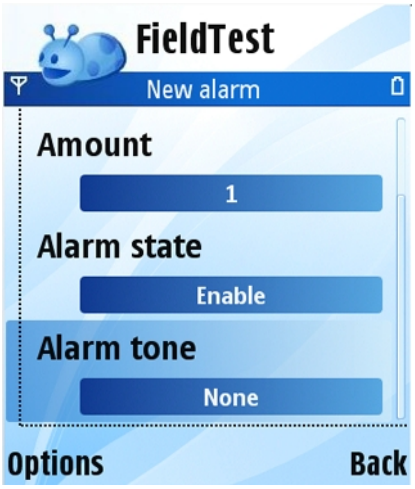


Figure 21 Alarm edit view settings

Alarm name

Alarm name setting is used to define the name for the alarm. The name is used when the alarm alarms. It is also visible on the alarms list and on the edit alarm view.

Amount

Amount is the number of field value changes required to make the alarm alarming.

Alarm state

Alarm state defines if the alarm is enabled or disabled. A disabled alarm does not monitor field value changes and thus it never alarms.

Alarm tone

Alarm tone can be selected to hear the alarm.

2 Group 01: GSM Signaling displays which can be visible to network operators

2.1 Group 01 Information

The network operators can activate these signaling displays. Before field test displays are visible, mobile has to be modified. With the normal production mobile, field test displays are not working.

2.2 Display 01.01: Information of the serving cell

S60 Data display

Channel num	a	bbb
Rx level	ccc	
Tx power lev	ddd	
Gprs attach	mm	
TS / TA	e	ff
Rx / R time	g	hhhh
C1 / C2	iii	jjj
Band/CHty	kk	llll
Amr U/Amr D	n	o

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a	GSS	FTD_SB_HOPPING	S	R,I,O	**H**, if carrier numbers are scrolled when hopping is on. Otherwise empty
b(3)	GSS	FTD_SB_CARRIER	S	R,I,O	When mobile is on TCH: DCH carrier number of serving cell in decimal. When mobile is NOT on TCH: CH means carrier number of serving cell in decimal. If hopping is on, used channels are scrolled when display is updated ERR means that mobile is out of band.
c(3)	GSS	FTD_SB_RX_LEVEL	B:D	R,I,O	Rx level in dBm, minus sign not shown if <-100
d(3)	GSS	FTD_SB_TX_LEVEL	S	R,I,O	Tx power level. If transmitter is on, symbol * is shown in front of the power level value.
e	GSS	FTD_SB_TIME_SLOT	B:D	R,I,O	Time Slot, range is 0 - 7
f(2)	GSS	FTD_SB_TIMING_ADV	B:D	R,I,O	Timing advance, range is 0 - 63
g	GSS	FTD_SB_RX_QUALITY	B:D	R,I,O	Rx quality (sub), range is 0 - 7
h(4)	GSS	FTD_SB_RADIO_LINK_TIMEOUT	B:D	R,I,O	Radio Link Timeout value. If value is negative, 0 is shown. Maximum value is 64. When mobile is NOT on TCH then xx is show
i(3)	GSS	FTD_SB_C1	S	R,I,O	Value of the path loss criteria (C1). Range is -99 - 999. ERR means that the value is out of range, e.g. because it was not able to be calculated
j(3)	GSS	FTD_SB_C2	S	R,I,O	Value of the cell reselection criteria (C2). Range is -99 - 999. If phone is phase 1 then C1 value is shown. ERR means that the value is out of range, e.g. because it was not able to be calculated.
k(2)	GSS	FTD_SB_CURR_BAND	B:D	R,I,O	Currently used band.Values: **9** = GSM900, **18** = GSM1800, **19** = GSM1900 .. extensible for future

Abbr	Server	Sub-block id	Format	Mode	Description
l(4)	GSS	FTD_SB_TYPE_OF_CURR_CH	S	R,I,O	Type of current channel **THR0**: TCH HR subchannel 0 **THR1**: TCH HR subchannel 1 **AHS0**: TCH AHS subchannel 0 **AHS1**: TCH AHS subchannel 1 **TFR**: TCH FR **AFS**: TCH AFS **TEFR**: TCH EFR **F144**: TCH FR data channel, speed 14.4 kbps **F96**: TCH FR data channel, speed 9.6 kbps **F72**: TCH FR data channel, speed 7.2 kbps **F48** : TCH FR data channel, speed 4.8 kbps **F24** : TCH FR data channel, speed 2.4 kbps **H480** : TCH HR data channel, speed 4.8 kbps, subch 0 **H481** : TCH HR data channel, speed 4.8 kbps, subch 1 **H240** : TCH HR data channel, speed 2.4 kbps, subch 0 **H241** : TCH HR data channel, speed 2.4 kbps, subch 1 **FA**: TCH FR signaling only (FACCH) channel **FAH0** : TCH HR signaling only (FACCH) channel, subch 0 **FAH1** : TCH HR signaling only (FACCH) channel, subch 1 **PCCC, PBCC, PAGC** : GPRS packet control channel **PNDR:** GPRS non-DRX mode (in PCCCH) **PDTC**: GPRS traffic channel **NDRX**: GPRS non-DRX mode (in CCCH) **SDCC** : SDCCH **AGCH** : AGCH **CCCH** : CCCH **CBCH** : CCCH and cell broadcast receiving on **BCCH** : BCCH **SEAR** : SEARCH **NSPS** : MS is in No Serv Power Save state
m(2)	GPDS	FTD_SB_GPDS_ATT_AND_PDP	S	R,I,O	G if MS is GSM-GPRS attached, GP if attached and PDP context created, U if UMTS-GPRS attached, UP if attached and PDP context created, otherwise empty.
n	GSM_DSP	FTD_SB_AMR_UL_MODE	B:D	R,I,O	Current absolute uplink mode on AMR channels, (0-7). **0**=4.75, **1**=5.15, **2**=5.9, **3**=6.7, **4**=7.4, **5**=7.95, **6**=10.2, **7**=12.2.
o	GSM_DSP	FTD_SB_AMR_DL_MODE	B:D	R,I,O	Current absolute downlink mode on AMR channels. See definition above.

2.3 Display 01.02: More information of the serving cell

S60 Data display

Paging mode	aa
max RACH retr	b
Roaming ind	c
BSIC value	dd
CC Cause	ee
Rx quality	f
CRO / Hopping	ggg hh
PenT / HCh	iii j
MAIO / HSN	kk ll

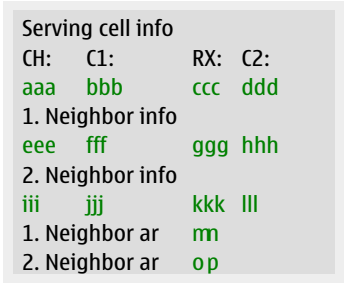
Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(2)	GSS	FTD_SB_PAGING_MODE	S	R,I,O	Paging mode **NO** : normal paging **EX** : extended paging **RO** : paging reorganization **SB** : same as before
b	GSS	FTD_SB_MAX_RAND_ACC_TRA	B:D	R,I,O	Maximum number of Random Access retransmission
c	GSS	FTD_SB_ROAMING_IND	S	R,I,O	Roaming indicator, values are R or empty.
d(2)	GSS	FTD_SB_BSIC	B:D	R,I,O	Letter B and BSIC value, range is 0 - 63.
e(2)	GSS	FTD_SB_LAST_CALL_REL_REAS	B:D	R,I,O	Reason of last call release. Cause from messages disconnect and release complete.
f	GSS	FTD_SB_RX_QUALITY	B:D	R,I,O	Rx quality (sub), range is 0 - 7
g(3)	GSS	FTD_SB_CELL_RESEL_OFFSET	B:D	R,I,O	Cell reselect offset, range 0 - 126 dB. 0 - 63 * 2 dB. 'xxx' in active mode.
h(2)	GSS	FTD_SB_TEMP_OFFSET	B:D	R,I,O	Temporary offset, range 0 - 60 dB. 0 - 7 * 10 dB. 70 dB means infinite time. 'xx' in active mode.
i(3)	GSS	FTD_SB_PENALTY_TIME	W:D	R,I,O	Penalty time, range 0 - 620 s. 0 - 31 * 20 s. 'xxx' in active mode
j	GSS	FTD_SB_HOPP_CH	B:D	R,I,O	Hopping channel **0** Single RF channel **1** RF hopping channel
k(2)	GSS	FTD_SB_MOB_ALLOC_INDEX	B:D	R,I,O	Mobile allocation index offset, MAIO Range: 00 to 63 / xx when H=0
l(2)	GSS	FTD_SB_HSN	B:D	R,I,O	Hopping sequence number, HSN Range: 00 to 63 / xx when H=0

2.4 Display 01.03: Information of the serving cell, 1st and 2nd neighbor

1. row: serving cell information
2. row: 1. neighbor information
3. row: 2. neighbor information
4. row, mn: 1. neighbor information
4. row, op: 2. neighbor information

S60 Data display



Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(3)	GSS	FTD_SB_CARRIER	S	R,I,O	When mobile is on TCH: DCH carrier number of serving cell in decimal. When mobile is NOT on TCH: CH means carrier number of serving cell in decimal. If hopping is on, used channels are scrolled when display is updated ERR means that mobile is out of band.
b(3)	GSS	FTD_SB_C1S	S	R,I,O	C1 value of serving cell, range is -99 - 999, displayed only in idle mode. ERR means that the value is out of range, e.g. because it was not able to be calculated. Instead of C1 value, letter 'B' and BSIC value will be displayed in active mode.
c(3)	GSS	FTD_SB_RX_LEVEL	B:D	R,I,O	Rx level in dBm, minus sign not shown if <-100
d(3)	GSS	FTD_SB_C2S	S	R,I,O	C2 value of serving cell, range is -99 - 999. ERR means that the value is out of range, e.g. because it was not able to be calculated.
e(3)	GSS	FTD_SB_CARRIER_1_NEIGH	S	R,I,O	Carrier number of 1. neighbor in decimal
f(3)	GSS	FTD_SB_C1_1_NEIGH	S	R,I,O	C1 of 1. neighbor value, range is -99 - 999, displayed only in idle mode. ERR means that the value is out of range, e.g. because it was not able to be calculated. Instead of C1 value, letter 'B' and BSIC value will be displayed in active mode.
g(3)	GSS	FTD_SB_RX_LEVEL_1_NEIGH	B:D	R,I,O	Rx level of 1. neighbor in dBm, minus sign not shown if <=-100
h(3)	GSS	FTD_SB_C2_1_NEIGH	S	R,I,O	C2 of 1. neighbor value, range is -99 - 999. ERR means that the value is out of range, e.g. because it was not able to be calculated.
i(3)	GSS	FTD_SB_CARRIER_2_NEIGH	S	R,I,O	Carrier number of 2. neighbor in decimal
j(3)	GSS	FTD_SB_C1_2_NEIGH	S	R,I,O	C1 value of 2. neighbor, range is -99 - 999, displayed only in idle mode. ERR means that the value is out of range, e.g. because it was not able to be calculated. Instead of C1 value, letter 'B' and BSIC value will be displayed in active mode.
k(3)	GSS	FTD_SB_RX_LEVEL_2_NEIGH	B:D	R,I,O	Rx level of 2. neighbor in dBm, minus sign not shown if <=-100
l(3)	GSS	FTD_SB_C2_2_NEIGH	S	R,I,O	C2 value of 2. neighbor, range is -99 - 999. ERR means that the value is out of range, e.g. because it was not able to be calculated.
m	GSS	FTD_SB_LOCATION_AREA_INFO_1	S	R,I,O	F is shown if cell is in a forbidden location area, otherwise location is empty.
n	GSS	FTD_SB_CELL_PRIORITY_1	S	R,I,O	B is Barred, N is normal priority and L is low priority, otherwise location is empty.

Abbr	Server	Sub-block id	Format	Mode	Description
o	GSS	FTD_SB_LOCATION_AREA_INFO_2	S	R,I,O	F is shown if cell is in a forbidden location area, otherwise location is empty.
p	GSS	FTD_SB_CELL_PRIORITY_2	S	R,I,O	B is Barred, N is normal priority and L is low priority, otherwise location is empty.

2.5 Display 01.04: Information of the 3rd, 4th and 5th neighbor

1. row: 3. neighbor information
2. row: 4. neighbor information
3. row: 5. neighbor information
4. row, mn: 3. neighbor information
5. row, op: 4. neighbor information
6. row, qr: 5. neighbor information

S60 Data display

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(3)	GSS	FTD_SB_CARRIER_3_NEIGH	S	R,I,O	Carrier number of 3. neighbor in decimal
b(3)	GSS	FTD_SB_C1_3_NEIGH	S	R,I,O	C1 value of 3. neighbor, range is -99 - 999, displayed only in idle mode. ERR means that the value is out of range, e.g. because it was not able to be calculated. Instead of C1 value, letter 'B' and BSIC value will be displayed in active mode.
c(3)	GSS	FTD_SB_RX_LEVEL_3_NEIGH	B:D	R,I,O	Rx level of 3. neighbor in dBm, minus sign not shown if <=-100
d(3)	GSS	FTD_SB_C2_3_NEIGH	S	R,I,O	C2 value of 3. neighbor, range is -99 - 999. ERR means that the value is out of range, e.g. because it was not able to be calculated.
e(3)	GSS	FTD_SB_CARRIER_4_NEIGH	S	R,I,O	Carrier number of 4. neighbor in decimal
f(3)	GSS	FTD_SB_C1_4_NEIGH	S	R,I,O	C1 value of 4. neighbor, range is -99 - 999, displayed only in idle mode. ERR means that the value is out of range, e.g. because it was not able to be calculated. Instead of C1 value, letter 'B' and BSIC value will be displayed in active mode.
g(3)	GSS	FTD_SB_RX_LEVEL_4_NEIGH	B:D	R,I,O	Rx level of 4. neighbor in dBm, minus sign not shown if <=-100
h(3)	GSS	FTD_SB_C2_4_NEIGH	S	R,I,O	C2 value of 4. neighbor, range is -99 - 999. ERR means that the value is out of range, e.g. because it was not able to be calculated.
i(3)	GSS	FTD_SB_CARRIER_5_NEIGH	S	R,I,O	Carrier number of 5. neighbor in decimal

Abbr	Server	Sub-block id	Format	Mode	Description
j(3)	GSS	FTD_SB_C1_5_NEIGH	S	R,I,O	C1 value of 5. neighbor, range is -99 - 999, displayed only in idle mode. ERR means that the value is out of range, e.g. because it was not able to be calculated. Instead of C1 value, letter 'B' and BSIC value will be displayed in active mode.
k(3)	GSS	FTD_SB_RX_LEVEL_5_NEIGH	B:D	R,I,O	Rx level of 5. neighbor in dBm, minus sign not shown if <=-100
l(3)	GSS	FTD_SB_C2_5_NEIGH	S	R,I,O	C2 value of 5. neighbor, range is -99 - 999. ERR means that the value is out of range, e.g. because it was not able to be calculated.
m	GSS	FTD_SB_LOCATION_AREA_INFO_3	S	R,I,O	F is shown if cell is in a forbidden location area, otherwise location is empty.
n	GSS	FTD_SB_CELL_PRIORITY_3	S	R,I,O	B is Barred, N is normal priority and L is low priority, otherwise location is empty.
o	GSS	FTD_SB_LOCATION_AREA_INFO_4	S	R,I,O	F is shown if cell is in a forbidden location area, otherwise location is empty.
p	GSS	FTD_SB_CELL_PRIORITY_4	S	R,I,O	B is Barred, N is normal priority and L is low priority, otherwise location is empty.
q	GSS	FTD_SB_LOCATION_AREA_INFO_5	S	R,I,O	F is shown if cell is in a forbidden location area, otherwise location is empty.
r	GSS	FTD_SB_CELL_PRIORITY_5	S	R,I,O	B is Barred, N is normal priority and L is low priority, otherwise location is empty.

2.6 Display 01.05: Information of the 6th, 7th and 8th neighbor

1. row: 6. neighbor information
2. row: 7. neighbor information
3. row: 8. neighbor information
4. row, ef: 6. neighbor information
5. row, gh: 7. neighbor information
6. row, ij: 8. neighbor information

S60 Data display

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(3)	GSS	FTD_SB_CARRIER_6_NEIGH	S	R,I,O	Carrier number of 6. neighbor in decimal
b(3)	GSS	FTD_SB_C1_6_NEIGH	S	R,I,O	C1 value of 6. neighbor, range is -99 - 999, displayed only in idle mode. ERR means that the value is out of range, e.g. because it was not able to be calculated. Instead of C1 value, letter 'B' and BSIC value will be displayed in active mode.

Abbr	Server	Sub-block id	Format	Mode	Description
c(3)	GSS	FTD_SB_RX_LEVEL_6_NEIGH	B:D	R,I,O	Rx level of 6. neighbor in dBm, minus sign not shown if <=-100
d(3)	GSS	FTD_SB_C2_6_NEIGH	S	R,I,O	C2 value of 6. neighbor, range is -99 - 999. ERR means that the value is out of range, e.g. because it was not able to be calculated.
e(3)	GSS	FTD_SB_CARRIER_7_NEIGH	S	R,I,O	Carrier number of 7. neighbor in decimal
f(3)	GSS	FTD_SB_C1_7_NEIGH	S	R,I,O	C1 value of 7. neighbor, range is -99 - 999, displayed only in idle mode. ERR means that the value is out of range, e.g. because it was not able to be calculated. Instead of C1 value, letter 'B' and BSIC value will be displayed in active mode.
g(3)	GSS	FTD_SB_RX_LEVEL_7_NEIGH	B:D	R,I,O	Rx level of 7. neighbor in dBm, minus sign not shown if <=-100
h(3)	GSS	FTD_SB_C2_7_NEIGH	S	R,I,O	C2 value of 7. neighbor, range is -99 - 999. ERR means that the value is out of range, e.g. because it was not able to be calculated.
i(3)	GSS	FTD_SB_CARRIER_8_NEIGH	S	R,I,O	Carrier number of 8. neighbor in decimal
j(3)	GSS	FTD_SB_C1_8_NEIGH	S	R,I,O	C1 value of 8. neighbor, range is -99 - 999, displayed only in idle mode. ERR means that the value is out of range, e.g. because it was not able to be calculated. Instead of C1 value, letter 'B' and BSIC value will be displayed in active mode.
k(3)	GSS	FTD_SB_RX_LEVEL_8_NEIGH	B:D	R,I,O	Rx level of 8. neighbor in dBm, minus sign not shown if <=-100
l(3)	GSS	FTD_SB_C2_8_NEIGH	S	R,I,O	C2 value of 8. neighbor, range is -99 - 999. ERR means that the value is out of range, e.g. because it was not able to be calculated.
m	GSS	FTD_SB_LOCATION_AREA_INFO_6	S	R,I,O	F is shown if cell is in a forbidden location area, otherwise location is empty.
n	GSS	FTD_SB_CELL_PRIORITY_6	S	R,I,O	B is Barred, N is normal priority and L is low priority, otherwise location is empty.
o	GSS	FTD_SB_LOCATION_AREA_INFO_7	S	R,I,O	F is shown if cell is in a forbidden location area, otherwise location is empty.
p	GSS	FTD_SB_CELL_PRIORITY_7	S	R,I,O	B is Barred, N is normal priority and L is low priority, otherwise location is empty.
q	GSS	FTD_SB_LOCATION_AREA_INFO_8	S	R,I,O	F is shown if cell is in a forbidden location area, otherwise location is empty.
r	GSS	FTD_SB_CELL_PRIORITY_8	S	R,I,O	B is Barred, N is normal priority and L is low priority, otherwise location is empty.

2.7 Display 01.06: Network selection display

This display shows the last registered network country code and network code as well as the codes for four forbidden networks and the first 3 preferred networks. If data isn't available there is shown xxx on the display.

1. row: last registered network - 1st forbidden network

2. row: 1st preferred network - 2nd forbidden network

3. row: 2nd preferred network - 3rd forbidden network

4. row: 3rd preferred network - 4th forbidden network

S60 Data display
Last Reg 1st forbidd aaaaaa eeeeee 1st pref 2nd forbidd bbbbbb ffffff 2nd pref 3rd forbidd cccccc gggggg 3rd pref 4th forbidd dddddd hhhhhh

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(6)	GSS	FTD_SB_LAST_REG	DW:H	R,I,O	Last registred network
b(6)	NETWORK	FTD_SB_FIRST_PREF	S	R,I,O	1. preferred network
c(6)	NETWORK	FTD_SB_SECOND_PREF	S	R,I,O	2. preferred network
d(6)	NETWORK	FTD_SB_THIRD_PREF	S	R,I,O	3. preferred network
e(6)	GSS	FTD_SB_1ST_FORBIDDEN_NW	DW:H	R,I,O	1. forbidden PLMN in SIM
f(6)	GSS	FTD_SB_2ND_FORBIDDEN_NW	DW:H	R,I,O	2. forbidden PLMN in SIM
g(6)	GSS	FTD_SB_3RD_FORBIDDEN_NW	DW:H	R,I,O	3. forbidden PLMN in SIM
h(6)	GSS	FTD_SB_4TH_FORBIDDEN_NW	DW:H	R,I,O	4. forbidden PLMN in SIM

2.8 Display 01.07: System information bits for serving cell

The following is picked from Phase2+ ETSI GSM 05.08 version 5.4.0, Section 8.4.3 ""Additional cell reporting requirements for multiband MS"".

For a multi band MS the number of cells, for each frequency band supported, which shall be included in the measurement report is indicated by the parameter, MULTIBAND_REPORTING. The meaning of different values of the parameter is specified as follows:

S60 Data display
Serving Cell System Info Bits E A H C I BR a b c d e f g EC 2Ter MB G h i j k

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a	GSS	FTD_SB_SYSTEM_INFO_BITS1	B:D	R,I,O	1 is shown if emergency calls are supported, else 0
b	GSS	FTD_SB_SYSTEM_INFO_BITS2	B:D	R,I,O	1 is shown if attach-detach-procedure is allowed, else 0

Abbr	Server	Sub-block id	Format	Mode	Description
c	GSS	FTD_SB_SYSTEM_INFO_BITS3	B:D	R,I,O	1 is shown if half rate channels are supported, else 0
d	GSS	FTD_SB_SYSTEM_INFO_BITS4	B:D	R,I,O	1 is shown if C2 values are broadcast, else 0
e	GSS	FTD_SB_SYSTEM_INFO_BITS5	B:D	R,I,O	1 is shown if system information 7 and 8 are broadcast, else 0
f	GSS	FTD_SB_SYSTEM_INFO_BITS6	B:D	R,I,O	1 is shown if cell broadcast is supported, else 0
g	GSS	FTD_SB_SYSTEM_INFO_BITS7	B:D	R,I,O	1 is shown if re-establishment is supported, else 0
h	GSS	FTD_SB_SYSTEM_INFO_BITS8	B:D	R,I,O	In idle mode 1 is shown if Early Classmark (ECSC) sending is supported, else 0. In dedicated mode (conversation) X is shown.
i	GSS	FTD_SB_SYSTEM_INFO_BITS9	B:D	R,I,O	In idle mode 1 is shown if 2-Ter messages are supported, else 0. In dedicated mode (conversation) X is shown.
j	GSS	FTD_SB_SYSTEM_INFO_BITS10	B:D	R,I,O	MultiBand reporting decimal value (0,1,2,3) is shown if supported. This is shown both in idle and dedicated mode.
k	GSS	FTD_SB_GPRS_SUPPORT	B:D	R,I,O	1 is shown if GPRS is supported, else 0

2.9 Display 01.08: Paging repeat period, TMSI, periodic location update, AFC and AGC

S60 Data display

TMSI value	aaaaaaaa
Curr T3212	bbb
Initial T3212	ccc
Paging repeat	d
Downlink fail	ee
TCH/SDCCH Ga	ff
VCTCXO AFC	ggggg
Channel num	hhh

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(8)	GSS	FTD_SB_TMSI	DW:H	R,I,O	TMSI value in hex format
b(3)	GSS	FTD_SB_T3212	B:D	R,I,O	Current value of T3212 counter (range is 000 - 'ccc', where 1 means 6 min time. So, if this value is 2 less than 'ccc' then next periodic location updating will be made within 2 * 6 min = 12 minutes
c(3)	GSS	FTD_SB_T3212_TIMEOUT	B:D	R,I,O	Timeout value of T3212 counter (range is 000 - 240, where 1 means 6 min time between location updates and 240 means 240 * 6 min = 24 h between location updates. 000 means that periodic location update is not in use.) This value is received from the network.
d	GSS	FTD_SB_PRP	B:D	R,I,O	Value of paging repeat period (range is 2 - 9, when paging is in every second multiframe, mobile takes more current than if it were in every 9th multiframe)
e(2)	GSS	FTD_SB_DOWNLINK_SIGN_FAIL	B:D	R,I,O	Downlink signaling failure value. If value is negative, 0 is shown. Maximum value is 45. When mobile is on TCH then xx is shown
f(2)	GSS	FTD_SB_GAIN_ON_TCH	B:D	R,I,O	Gain value on TCH/SDCCH, range is 0 - 93
g(5)	GSS	FTD_SB_VCTCXO_AFC_DAC	W:D	R,I,O	VCTCXO AFC DAC control, range is -1024 - 1023
h(3)	GSS	FTD_SB_CARRIER	S	R,I,O	When mobile is on TCH: DCH carrier number of serving cell in decimal.

Abbr	Server	Sub-block id	Format	Mode	Description
					When mobile is NOT on TCH: CH means carrier number of serving cell in decimal. If hopping is on, used channels are scrolled when display is updated ERR means that mobile is out of band.

2.10 Display 01.09: Network parameters

LAC and CID may be in hex format in some projects. Or even both decimal and hexadecimal formats may be shown on the same line.

S60 Data display
Network parameters Country code aaa Network code bbb Location area ccccc Serving cell Channel num ddd Cell Identifier eeeeeeeeee

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(3)	GSS	FTD_SB_REG_CC	S	R,I,O	MCC value in decimal (MCC=Mobile Country Code)
b(3)	GSS	FTD_SB_REG_MNC	S	R,I,O	MNC value in decimal (MNC=Mobile Network Code). Three digits are shown only in DCS1900. In other systems only two digits are shown.
c(5)	GSS	FTD_SB_LAC	W:D	R,I,O	LAC value in decimal (LAC=Location Area Code)
d(3)	GSS	FTD_SB_CARRIER	S	R,I,O	When mobile is on TCH: DCH carrier number of serving cell in decimal. When mobile is NOT on TCH: CH means carrier number of serving cell in decimal. If hopping is on, used channels are scrolled when display is updated ERR means that mobile is out of band.
e(10)	GSS	FTD_SB_CELL_ID	DW:D	R,I,O	Cell Identifier in decimal format. Data format is DW:D from GSS ISI header version 2.1 onwards. Older GSS ISI headers handle this as W:D

2.11 Display 01.10: Ciphering, hopping DTX status and IMSI

These values are updated only on the TCH.

S60 Data display
Updated only on TCH Ciphering val aaa Hopping val bbb DTX value ccc IMSI attach ddd

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(3)	GSS	FTD_SB_CIPH	S	R,I,O	Ciphering value, OFF/A51/A52
b(3)	GSS	FTD_SB_HOPP_STATUS	S	R,I,O	Hopping value, ON/OFF
c(3)	GSS	FTD_SB_DTX_VALUE	S	R,I,O	DTX value ON/OFF
d(3)	GSS	FTD_SB_IMSI_ATT	S	R,I,O	IMSI attach **ON** : IMSI attach on **OFF** : IMSI attach off

2.12 Display 01.11: Uplink DTX switching display

With this display it is possible to change MS to use DTX or not, if BS allows MS to decide it. This display must be activated from MENU to change DTX state. When MENU is not active and the user is scrolling field test displays with NEXT and PREVIOUS, the DTX state will not change.

S60 Data display
Execute display With this display it is possible to change MS to use DTX or not. Use options to change DTX mode aaaaaaaaaa Default DTX bbb DTX from BS ccc

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(10)	GSS	FTD_SB_DTX_STATUS	S	R,I,O	Status of switched mode. **DTX:ON** : MS uses DTX **DTX:OFF** : MS does not use DTX **DTX:DEF** : MS use default state of DTX. Defined in MS_PAR.H **NOTALLOWED**: BS does not allow MS to decide if it uses DTX or not.
b(3)	GSS	FTD_SB_DTX_DEF	S	R,I,O	Default state of DTX. Defined in MS_PAR.H. The value is either ON or OFF
c(3)	GSS	FTD_SB_DTX_FROM_BS	S	R,I,O	Is DTX value from BS MAY : BS allows MS to decide if it uses dtx or not on uplink. USE : BS controls MS to use dtx (on uplink)

Abbr	Server	Sub-block id	Format	Mode	Description
					NOT : BS controls MS not to use dtx (on uplink)
EXE	GSS	FTD_SB_DTX_STATUS_CHANGE	B:D	R,I,O	Toggle DTX status.

2.13 Display 01.12: Storing and removing BTS_TEST carrier

This display is used to change BTS_TEST carrier on permanent memory. If BTS_TEST carrier is stored on permanent memory each time the mobile sends a search list it uses only the carrier number stored on Mobile Station permanent memory. Also the neighbor information from system information messages is ignored. If the BTS_TEST carrier is not stored, then the mobile behaves normally (i.e. does the neighbor measurements according the GSM specifications).

Mobile is searching only one frequency. Neighbor measurements are not done.

Mobile is behaving normally. Neighbor measurements are done.

To store BTS test carrier, perform following steps:

1. Press the Menu button.
2. Scroll in the main menu loop to field test display item.
3. Press the Select button.
4. Select this display in input mode by entering 0112 (TEST GROUP;TEST DISPLAY) to the query prompt.
5. Test input promt will be shown on the display, enter the channel number in display.
6. Confirm with the Ok button.
7. Switch power off and on.
8. If activation succeeded, there is text "BTS TEST LOCKED, CH:" in display 12 of group 1.

To deactivate BTS tests, perform following steps:

1. Press the Menu button.
2. Scroll in the main menu loop to field test display item.
3. Press the Select button.
4. Select this display in input mode by entering 0112 (TEST GROUP;TEST DISPLAY) to the query prompt.
5. Test input promt will be shown on the display, enter the 3333 as a channel number in display
6. Confirm with the Ok button.
7. Switch power off and on.
8. If deactivation succeeded, there is text "BTS TEST OFF" in display 12 of group 1.

The legal carrier numbers:

Band Carrier Numbers

GSM450 259-293

GSM480 306-340

GSM850 128-251

GSM900 1-124

GSM1800 512-885

GSM1900 512-810

E-GSM 0, 975-1023

R-GSM 955-974

S60 Data display
Execute display With this display it is possible to change BTS_TEST carrier. Use options to change BTS TEST aaaa

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(4)	NETWORK	FTD_SB_BTS_STATUS	S	R,I,O	BTS test status
INPUT(4)	NETWORK	FTD_SB_BTS_TEST	DW:D	R,I,O	BTS test

2.14 Display 01.13: Toggle Cell Barred Status

This test is meant to be used when some cells are tested prior taking them into commercial use. By setting the barring on in the base station normal GSM phones will not try to register these barred cells. By selecting cell barring reversed, the MS will only use the cells to be tested. However, if at the same time it is wanted that MS will be capable to use normal network cell barring ignored can be set. This display will show the cell barring mode.

NOTE! If a cell has been selected before barring state is changed the selected cell may have different barring state than what the display shows. After reselection the cell barring state is working for sure.

To change Cell Barring status, perform following steps:

1. Press the Menu button.
2. Scroll in the main menu loop to field test display item.
3. Press the Select button.
4. Select this display in executive mode by entering 0113 (TEST GROUP;TEST DISPLAY) to the query prompt.
5. Confirm with the Ok button.
6. If activation succeeded, there is text "CELL BARR" in display 13 of group 1.

S60 Data display
Execute display With this display it is possible to change Call bearer status. Use options to change CALL BEARER aaaaaaaa

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(8)	GSS	FTD_SB_CELL_BARR_IND_STATUS	S	R,I,O	Cell Barring status
EXE	GSS	FTD_ SB_CELL_BARR_IND_STATUS_CHA NGE	B:D	R,I,O	Toggle Cell Barring status

2.15 Display 01.14: Modify last used band

This display is applicable only in phones having both European and American frequencies.

With this display it is possible to manipulate the "last used band". In multi-band products this paramater is used at startup to decide which band shall be searched first. In most cases the last used band is the most promising band to find networks in. Nevertheless, for testing purposes it is helpful to have influence on this decision.

If at startup no "last used band" is found in the memory, the "Default" setting (Europe or America) will be effective.

1. Press the Menu button.
2. Scroll in the main menu loop to field test display item.
3. Press the Select button.
4. Select this display in input mode by entering 01.14 (TEST GROUP;TEST DISPLAY) to the query prompt.
5. Test input prompt will activate, enter the desired band code (see the table below) in display.
6. Confirm with the Ok button.
7. REMOVE BATTERY or POWER SUPPLY

NOTE: In normal operation the last used band is saved to the memory at power-down. If this value is written via Test Display 01.14, the phone MUST NOT be powerd off normally afterwards, because then the user-set value will be overwritten. The power supply has be interrupted instead.

Band codes:

Band Code Meaning

9 GSM900

18 GSM1800

19 GSM1900

Other Delete stored value

S60 Data display
Execute display With this display it is possible to set band which will be searched first after startup Use options to set. aa

Fields

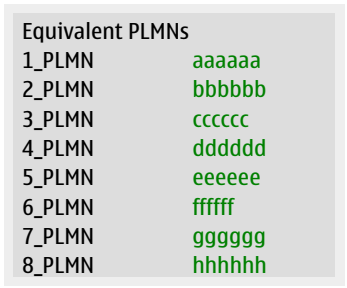
Abbr	Server	Sub-block id	Format	Mode	Description
a(2)	GSS	FTD_SB_LAST_USED_BAND_READ	B:D	R,I,O	Last used band, see the table below
INPUT(4)	GSS	FTD_SB_LAST_USED_BAND_SET	DW:D	R,I,O	Write value to memory

2.16 Display 01.15: Equivalent PLMN display

This display shows the equivalent PLMN list. If data isn't available xxx is shown on the display.

1. row: 1st equivalent PLMN - 5th equivalent PLMN
2. row: 2nd equivalent PLMN - 6th equivalent PLMN
3. row: 3rd equivalent PLMN - 7th equivalent PLMN
4. row: 4th equivalent PLMN - 8th equivalent PLMN

S60 Data display



Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(6)	GSS	FTD_SB_1_EQUIV_PLMN	DW:H	R,I,O	Equivalent PLMN
b(6)	GSS	FTD_SB_2_EQUIV_PLMN	DW:H	R,I,O	Equivalent PLMN
c(6)	GSS	FTD_SB_3_EQUIV_PLMN	DW:H	R,I,O	Equivalent PLMN
d(6)	GSS	FTD_SB_4_EQUIV_PLMN	DW:H	R,I,O	Equivalent PLMN
e(6)	GSS	FTD_SB_5_EQUIV_PLMN	DW:H	R,I,O	Equivalent PLMN
f(6)	GSS	FTD_SB_6_EQUIV_PLMN	DW:H	R,I,O	Equivalent PLMN
g(6)	GSS	FTD_SB_7_EQUIV_PLMN	DW:H	R,I,O	Equivalent PLMN
h(6)	GSS	FTD_SB_8_EQUIV_PLMN	DW:H	R,I,O	Equivalent PLMN

2.17 Display 01.16: Equivalent PLMN display

This display shows the equivalent PLMN list. If data isn't available xxx is shown on the display.

1. row: 9th equivalent PLMN - 13th equivalent PLMN
2. row: 10th equivalent PLMN - 14th equivalent PLMN
3. row: 11th equivalent PLMN - 15th equivalent PLMN
4. row: 12th equivalent PLMN - 16th equivalent PLMN

S60 Data display

Equivalent PLMNs	
9_PLMN	aaaaaa
10_PLMN	bbbbbb
11_PLMN	cccccc
12_PLMN	dddddd
13_PLMN	eeeeee
14_PLMN	ffffff
15_PLMN	gggggg
16_PLMN	hhhhhh

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(6)	GSS	FTD_SB_9_EQUIV_PLMN	DW:H	R,I,O	Equivalent PLMN
b(6)	GSS	FTD_SB_10_EQUIV_PLMN	DW:H	R,I,O	Equivalent PLMN
c(6)	GSS	FTD_SB_11_EQUIV_PLMN	DW:H	R,I,O	Equivalent PLMN
d(6)	GSS	FTD_SB_12_EQUIV_PLMN	DW:H	R,I,O	Equivalent PLMN
e(6)	GSS	FTD_SB_13_EQUIV_PLMN	DW:H	R,I,O	Equivalent PLMN
f(6)	GSS	FTD_SB_14_EQUIV_PLMN	DW:H	R,I,O	Equivalent PLMN
g(6)	GSS	FTD_SB_15_EQUIV_PLMN	DW:H	R,I,O	Equivalent PLMN
h(6)	GSS	FTD_SB_16_EQUIV_PLMN	DW:H	R,I,O	Equivalent PLMN

3 Group 04: GSM Test Timers SMS and Call Counter Displays

3.1 Display 04.05: Call attempts counters

On poweroff the values of the counter displays are stored onto the permanent memory, where they will be read during power on. To initialize the counters to zero, select Display 04.04: Reset SMS and Call Counters to zero. Counters are automatically reset to zero when they exceed their maximum value.

S60 Data display

Call attempts counter

CC Cause	aa
Release dire	bb
MO attempts	ccc
MO call ok	ddd
MT attempts	eee
MT call ok	fff

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(2)	GSS	FTD_SB_LAST_CALL_REL_REAS	B:D	R,I,O	Reason of last call release. Cause from messages disconnect and release complete.
b(2)	GSS	FTD_ SB_LAST_CALL_REL_DIRECTION	S	R,I,O	Direction of last call release: UN : Unknown MO : Mobile originated MT : Mobile terminated IN : Internal (ME CS sw)
c(3)	GSS	FTD_SB_MO_CALL_COUNT	W:D	R,I,O	Count of all MO call attempts made
d(3)	GSS	FTD_SB_MO_CALL_OK_COUNT	W:D	R,I,O	Count of succeeded MO calls
e(3)	GSS	FTD_SB_MT_CALL_COUNT	W:D	R,I,O	Count of all call setups received
f(3)	GSS	FTD_SB_MT_CALL_OK_COUNT	W:D	R,I,O	Count of succeeded MT calls

3.2 Display 04.06: Information about reasons for call clearing

All cause values are shown in decimal form.

S60 Data display

Information from call clearing reasons

CC cause	aaaa
MM cause	bbbb
RR cause	cccc

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(4)	GSS	FTD_SB_CC_CAUSE	S	R,I,O	CC cause value, see section 10.5.4.11/GSM 04.08. '*' is shown in front of cause value if cause is made up by CC layer in MS
b(4)	GSS	FTD_SB_MM_CAUSE	S	R,I,O	MM cause value, see section 10.5.3.6/GSM 04.08. '*' is shown in front of cause value if cause is made up by MM layer in MS
c(4)	GSS	FTD_SB_RR_CAUSE	S	R,I,O	RR cause value, see section 10.5.2.31/GSM 04.08. '*' is shown in front of cause value if cause is made up by RR layer in MS

4 Group 05: GSM Data Displays

4.1 Display 05.01: HSCSD, Timeslot information display

S60 Data display

HSCD Timeslot
information display

Timeslot	1234567
RX	aaaaaaaa
TX	bbbbbbbb
Main CH Ts	c
Main CH power	dd

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(8)	GSS	FTD_SB_RX_TIMESLOT_ALLOC	DW:H	R,I,O	Each bit can have value 1 or 0, 1 indicating that timeslot is part of multislot allocation in downlink direction.
b(8)	GSS	FTD_SB_TX_TIMESLOT_ALLOC	DW:H	R,I,O	Each bit can have value 1 or 0, 1 indicating that timeslot is part of multislot allocation in uplink direction.
c	GSS	FTD_SB_MAIN_CH_PLACE	B:D	R,I,O	Value from 0 to 7 indicating the place of main channel. In case of GPRS multislot allocation, this is not valid "x".
d(2)	GSS	FTD_ SB_MAIN_CH_PWR_CONTROL	B:D	R,I,O	Value from 0-31 indicating main channel power control level. In case of GPRS multislot allocation, this is not valid "xx".

4.2 Display 05.02: HSCSD, Timeslot power control level display

S60 Data display

Main CH TS	a
Main CH power	bb
Pwr level TS0	cc
Pwr level TS1	dd
Pwr level TS2	ee
Pwr level TS3	ff
Pwr level TS4	gg
Pwr level TS5	hh
Pwr TS6 / TS7	ii jj

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a	GSS	FTD_SB_MAIN_CH_PLACE	B:D	R,I,O	Value from 0 to 7 indicating the place of main channel. In case of GPRS multislot allocation, this is not valid "x".

Abbr	Server	Sub-block id	Format	Mode	Description
b(2)	GSS	FTD_ SB_MAIN_CH_PWR_CONTROL	B:D	R,I,O	Value from 0-31 indicating main channel power control level. In case of GPRS multislot allocation, this is not valid "xx".
c(2)	GSS	FTD_SB_PWR_CONTROL_TS_0	B:D	R,I,O	Power control level for timeslot 0.
d(2)	GSS	FTD_SB_PWR_CONTROL_TS_1	B:D	R,I,O	Power control level for timeslot 1.
e(2)	GSS	FTD_SB_PWR_CONTROL_TS_2	B:D	R,I,O	Power control level for timeslot 2.
f(2)	GSS	FTD_SB_PWR_CONTROL_TS_3	B:D	R,I,O	Power control level for timeslot 3.
g(2)	GSS	FTD_SB_PWR_CONTROL_TS_4	B:D	R,I,O	Power control level for timeslot 4.
h(2)	GSS	FTD_SB_PWR_CONTROL_TS_5	B:D	R,I,O	Power control level for timeslot 5.
i(2)	GSS	FTD_SB_PWR_CONTROL_TS_6	B:D	R,I,O	Power control level for timeslot 6.
j(2)	GSS	FTD_SB_PWR_CONTROL_TS_7	B:D	R,I,O	Power control level for timeslot 7.

5 Group 06: GPRS Signaling displays

5.1 Group 06 Information

If MS is not GPRS attached, xxx is shown in all displays.

5.2 Display 06.01: Information of the current GPRS state and previous TBF configuration

S60 Data display

```
GPRS state and TBF conf.
Hopping/Carrier   a     bbbb
RX lev / Tadv     ccc   dd
DL TS / UP TS     e     f
DL CS / UP CS     g     h
Tadv I / TFI      ii    jj
MAC / Cha type    kkkk llll
GPRS State        m
USF values        nnnnnnnn
```

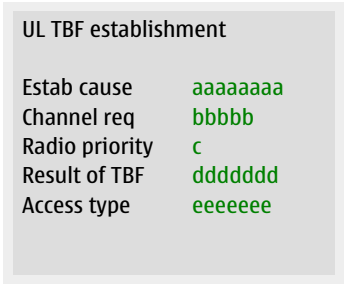
Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a	GSS	FTD_SB_GPRS_HOPPING	S	R,I,O	H, if carrier numbers are scrolled when hopping is on. Otherwise empty.
b(4)	GSS	FTD_SB_GPRS_CARRIER	S	R,I,O	Carrier number in decimal. If hopping is on, used channels are scrolled when display is updated
c(3)	GSS	FTD_SB_GPRS_RX_LEVEL	B:D	R,I,O	Rx level in dBm, minus sign not shown if <=-100
d(2)	GSS	FTD_SB_GPRS_TIMING_ADV	B:D	R,I,O	The latest value for timing advance, range 0-63
e	GPDS	FTD_SB_RLC_DL_SLOTS	B:D	R,I,O	Downlink time slot count in the latest TBF configuration, range 0-8
f	GPDS	FTD_SB_RLC_UL_SLOTS	B:D	R,I,O	Uplink time slot count in the latest TBF configuration, range 0-8.
g	GPDS	FTD_SB_RLC_DL_CH_CODE	B:D	R,I,O	Channel coding scheme in downlink direction, range 1-4. If no downlink TBF is active, x is shown. Appears also on display 07.03.
h	GPDS	FTD_SB_RLC_UL_CH_CODE	B:D	R,I,O	Channel coding scheme in uplink direction, range 1-4. If no uplink TBF is active, x is shown. Appears also on display 07.03.
i(2)	GSS	FTD_SB_PH_TAI	B:D	R,I,O	The latest value for timing advance index, range 0-15. If continuous timing advance is/was not in use, xx is shown.
j(2)	GPDS	FTD_SB_MAC_DL_TFI	B:D	R,I,O	TFI of the latest TBF configuration, range 0-31. If there is/was no downlink TBF in the latest TBF configuration, xx is shown.
k(4)	GPDS	FTD_SB_MAC_ALLOC_MODE	S	R,I,O	MAC mode, i.e. resource allocation method, used during the latest TBF configuration: **DYN EDYN FIXD DUSF**: USF granularity in use **EUSF**: USF granularity in use **F_HD**: Fixed Half Duplex
l(4)	GSS	FTD_SB_GPRS_TYPE_OF_CURR_CH	S	R,I,O	Type of current channel In GPRS idle mode, if PBCCH supported in cell: PCCC, PBCC, PAGC, PNDR (non-DRX state): In GPRS idle mode, if PBCCH not supported in cell:

Abbr	Server	Sub-block id	Format	Mode	Description
					AGCH, NDRX (non-DRX state), CCCH, BCCH In GPRS transfer mode: **PDTC** Other possibilities are the same as in Display 1 in group 1.
m	GPDS	FTD_SB_GMM_R_AND_S	S	R,I,O	**R** if MS is in READY state, **S** if GPRS is suspended and otherwise empty,
n(8)	GSS	FTD_SB_PH_USF	S	R,I,O	USF values of the current TBF configuration, the first value corresponding timeslot 0, next timeslot 1 and so on. The range of each USF value is 0-7. If there is no uplink TBF, or dynamic allocation was not used in the latest TBF configuration, xxxxxxxx is shown. If there is an uplink TBF but not all the 8 time slots are used, x is shown in place of the unused time slots.

5.3 Display 06.02: Previous UL TBF establishment

S60 Data display



Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(8)	GPDS	FTD_SB_MAC_UL_TBF_EST_CAUSE	S	R,I,O	The establishment cause of the previous TBF establishment: **ONE-PHAS**: one-phase access request **SHORT**: short access request **TWO-PHAS**: two-phase access request **PAGE RES**: paging response **CELL UPD**: cell update **GMM SIGN**: GMM or SM procedure **SINGLE B**: single block without TBF establishment These correspond the establishment causes in PACKET CHANNEL REQUEST.
b(5)	GPDS	FTD_SB_MAC_CH_REQ_TYPE	S	R,I,O	**PRACH**: if PACKET CHANNEL REQUEST was sent (PCCCH) **RACH**: if CHANNEL REQUEST was sent (CCCH)
c	GPDS	FTD_SB_MAC_RADIO_PRIORITY	B:D	R,I,O	Radio priority, range 1-4
d(7)	GPDS	FTD_SB_MAC_TBF_EST_RES	S	R,I,O	Result of the TBF establishment: **OK**: TBF establishment succeeded. **REJECT**: IMM ASS REJECT (CCCH) or PACKET ACCESS REJECT (PCCCH) received from the network. **TIMEOUT**: No response to (P)RACH from the network. **QUEUE**: CS channel description received in IMM ASS (CCCH) or PACKET QUEUING NOTIFICATION received (PCCCH) and the TBF was not established (the final result may still be OK if the TBF was established correctly after queueing). **FAILURE**: TBF establishment failed due to any other reason.
e(7)	GPDS	FTD_SB_MAC_TBF_EST_REALIZED	S	R,I,O	The used access type, 1-PHASE or 2-PHASE access. This informs the finally used method, regardless of the requested access type. If the TBF establishment failed, xxxxxx is shown.

5.4 Display 06.03: Information of the GMM state

S60 Data display

GMM state information

NW oper mode	aaa
GPRS attach	bbbbbbbb
GMM state	c
MS state	ddddd
READY timeout	eee
T3312 timer	fff
T3312 / exp	ggg h

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(3)	GPDS	FTD_SB_GMM_NW_MODE	S	R,I,O	Network operation mode **NW1 NW2 NW3**
b(8)	GPDS	FTD_SB_GMM_ATTACH_TYPE	S	R,I,O	The status of GPRS attach: (xxxxxxxx displayed in all these displays in case no GPRS attach is made) **BOTH**: Both IMSI and GPRS attach made **GPRS**: GPRS attach only
c	GPDS	FTD_SB_GMM_ATTACH_STATUS	S	R,I,O	The state of GMM c: main state of GMM **X** idle **R** registered **D** deregistered
d(5)	GPDS	FTD_ SB_GMM_READY_TMR_STATUS	S	R,I,O	While UE is in GSM **READY**: MS is in READY state **FORCE**: MS is in standby state after receiving "force to standby" indication STAND: MS is in standby state (xxxx shown if in IDLE state) While UE is in UMTS **CONN**: UE is registered and the PS signalling connection exists (alike with READY mode in GSM) **IDLE**: UE is registered but has no PS signalling connection (alike with STANDBY mode in GSM) Otherwise xxxx (include DETACHED mode)
e(3)	GPDS	FTD_ SB_GMM_READY_TMR_TIMEOUT	W:D	R,I,O	The used timeout value for READY timer. Unit seconds. xxx if READY timer is deactivated
f(3)	GPDS	FTD_ SB_GMM_RAU_TMR_CURRENT	B:D	R,I,O	Current value of T3312 timer, timer for periodical routing area updates. Range is 000 - 186 and unit is minutes.
g(3)	GPDS	FTD_ SB_GMM_RAU_TMR_TIMEOUT	W:D	R,I,O	Timeout value of T3312 timer. Range 000 - 186 and unit is minutes. xxx if T3312 timer is deactivated
h	GPDS	FTD_ SB_GMM_PREVENT_READY_EXPIRY	S	R,I,O	F if READY timer expiry preventation mechanism is activated, otherwise empty.

5.5 Display 06.04: Values of P-TMSI, RAC, SMS radio priority, Ciphering and Non-DRX parameters

S60 Data display

GMM values and non-DRX parameters

P-TMSI	aaaaaaaa
RAI	bbbb
Ciphering	cccc
SPLIT_PG_CYC	ddd
	ee
SMS radio pri	f
FORP	

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(8)	GPDS	FTD_SB_GMM_PTMSI_VALUE	DW:D	R,I,O	P-TMSI value in hex format
b(4)	GPDS	FTD_SB_GMM_RAI_VALUE	W:D	R,I,O	RAI (Routing Area Indicator) in hex format
c(4)	GPDS	FTD_SB_GMM_CIPHERING_VALUE	S	R,I,O	Ciphering value (negotiated by GMM): OFF/GEA1/GEA2 Note! Even if the value here would show that ciphering is used, LLC may still send and receive unciphered blocks.
d(3)	GPDS	FTD_ SB_GMM_SPLIT_PG_CYCLE_VALUE	W:D	R,I,O	SPLIT_PG_CYCLE value indicated by MS. 704 if non-DRX is used, otherwise range is 1-352. 0 is shown if SPLIT_PG_CYCLE is not in use in CCCH.
e(2)	GPDS	FTD_SB_GMM_NON_DRX_TMR	B:D	R,I,O	non-DRX timer indicated by MS. (The actually used value is a minimum of this and the network parameter.) 0 if no non-DRX mode is used after transfer mode, otherwise range is 1-64 seconds.
f	GPDS	FTD_SB_GMM_SMS_PRIORITY	B:D	R,I,O	SMS radio priority, range 1-4. If MO SMS via GPRS is not allowed, x is shown.

5.6 Display 06.05: GPRS Network parameters

S60 Data display

GPRS network parameters

CTRL_ACK type	aaaa
ACCESS_BURST	bb
DRX_TIMER_MAX	cc
SPLIT support	d
Paging mode	ee
NC mode	fff
T3168 timer	g

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(4)	GPDS	FTD_SB_MAC_CTRL_ACK_TYPE	S	R,I,O	The value of CONTROL_ACK_TYPE 4ACC: PACKET CONTROL ACKNOWLEDGEMENT is sent as 4 access bursts. CTRL: PACKET CONTROL ACKNOWLEDGEMENT is sent as RLC/MAC control block.
b(2)	GPDS	FTD_SB_MAC_ACC_BURST_TYPE	B:D	R,I,O	The value of ACCESS_BURST_TYPE, either 8 or 11 [bits].
c(2)	GPDS	FTD_SB_MAC_DRX_TIMER_MAX	B:D	R,I,O	The value of DRX_TIMER_MAX, range 1 - 64 seconds.

Abbr	Server	Sub-block id	Format	Mode	Description
d	GPDS	FTD_SB_MAC_SPLIT_PG_CYCLE_ON_CCCH	B:D	R,I,O	The value of SPLIT_PG_CYCLE_CCCH_SUPPORTED, range 0-1. If PBCCH is supported, x is shown.
e(2)	GPDS	FTD_SB_MAC_PAGE_MODE	S	R,I,O	Paging mode: NO: normal paging EX: extended paging RO: paging reorganization SB: same as before
f(3)	GPDS	FTD_SB_MAC_NC_MODE_BROADCAST	S	R,I,O	NC mode indicated in system information. If GPRS not supported, xxx is shown. NC0: No measurement reports, MS decides of the cell re-selections NC1: Measurement reports. MS decides of the cell re-selections NC2: Measurement reports. The network commands the cell re-selections.
g	GPDS	FTD_SB_MAC_T3168_VALUE	B:D	R,I,O	The value of T3168 timer, range 0-7, corresponding 0.5s, 1s, , 4s.

5.7 Display 06.06: Packet control channel parameters

If PCCH is not supported, xxx is shown in all fields

S60 Data display

PCCH parameters

BS_PBCCH_BLKS	a
BS_PCC_CHANS	cc
BS_PAG_BLCKS_RES	ee
BS_PCC_REL	f
BS_PRACH_BLKS	gg
Hopping of PBCCH	b
Hopping of PCCCH	d

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a	GPDS	FTD_SB_MAC_BS_PBCCH_BLKS	B:D	R,I,O	Value of BS_PBCCH_BLKS, range 1-4.
b	GSS	FTD_SB_PBCCH_HOPPING	S	R,I,O	Hopping of PBCCH H if PBCCH is hopping, otherwise empty
c(2)	GPDS	FTD_SB_MAC_BS_PCC_CHANS	B:D	R,I,O	Value of BS_PCC_CHANS, range 1-16.
d	GSS	FTD_SB_PCCCH_HOPPING	S	R,I,O	Hopping of PCCCH H if PCCCH is hopping, otherwise empty (also if BS_PCC_CHANS=1)
e(2)	GPDS	FTD_SB_MAC_BS_PAG_BLKS_RES	B:D	R,I,O	Value of BS_PAG_BLCKS_RES, range 0-12.
f	GPDS	FTD_SB_MAC_BS_PCC_REL	B:D	R,I,O	Value of BS_PCC_REL, range 0-1.
g(2)	GPDS	FTD_SB_MAC_BS_PRACH_BLKS	B:D	R,I,O	Value of BS_PRACH_BLKS, range 0-12.

5.8 Display 06.07: (Packet) System information parameters

S60 Data display

System information

Sys 13 / Sys 5	aaaa	b
PSI repeat/ LR	cc	dd
PSI_HR/ Status	ee	f
MSCR / SGSNR	g	h
SI ind/NW EXT	i	j
CCN / PFC mode	k	l

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(4)	GSS	FTD_SB_PH_SI13_LOCATION	S	R,I,O	The location of System information 13. NORM: SI 13 available at BCCH Norm EXT: SI 13 available at BCCH Ext
b	GPDS	FTD_SB_MAC_PSI5_BROADCAST	B:D	R,I,O	The availability of Packet system information 5 (optional) 0: PSI 5 not supported 1: PSI 5 supported
c(2)	GPDS	FTD_ SB_MAC_PSI1_REPEAT_PERIOD	B:D	R,I,O	The value of PSI_REPEAT_PERIOD, range 1-16. If PBCCH is not supported, xx is shown.
d(2)	GPDS	FTD_SB_MAC_PSI_COUNT_LR	B:D	R,I,O	The value of PSI_COUNT_LR, range 0-63. If PBCCH is not supported, xx is shown.
e(2)	GPDS	FTD_SB_MAC_PSI_COUNT_HR	B:D	R,I,O	The value of PSI_COUNT_HR, range 0-63. If PBCCH is not supported, xx is shown.
f	GPDS	FTD_SB_MAC_PSI_STATUS_IND	B:D	R,I,O	The value of PSI_STATUS_IND, range 0-1. If 1, network supports the PACKET PSI_STATUS message. If PBCCH is not supported, 0 is shown.
g	GSS	FTD_SB_PH_MSCR	B:D	R,I,O	Value of MSCR bit, range 0-1. If 0, MSC is Release 98 or older, or info not availaible If 1, MSC is Release 99 onwards
h	GSS	FTD_SB_PH_SGSNR	B:D	R;I;O	Value of SGSNR bit, range 0-1 If 0, SGSN is Release 98 or older, or info not available If 1, SGSN is Release 99 onwards
i	GSS	FTD_SB_PH_SI_STATUS_IND	B:D	R;I;O	The value of SI_STATUS_IND, range 0-1. If 1, network supports the PACKET SI_STATUS message. If PBCCH is supported, 0 is shown.
j	GSS	FTD_SB_PH_EXT_UTBF	B:D	R;I;O	The value of NW_EXT_UTBF, range 0-1. If 1, network supports the extended UL TBF mode (Rel4).
k	GSS	FTD_SB_PH_CCN_ACTIVE	B:D	R;I;O	The value of CCN_ACTIVE, range 0-1. If 1, network supports Cell Change Notification procedures (Rel4)
l	GSS	FTD_SB_PH_PFC_FEATURE_MODE	B:D	R;I;O	The value of PFC_FEATURE_MODE, range 0-1. If 1, network supports packet flow context procedures.

5.9 Display 06.08: Cell re-selection parameters (serving cell)

xx is shown in all fields if MS performs cell re-selections with GSM cell re-selection algorithm, i.e. if PBCCH is not supported and if neither PACKET MEAS ORDER nor PACKET CELL CHANGE ORDER has been received. xx is also shown in a specific field if the value is not available

S60 Data display

```
Cell re-selection param

RXLEV_ACC_MIN       aa
CELL_RESEL_HYS      bb
RA_RESEL_HYS        cc
C31_HYST            d
C32_QUAL            e
RAND_ACC_RETR       f
T_RESEL             gggg
```

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(2)	GSS	FTD_SB_GPRS_RXLEV_ACC_MIN	B:D	R,I,O	The value of GPRS_RXLEV_ACCESS_MIN, range 0-63.
b(2)	GSS	FTD_SB_GPRS_CELL_RESEL_HYST	B:D	R,I,O	The value of GPRS_CELL_RESELECT_HYSTERESIS, range 0-14 [dB].
c(2)	GSS	FTD_SB_RA_RESEL_HYST	B:D	R,I,O	The value of RA_RESELECT_HYSTERESIS, range 0-14 [dB].
d	GSS	FTD_SB_C31_HYST	B:D	R,I,O	The value of C31_HYST, range 0-1.
e	GSS	FTD_SB_C32_QUAL	B:D	R,I,O	The value of C32_QUAL, range 0-1.
f	GSS	FTD_SB_RAND_ACC_RETRY	B:D	R,I,O	The value of RANDOM_ACCESS_RETRY, range 0-1.
g(4)	GSS	FTD_SB_T_RESEL	W:D	R,I,O	The value of T_RESEL, range 5-300 [seconds].

5.10 Display 06.09: GPRS information of the serving cell, 1st, 2nd, and 3rd neighbor

1. row: serving cell information
2. row: 1. neighbor information
3. row: 2. neighbor information
4. row: 3. neighbor information

xx is shown in all fields if MS performs cell re-selections with GSM cell re-selection algorithm, i.e. if PBCCH is not supported and if neither PACKET MEAS ORDER nor PACKET CELL CHANGE ORDER has been received.

S60 Data display

```
GPRS Serving cell info
CH:     Rx:         PRI:  C32:
aaa     bbb         c     ddd
1. Neighbor info
eee     fff         g     hhh
2. Neighbor info
iii     jjj         k     lll
3. Neighbor info
mmm nnn             o     ppp
```

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(3)	GSS	FTD_SB_GPRS_CARRIER_SERV	S	R,I,O	Carrier number in decimal.
b(3)	GSS	FTD_SB_GPRS_RX_LEVEL_SERV	B:D	R,I,O	Rx level in dBm, minus sign not shown if <=-100.

Abbr	Server	Sub-block id	Format	Mode	Description
c	GSS	FTD_SB_PRIOR_CLASS_SERV	S	R,I,O	PRIORITY_CLASS, range 0-7. Shown only when C31>=0, otherwise left empty. If HCS parameters are not available (optional), x is shown.
d(3)	GSS	FTD_SB_C32_SERV	S	R,I,O	C32 value. For the serving cell, C32 equals C1. The neighbours are sorted first based on the priority class (biggest priority on top). Within each priority class the neighbours are sorted based on C32 value. The neighbors are sorted based on only C32, if all the C31 values are negative (c-fields empty) or if priorities are not available (x shown in c-fields).
e(3)	GSS	FTD_SB_GPRS_CARRIER_1_NEIGH	S	R,I,O	Carrier number in decimal.
f(3)	GSS	FTD_ SB_GPRS_RX_LEVEL_1_NEIGH	B:D	R,I,O	Rx level in dBm, minus sign not shown if <=-100.
g	GSS	FTD_SB_PRIOR_CLASS_1_NEIGH	S	R,I,O	PRIORITY_CLASS, range 0-7. Shown only when C31>=0, otherwise left empty. If HCS parameters are not available (optional), x is shown.
h(3)	GSS	FTD_SB_C32_1_NEIGH	S	R,I,O	C32 value. For the serving cell, C32 equals C1. The neighbours are sorted first based on the priority class (biggest priority on top). Within each priority class the neighbours are sorted based on C32 value. The neighbors are sorted based on only C32, if all the C31 values are negative (c-fields empty) or if priorities are not available (x shown in c-fields).
i(3)	GSS	FTD_SB_GPRS_CARRIER_2_NEIGH	S	R,I,O	Carrier number in decimal.
j(3)	GSS	FTD_ SB_GPRS_RX_LEVEL_2_NEIGH	B:D	R,I,O	Rx level in dBm, minus sign not shown if <=-100.
k	GSS	FTD_SB_PRIOR_CLASS_2_NEIGH	S	R,I,O	PRIORITY_CLASS, range 0-7. Shown only when C31>=0, otherwise left empty. If HCS parameters are not available (optional), x is shown.
l(3)	GSS	FTD_SB_C32_2_NEIGH	S	R,I,O	C32 value. For the serving cell, C32 equals C1. The neighbours are sorted first based on the priority class (biggest priority on top). Within each priority class the neighbours are sorted based on C32 value. The neighbors are sorted based on only C32, if all the C31 values are negative (c-fields empty) or if priorities are not available (x shown in c-fields).
m(3)	GSS	FTD_SB_GPRS_CARRIER_3_NEIGH	S	R,I,O	Carrier number in decimal.
n(3)	GSS	FTD_ SB_GPRS_RX_LEVEL_3_NEIGH	B:D	R,I,O	Rx level in dBm, minus sign not shown if <=-100.
o	GSS	FTD_SB_PRIOR_CLASS_3_NEIGH	S	R,I,O	PRIORITY_CLASS, range 0-7. Shown only when C31>=0, otherwise left empty. If HCS parameters are not available (optional), x is shown.
p(3)	GSS	FTD_SB_C32_3_NEIGH	S	R,I,O	C32 value. For the serving cell, C32 equals C1. The neighbours are sorted first based on the priority class (biggest priority on top). Within each priority class the neighbours are sorted based on C32 value. The neighbors are sorted based on only C32, if all the C31 values are negative (c-fields empty) or if priorities are not available (x shown in c-fields).

5.11 Display 06.10: GPRS information of 4th, 5th and 6th neighbor

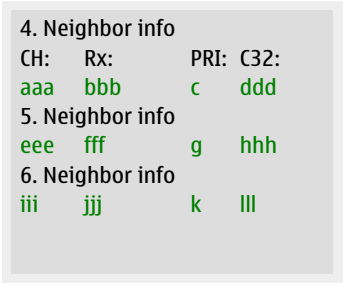
1. row: 4. neighbor information

2. row: 5. neighbor information

3. row: 6. neighbor information

xx is shown in all fields if MS performs cell re-selections with GSM cell re-selection algorithm, i.e. if PBCCH is not supported and if neither PACKET MEAS ORDER nor PACKET CELL CHANGE ORDER has been received.

S60 Data display



Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(3)	GSS	FTD_SB_GPRS_CARRIER_4_NEIGH	S	R,I,O	Carrier number in decimal.
b(3)	GSS	FTD_ SB_GPRS_RX_LEVEL_4_NEIGH	B:D	R,I,O	Rx level in dBm, minus sign not shown if <=-100.
c	GSS	FTD_SB_PRIOR_CLASS_4_NEIGH	S	R,I,O	PRIORITY_CLASS, range 0-7. Shown only when C31>=0, otherwise left empty. If HCS parameters are not available (optional), x is shown.
d(3)	GSS	FTD_SB_C32_4_NEIGH	S	R,I,O	C32 value. The neighbours are sorted first based on the priority class (biggest priority on top). Within each priority class the neighbours are sorted based on C32 value. The neighbors are sorted based on only C32, if all the C31 values are negative (c-fields empty) or if priorities are not available (x shown in c-fields).
e(3)	GSS	FTD_SB_GPRS_CARRIER_5_NEIGH	S	R,I,O	Carrier number in decimal.
f(3)	GSS	FTD_ SB_GPRS_RX_LEVEL_5_NEIGH	B:D	R,I,O	Rx level in dBm, minus sign not shown if <=-100.
g	GSS	FTD_SB_PRIOR_CLASS_5_NEIGH	S	R,I,O	PRIORITY_CLASS, range 0-7. Shown only when C31>=0, otherwise left empty. If HCS parameters are not available (optional), x is shown.
h(3)	GSS	FTD_SB_C32_5_NEIGH	S	R,I,O	C32 value. The neighbours are sorted first based on the priority class (biggest priority on top). Within each priority class the neighbours are sorted based on C32 value. The neighbors are sorted based on only C32, if all the C31 values are negative (c-fields empty) or if priorities are not available (x shown in c-fields).
i(3)	GSS	FTD_SB_GPRS_CARRIER_6_NEIGH	S	R,I,O	Carrier number in decimal.
j(3)	GSS	FTD_ SB_GPRS_RX_LEVEL_6_NEIGH	B:D	R,I,O	Rx level in dBm, minus sign not shown if <=-100.
k	GSS	FTD_SB_PRIOR_CLASS_6_NEIGH	S	R,I,O	PRIORITY_CLASS, range 0-7. Shown only when C31>=0, otherwise left empty. If HCS parameters are not available (optional), x is shown.
l(3)	GSS	FTD_SB_C32_6_NEIGH	S	R,I,O	C32 value. The neighbours are sorted first based on the priority class (biggest priority on top). Within each priority class the neighbours are sorted based on C32 value. The neighbors are sorted based on only C32, if all the C31 values are negative (c-fields empty) or if priorities are not available (x shown in c-fields).

5.12 Display 06.11: GPRS information of the serving cell and 6 neighbors

1. row: serving cell information

2. row: 1. neighbor on the left, 4. neighbor on the right

3. row: 2. neighbor on the left, 5. neighbor on the right

4. row: 3. neighbor on the left, 6. neighbor on the right

xx is shown in all fields if MS performs cell re-selections with GSM cell re-selection algorithm, i.e. if PBCCH is not supported and if neither PACKET MEAS ORDER nor PACKET CELL CHANGE ORDER has been received.

S60 Data display

```
Serving cell      a  b  c
1. neighbor       d  e  f
2. neighbor       g  h  i
3. neighbor       j  k  l
4. neighbor       m  n  o
5. neighbor       p  q  r
6. neighbor       s  t  u
   =MS READY      =Same RA
   =CELL_BAR      =EXC_ACC
```

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a	GSS	FTD_SB_GMM_STATE	S	R,I,O	R if MS is in READY state and therefore applies hysteresis for cell re-selection.
b	GSS	FTD_SB_CELL_BAR_ACC_2	B:D	R,I,O	The value of CELL_BAR_ACCESS_2. x is shown if PBCCH is not supported.
c	GSS	FTD_SB_EXC_ACC	B:D	R,I,O	The value of EXC_ACC. x is shown if PBCCH is not supported.
d	GSS	FTD_ SB_SAME_RA_AS_SRV_CELL_1_NEIGH	B:D	R,I,O	The value of SAME_RA_AS_SERVING_CELL: 1: cell belongs to the same routing area as the serving cell 0: cell belongs to the different routing area as the serving cell
e	GSS	FTD_ SB_CELL_BAR_ACC_2_1_NEIGH	B:D	R,I,O	The value of CELL_BAR_ACCESS_2. x is shown if PBCCH is not supported.
f	GSS	FTD_SB_EXC_ACC_1_NEIGH	B:D	R,I,O	The value of EXC_ACC. x is shown if PBCCH is not supported.
g	GSS	FTD_ SB_SAME_RA_AS_SRV_CELL_2_NEIGH	B:D	R,I,O	The value of SAME_RA_AS_SERVING_CELL: 1: cell belongs to the same routing area as the serving cell 0: cell belongs to the different routing area as the serving cell
h	GSS	FTD_ SB_CELL_BAR_ACC_2_2_NEIGH	B:D	R,I,O	The value of CELL_BAR_ACCESS_2. x is shown if PBCCH is not supported.
i	GSS	FTD_SB_EXC_ACC_2_NEIGH	B:D	R,I,O	The value of EXC_ACC. x is shown if PBCCH is not supported.
j	GSS	FTD_ SB_SAME_RA_AS_SRV_CELL_3_NEIGH	B:D	R,I,O	The value of SAME_RA_AS_SERVING_CELL: 1: cell belongs to the same routing area as the serving cell 0: cell belongs to the different routing area as the serving cell
k	GSS	FTD_ SB_CELL_BAR_ACC_2_3_NEIGH	B:D	R,I,O	The value of CELL_BAR_ACCESS_2. x is shown if PBCCH is not supported.
l	GSS	FTD_SB_EXC_ACC_3_NEIGH	B:D	R,I,O	The value of EXC_ACC. x is shown if PBCCH is not supported.

Abbr	Server	Sub-block id	Format	Mode	Description
m	GSS	FTD_SB_SAME_RA_AS_SRV_CELL_4_NEIGH	B:D	R,I,O	The value of SAME_RA_AS_SERVING_CELL: 1: cell belongs to the same routing area as the serving cell 0: cell belongs to the different routing area as the serving cell
n	GSS	FTD_SB_CELL_BAR_ACC_2_4_NEIGH	B:D	R,I,O	The value of CELL_BAR_ACCESS_2. x is shown if PBCCH is not supported.
o	GSS	FTD_SB_EXC_ACC_4_NEIGH	B:D	R,I,O	The value of EXC_ACC. x is shown if PBCCH is not supported.
p	GSS	FTD_SB_SAME_RA_AS_SRV_CELL_5_NEIGH	B:D	R,I,O	The value of SAME_RA_AS_SERVING_CELL: 1: cell belongs to the same routing area as the serving cell 0: cell belongs to the different routing area as the serving cell
q	GSS	FTD_SB_CELL_BAR_ACC_2_5_NEIGH	B:D	R,I,O	The value of CELL_BAR_ACCESS_2. x is shown if PBCCH is not supported.
r	GSS	FTD_SB_EXC_ACC_5_NEIGH	B:D	R,I,O	The value of EXC_ACC. x is shown if PBCCH is not supported.
s	GSS	FTD_SB_SAME_RA_AS_SRV_CELL_6_NEIGH	B:D	R,I,O	The value of SAME_RA_AS_SERVING_CELL: 1: cell belongs to the same routing area as the serving cell 0: cell belongs to the different routing area as the serving cell
t	GSS	FTD_SB_CELL_BAR_ACC_2_6_NEIGH	B:D	R,I,O	The value of CELL_BAR_ACCESS_2. x is shown if PBCCH is not supported.
u	GSS	FTD_SB_EXC_ACC_6_NEIGH	B:D	R,I,O	The value of EXC_ACC. x is shown if PBCCH is not supported.

5.13 Display 06.12: EGPRS specific parameters

S60 Data display

EGPRS parameters

EGPRS support a
Packet channel b
BEP period cc
LQ meas mode dd

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a	GSS	FTD_SB_EGPRS_SUPPORT	B:D	R,I,O	1=EGPRS supported in cell; 0=not supported
b	GSS	FTD_SB_EGPRS_PACKET_CHANNEL_REQUEST	B:D	R,I,O	1=EGPRS packet channel request supported in cell; 0=not supported
c(2)	GSS	FTD_SB_EGPRS_BEP_PER	B:H	R,I,O	BEP_PERIOD, or BEP_PERIOD2 when received
d(2)	GPDS	FTD_SB_EGPRS_LQ_MEAS_MODE	B:D	R,I,O	Used link quality measurement mode

5.14 Display 06.14 Dual Transfer Mode information

S60 Data display
DTM support aaa MAX_LAPDm bb GTTP ul ccc GTTP dl ddd

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(3)	GSS	FTD_SB_DTM_SUPP	S	R,I,O	Network support of DTM: ON : DTM is supported by the network OFF : DTM is not supported by the network
b(2)	GSS	FTD_SB_DTM_MAX_LAPDM	B:D	R,I,O	The value of parameter MAX_LAPDm, value range 5-12 X is shown if DTM is not supported in the cell
c(3)	GPDS	FTD_SB_DTM_GTTP_UL_CTR	B:D	R,I,O	Counter for LLC PDUs sent via GTTP
d(3)	GPDS	FTD_SB_DTM_GTTP_DL_CTR	B:D	R,I,O	Counter for LLC PDUs received via GTTP

5.15 Display 06.15: Dual Transfer Mode configuration

S60 Data display
DTM channel config for CS and PS (UL+DL) TN CS aaaaaaaa Pdl bbbbbbbb Pul cccccccc

Fields

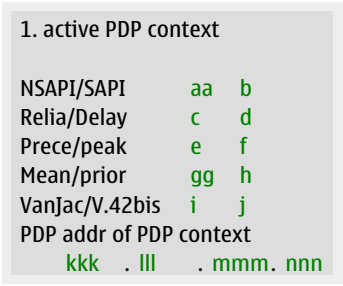
Abbr	Server	Sub-block id	Format	Mode	Description
a(8)	GSS	FTD_SB_DTM_CS_TSLOT_CONF	DW:H	R,I,O	Each bit can have value 1 or 0, 1 indicating that timeslot is part of CS allocation in either uplink or downlink direction. This field also shows the configuration when only CS connection exists.
b(8)	GSS	FTD_SB_DTM_PS_DL_CONF	DW:H	R,I,O	Each bit can have value 1 or 0, 1 indicating that timeslot is part of PS allocation in downlink direction.
c(8)	GSS	FTD_SB_DTM_PS_UL_CONF	DW:H	R,I,O	Each bit can have value 1 or 0, 1 indicating that timeslot is part of PS allocation in uplink direction.

6 Group 07: GPRS Data protocol displays

6.1 Display 07.01: Information of the first active PDP context

If no PDP context is active, xx is shown in all fields. In 2G/3G products, xx is shown in all fields except NSAPI and SAPI.

S60 Data display



Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(2)	GPDS	FTD_SB_GPDS_NSAPI_1	B:D	R,I,O	NSAPI of the PDP context, range 5-15.
b	GPDS	FTD_SB_GPDS_SAPI_1	B:D	R,I,O	The SAPI identity: 3,5,9 or 11.
c	GPDS	FTD_SB_SN_RELC_1	B:D	R,I,O	The negotiated reliability class of the PDP context, range 1-5.
d	GPDS	FTD_SB_SN_DELC_1	B:D	R,I,O	The negotiated delay class of the PDP context, range 1-4.
e	GPDS	FTD_SB_SN_PREC_1	B:D	R,I,O	The negotiated precedence class of the PDP context, range 1-3
f	GPDS	FTD_SB_SN_PTPC_1	B:D	R,I,O	The negotiated peak throughput, range 1-9.
g(2)	GPDS	FTD_SB_SN_MTPC_1	S	R,I,O	The negotiated mean throughput, range 1-18 or B (=best effort).
h	GPDS	FTD_SB_SN_RPRI_1	B:D	R,I,O	The radio priority of the PDP context, range 1-4.
i	GPDS	FTD_SB_SN_HCOMP_1	S	R,I,O	P if protocol compression (VanJacobsen) isnegotiated to be usedotherwise empty.
j	GPDS	FTD_SB_SN_DCOMP_1	S	R,I,O	D if data compression (V.42bis) is negotiated to be used otherwise empty.
k(3)	GPDS	FTD_ SB_GPDS_PDP_ADDRESS_1_1	B:D	R,I,O	The PDP address of the PDP context, part 1. Format IPv4 address.
l(3)	GPDS	FTD_ SB_GPDS_PDP_ADDRESS_1_2	B:D	R,I,O	The PDP address of the PDP context, part 2. Format IPv4 address.
m(3)	GPDS	FTD_ SB_GPDS_PDP_ADDRESS_1_3	B:D	R,I,O	The PDP address of the PDP context, part 3. Format IPv4 address.
n(3)	GPDS	FTD_ SB_GPDS_PDP_ADDRESS_1_4	B:D	R,I,O	The PDP address of the PDP context, part 4. Format IPv4 address.

6.2 Display 07.02: Information of the second active PDP context

If no PDP context is active, xx is shown in all fields. In 2G/3G products, xx is shown in all fields except NSAPI and SAPI.

S60 Data display
2. active PDP context NSAPI/SAPI aa b Relia/Delay c d Prece/peak e f Mean/prior gg h VanJac/V.42bis i j PDP addr of PDP context kkk . lll . mmm. nnn

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(2)	GPDS	FTD_SB_GPDS_NSAPI_2	B:D	R,I,O	NSAPI of the PDP context, range 5-15.
b	GPDS	FTD_SB_GPDS_SAPI_2	B:D	R,I,O	SAPI of the PDP context: 3,5,9 or B (=11)
c	GPDS	FTD_SB_SN_RELC_2	B:D	R,I,O	The negotiated reliability class of the PDP context, range 1-5.
d	GPDS	FTD_SB_SN_DELC_2	B:D	R,I,O	The negotiated delay class of the PDP context, range 1-4.
e	GPDS	FTD_SB_SN_PREC_2	B:D	R,I,O	The negotiated precedence class of the PDP context, range 1-3
f	GPDS	FTD_SB_SN_PTPC_2	B:D	R,I,O	The negotiated peak throughput, range 1-9.
g(2)	GPDS	FTD_SB_SN_MTPC_2	S	R,I,O	The negotiated mean throughput, range 1-18 or B (=best effort).
h	GPDS	FTD_SB_SN_RPRI_2	B:D	R,I,O	The radio priority of the PDP context, range 1-4.
i	GPDS	FTD_SB_SN_HCOMP_2	S	R,I,O	P if protocol compression (VanJacobsen) is negotiated to be used otherwise empty.
j	GPDS	FTD_SB_SN_DCOMP_2	S	R,I,O	D if data compression (V.42bis) is negotiated to be used otherwise empty.
k(3)	GPDS	FTD_ SB_GPDS_PDP_ADDRESS_2_1	B:D	R,I,O	The PDP address of the PDP context, part 1. Format IPv4 address.
l(3)	GPDS	FTD_ SB_GPDS_PDP_ADDRESS_2_2	B:D	R,I,O	The PDP address of the PDP context, part 2. Format IPv4 address.
m(3)	GPDS	FTD_ SB_GPDS_PDP_ADDRESS_2_3	B:D	R,I,O	The PDP address of the PDP context, part 3. Format IPv4 address.
n(3)	GPDS	FTD_ SB_GPDS_PDP_ADDRESS_2_4	B:D	R,I,O	The PDP address of the PDP context, part 4. Format IPv4 address.

6.3 Display 07.03: Information of the RLC state

S60 Data display
RLC state information Downlink TS a Coding scheme b RLC mode down cccc Uplink TS d Coding scheme e RLC mode up ffff UL TBF ggggg N3102 state hh

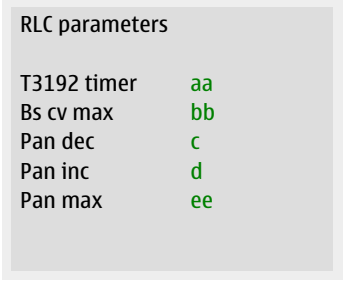
Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a	GPDS	FTD_SB_RLC_DL_SLOTS	B:D	R,I,O	Downlink time slot count in the latest TBF configuration, range 0-8
b	GPDS	FTD_SB_RLC_DL_CH_CODE	B:D	R,I,O	Channel coding scheme in downlink direction, range 1-4. If no downlink TBF is active, x is shown. Appears also on display 07.03.
c(4)	GPDS	FTD_SB_RLC_DL_MODE	S	R,I,O	RLC mode in downlink direction. If no downlink TBF is active, xxxxx is shown. ACK: RLC in acknowledged mode UNAC: RLC in unacknowledged mode
d	GPDS	FTD_SB_RLC_UL_SLOTS	B:D	R,I,O	Uplink time slot count in the latest TBF configuration, range 0-8.
e	GPDS	FTD_SB_RLC_UL_CH_CODE	B:D	R,I,O	Channel coding scheme in uplink direction, range 1-4. If no uplink TBF is active, x is shown. Appears also on display 07.03.
f(4)	GPDS	FTD_SB_RLC_UL_MODE	S	R,I,O	RLC mode in uplink direction. If no uplink TBF is active, xxxx is shown. ACK: RLC in acknowledged mode UNAC: RLC in unacknowledged mode
g(5)	GPDS	FTD_SB_RLC_ENDING_MODE	S	R,I,O	xxxxx when no UL TBF is active CLOSE when UL TBF is close-ended TBF OPEN when UL TBF is open-ended TBF
h(2)	GPDS	FTD_SB_RLC_N3102	B:D	R,I,O	The state of N3102 counter, range 0-PAN_MAX (negative values are also shown as 0). If the counter is disabled, x is shown.

6.4 Display 07.04: RLC parameters

xx is shown in the fields when the values are not available (e.g. no GPRS support in the cell, no GPRS attach performed).

S60 Data display



Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(2)	GPDS	FTD_SB_RLC_T3192	B:D	R,I,O	The value of T3192 timer, range 0-7, corresponding 0.5s, 1s, , 4s.
b(2)	GPDS	FTD_SB_RLC_BS_CV_MAX	B:D	R,I,O	The value of BS_CV_MAX, range 1-15. Tells how many radio block periods the countdown procedure lasts in the end of UL TBF.
c	GPDS	FTD_SB_RLC_PAN_DEC	B:D	R,I,O	The value of PAN_DEC, range 0-7. If PAN_DEC and PAN_INC are equal to 0, N3102 counter is disabled.
d	GPDS	FTD_SB_RLC_PAN_INC	B:D	R,I,O	The value of PAN_INC, range 0-7. If PAN_DEC and PAN_INC are equal to 0, N3102 counter is disabled.
e(2)	GPDS	FTD_SB_RLC_PAN_MAX	B:D	R,I,O	The value of PAN_MAX, range 4-32.

6.5 Display 07.05: RLC data block counters

S60 Data display

RLC data block counters

Rcve blocks	aaaa
Sent blocks	bbbb
Missing dl bl	cccc
Req retrans ul	dddd

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(4)	GPDS	FTD_SB_RLC_BLOCKS_RECV	W:D	R,I,O	Counter for received RLC data blocks
b(4)	GPDS	FTD_SB_RLC_BLOCKS_SENT	W:D	R,I,O	Counter for sent RLC data blocks
c(4)	GPDS	FTD_SB_RLC_BLOCKS_MISS	W:D	R,I,O	Counter for detected missing downlink data blocks
d(4)	GPDS	FTD_SB_RLC_BLOCKS_RESENT	W:D	R,I,O	Counter for requested re-transmissions of the uplink RLC data blocks

6.6 Display 07.06: LLC data block counters

S60 Data display

LLC data block counters

Received PDU's	aaaa
Sent PDU's	bbbb
Missing downl PDU's	cccc
Re-trans uplink PDU's	dddd

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(4)	GPDS	FTD_SB_LLC_PDU_RECV	W:D	R,I,O	Counter for received LLC PDUs
b(4)	GPDS	FTD_SB_LLC_PDU_SENT	W:D	R,I,O	Counter for sent LLC PDUs
c(4)	GPDS	FTD_SB_LLC_PDU_MISS	W:D	R,I,O	Counter for detected missing or erroneous?? downlink LLC PDUs
d(4)	GPDS	FTD_SB_LLC_PDU_RESENT	W:D	R,I,O	Counter for re-transmitted uplink LLC PDUs

6.7 Display 07.07: LLC Ciphering parameters

S60 Data display
LLC ciphering parameters LSB of Kc aaaaaaaa MSB of Kc bbbbbbbb UL overflow I cccc DL overflow I dddd UL overflow UI eeee DL overflow UI ffff

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(8)	GPDS	FTD_SB_LLC_KC1	DW:D	R,I,O	LSB of Kc (bits 0-31) in hex format
b(8)	GPDS	FTD_SB_LLC_KC2	DW:D	R,I,O	MSB of Kc (bits 32-63) in hex format
c(4)	GPDS	FTD_SB_LLC_OC_I_UL	W:D	R,I,O	Uplink overflow counter for I frames
d(4)	GPDS	FTD_SB_LLC_OC_I_DL	W:D	R,I,O	Downlink overflow counter for I frames
e(4)	GPDS	FTD_SB_LLC_OC_UI_UL	W:D	R,I,O	Uplink overflow counter for UI frames
f(4)	GPDS	FTD_SB_LLC_OC_UI_DL	W:D	R,I,O	Downlink overflow counter for UI frames

6.8 Display 07.08: LLC parameters of the first SAPI

xx is shown in all fields if there is no LLC SAPIs activated

S60 Data display
LLC parameters 1. SAPI SAPI a N201-I bbbb N201-U cccc N200/T200 dd eeee kU/kD fff ggg

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a	GPDS	FTD_SB_GPDS_SAPI_1	B:D	R,I,O	The SAPI identity: 3,5,9 or 11.
b(4)	GPDS	FTD_SB_LLC_N201_I_1	W:D	R,I,O	The value of N201-I (maximum information field for I frames), range 140-1520.
c(4)	GPDS	FTD_SB_LLC_N201_U_1	W:D	R,I,O	The value of N201-U (maximum information field for U and UI frames), range 140-1520.
d(2)	GPDS	FTD_SB_LLC_N200_1	B:D	R,I,O	The value of N200 (maximum number of retransmissions), range 1-15.
e(4)	GPDS	FTD_SB_LLC_T200_1	W:D	R,I,O	The value of T200 (retransmission timeout), range 1-4095.
f(3)	GPDS	FTD_SB_LLC_KU_1	B:D	R,I,O	The value of kU (uplink window size), range 1-255.
g(3)	GPDS	FTD_SB_LLC_KD_1	B:D	R,I,O	The value of kD (downlink window size), range 1-255.

6.9 Display 07.09: LLC parameters of the second SAPI

xx is shown in all fields if there is no LLC SAPIs activated.

S60 Data display

LLC parameters 2. SAPI

SAPI	a
N201-I	bbbb
N201-U	cccc
N200/T200	dd eeee
kU/kD	fff ggg

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a	GPDS	FTD_SB_GPDS_SAPI_2	B:D	R,I,O	SAPI of the PDP context: 3,5,9 or B (=11)
b(4)	GPDS	FTD_SB_LLC_N201_I_2	W:D	R,I,O	The value of N201-I (maximum information field for I frames), range 140-1520.
c(4)	GPDS	FTD_SB_LLC_N201_U_2	W:D	R,I,O	The value of N201-U (maximum information field for U and UI frames), range 140-1520.
d(2)	GPDS	FTD_SB_LLC_N200_2	B:D	R,I,O	The value of N200 (maximum number of retransmissions), range 1-15.
e(4)	GPDS	FTD_SB_LLC_T200_2	W:D	R,I,O	The value of T200 (retransmission timeout), range 1-4095.
f(3)	GPDS	FTD_SB_LLC_KU_2	B:D	R,I,O	The value of kU (uplink window size), range 1-255.
g(3)	GPDS	FTD_SB_LLC_KD_2	B:D	R,I,O	The value of kD (downlink window size), range 1-255.

6.10 Display 07.10: SNDC Data counters

S60 Data display

SNDC data counters

Rcvd NPDU's	aaaa
Sent NPDU's	bbbb
Abort NPDU recep	cccc
Resent NPDU's	dddd

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(4)	GPDS	FTD_SB_SN_NPDU_RECV	W:D	R,I,O	Counter for received NPDUs
b(4)	GPDS	FTD_SB_SN_NPDU_SENT	W:D	R,I,O	Counter for sent NPDUs
c(4)	GPDS	FTD_SB_SN_NPDU_ABORT	W:D	R,I,O	Counter for aborted NPDU receptions
d(4)	GPDS	FTD_SB_SN_NPDU_RESENT	W:D	R,I,O	Counter for resent NPDUs

6.11 Display 07.11: PPP information

S60 Data display
PPP information PPP HDLC FCS failures aaaa PPP max receive unit bbbb PPP max transmit unit cccc

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(4)	GPDS	FTD_SB_PDI_FCS_FAIL	W:D	R,I,O	Counter for PPP HDLC FCS failures
b(4)	GPDS	FTD_SB_PDI_MRU	W:D	R,I,O	Negotiated PPP Maximum Receive Unit Value.
c(4)	GPDS	FTD_SB_PDI_MTU	W:D	R,I,O	Negotiated PPP Maximum Transmit Unit Value.

6.12 Display 07.12: ERLC Data information_1

S60 Data display
ERLC Data information 1 Used MCS UL aaaa Used MCS DL bbbb Resegment c Pre-empt d

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(4)	GPDS	FTD_SB_ERLC_MCS_UPLINK	S	R,I,O	Used MCS for uplink. Coding 1,2,3,4,5,6,7,8,9,3P,6P
b(4)	GPDS	FTD_SB_ERLC_MCS_DOWNLINK	S	R,I,O	Used MCS for downlink Coding 1,2,3,4,5,6,7,8,9,3P,6P
c	GPDS	FTD_SB_ERLC_RESEGMENT	B:D	R,I,O	Value of resegmentation bit
d	GPDS	FTD_SB_ERLC_PRE_EMPTIVE	B:D	R,I,O	Value of pre-emptive transmission bit

6.13 Display 07.13: ERLC Data information_2

S60 Data display
ERLC Data information 2 Used window size for UL aaaaa Used window size for DL bbbbb

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(5)	GPDS	FTD_SB_ERLC_WINDOW_UPLINK	W:D	R,I,O	Used window size for uplink
b(5)	GPDS	FTD_ SB_ERLC_WINDOW_DOWNLINK	W:D	R,I,O	Used window size for downlink

6.14 Display 07.14: ERLC Data counters

S60 Data display
ERLC Data counters MS out of memory counter aaaaa MCS changes during TBF bbbbb

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(5)	GPDS	FTD_SB_ERLC_MS_OUT_OF_MEM	DW:D	R,I,O	MS_OUT_OF_MEMORY counter
b(5)	GPDS	FTD_ SB_ERLC_LINK_ADAPTATIONS	DW:D	R,I,O	Number of MCS changes during TBF

6.15 Display 07.15: System status

In 2G only products, xx is shown in all counter fields.

S60 Data display
System status System status aa SMS sig req bbbbb Data serv req ccccc GSM serv req ddddd Inter-sys HO eeeee Active PDP ff Active CID ggggggggggg

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(2)	GPDS	FTD_SB_GPDS_ATT_AND_PDP	S	R,I,O	G if MS is GSM-GPRS attached, GP if attached and PDP context created, U if UMTS-GPRS attached, UP if attached and PDP context created, otherwise empty.
b(5)	GPDS	FTD_SB_GPDS_MSL_SMS_SERV_REQ_COUNTER	W:D	R,I,O	Counter for SMS signalling service requests.
c(5)	GPDS	FTD_SB_GPDS_MSL_DATA_SERV_REQ_COUNTER	W:D	R,I,O	Counter for data service requests.
d(5)	GPDS	FTD_SB_GPDS_MSL_GSM_SERV_REQ_COUNTER	W:D	R,I,O	Counter for GSM service requests.
e(5)	GPDS	FTD_SB_GPDS_MSL_INTSYS_HO_COUNTER	W:D	R,I,O	Counter for inter-system handovers.
f(2)	GPDS	FTD_SB_GPDS_CONTEXT_COUNT	B:D	R,I,O	Number of active PDP contexts, range 0-10.
g(12)	GPDS	FTD_SB_GPDS_ACTIVE_CIDS	S	R,I,O	Active CIDs (6 first) after each other, range 0-10 for each. Example when 4 active PDP contexts: 0 1 2 3 .

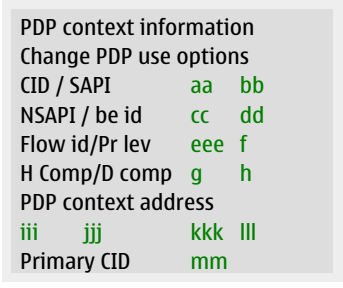
6.16 Display 07.16: Information of the selected PDP context

To change PDP context, perform following steps:

1. Press the Menu button.
2. Scroll in the main menu loop to field test display item.
3. Press the Select button.
4. Select this display in input mode by entering 0716 (GPRS Data protocol displays; Information of the selected PDP context) to the query prompt.
5. "INPUT" prompt will be shown on the display, enter the PDP context identifier (CID) in display.
6. Confirm with the Ok button.

If change succeeded, the new PDP context information is displayed. If no PDP context is active, xx is shown in all fields. In 2G only products, xx is shown in most of the fields.

S60 Data display



Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(2)	GPDS	FTD_SB_GPDS_CID	B:D	R,I,O	CID of the PDP context, range 0-10.
b(2)	GPDS	FTD_SB_GPDS_SAPI	B:D	R,I,O	SAPI of the PDP context: 1,3,5,7,9 or 11.

Abbr	Server	Sub-block id	Format	Mode	Description
c(2)	GPDS	FTD_SB_GPDS_NSAPI	B:D	R,I,O	NSAPI of the PDP context, range 5-15.
d(2)	GPDS	FTD_SB_GPDS_MSL_RBID	B:D	R,I,O	The radio bearer ID of the PDP context, range 5-32.
e(3)	GPDS	FTD_SB_GPDS_MSL_PFID	B:D	R,I,O	The packet flow ID of the PDP context, range 0-127.
f	GPDS	FTD_SB_GPDS_MSL_RPRI	B:D	R,I,O	Radio priority level of the corresponding NSAPI, range 1-4.
g	GPDS	FTD_SB_GPDS_MSL_HCOMP	S	R,I,O	Header compression to be used: V - VanJacobsen (RFC1144), D - Degermark (RFC2507), R - RoHC (RFC3095), otherwise 'x' is shown.
h	GPDS	FTD_SB_GPDS_MSL_DCOMP	S	R,I,O	Data compression to be used: 2 - V.42bis 4 - V.44, otherwise 'x' is shown.
i(3)	GPDS	FTD_ SB_GPDS_PDP_ADDRESS_V4_1	B:D	R,I,O	First byte of the PDP address in IPv4 format. If IPv6 is used 'xxx' is shown.
j(3)	GPDS	FTD_ SB_GPDS_PDP_ADDRESS_V4_2	B:D	R,I,O	Second byte of the PDP address in IPv4 format. If IPv6 is used 'xxx' is shown.
k(3)	GPDS	FTD_ SB_GPDS_PDP_ADDRESS_V4_3	B:D	R,I,O	Third byte of the PDP address in IPv4 format. If IPv6 is used 'xxx' is shown.
l(3)	GPDS	FTD_ SB_GPDS_PDP_ADDRESS_V4_4	B:D	R,I,O	Last byte of the PDP address in IPv4 format. If IPv6 is used 'xxx' is shown.
m(2)	GPDS	FTD_SB_GPDS_RELATEDPRIM_CID	B:D	R,I,O	Empty if primary context. CID of the related primary PDP context, range 0-10, if secondary context.
INPUT(4)	GPDS	FTD_SB_GPDS_CHANGE_CONTEXT	DW:D	R,I,O	Context identifier (CID), range 0-10.

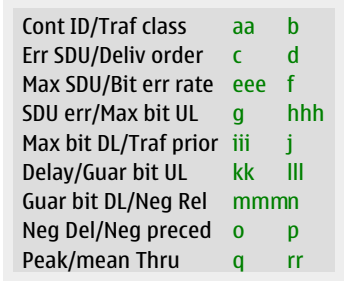
6.17 Display 07.17: QoS of the selected PDP context

To change PDP context, perform following steps:

1. Press the Menu button.
2. Scroll in the main menu loop to field test display item.
3. Press the Select button.
4. Select this display in input mode by entering 0717 (GPRS Data protocol displays; QoS of the selected PDP context) to the query prompt.
5. "INPUT" prompt will be shown on the display, enter the PDP context identifier (CID) in display.
6. Confirm with the Ok button.

If change succeeded, the new QoS information is displayed. If no PDP context is active, xx is shown in all fields

S60 Data display



Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(2)	GPDS	FTD_SB_GPDS_CID	B:D	R,I,O	CID of the PDP context, range 0-10.

Abbr	Server	Sub-block id	Format	Mode	Description
b	GPDS	FTD_SB_GPDS_SM_TRAC	B:D	R,I,O	The traffic class, range 1-4.
c	GPDS	FTD_SB_GPDS_SM_DOES	B:D	R,I,O	The delivery of the erroneous SDUs, range 1-3.
d	GPDS	FTD_SB_GPDS_SM_DELO	B:D	R,I,O	The delivery order, range 1-2.
e(3)	GPDS	FTD_SB_GPDS_SM_MSDU	B:D	R,I,O	Maximum SDU size, range 1-153.
f	GPDS	FTD_SB_GPDS_SM_RBER	B:D	R,I,O	The residual Bit Error Rate (BER), range 1-9.
g	GPDS	FTD_SB_GPDS_SM_SDER	B:D	R,I,O	The SDU error ratio, range 1-7.
h(3)	GPDS	FTD_SB_GPDS_SM_MBRU	B:D	R,I,O	Maximum bit rate for uplink, range 1-254.
i(3)	GPDS	FTD_SB_GPDS_SM_MBRD	B:D	R,I,O	Maximum bit rate for downlink, range 1-254.
j	GPDS	FTD_SB_GPDS_SM_TRHP	B:D	R,I,O	The traffic handling priority, range 1-3.
k(2)	GPDS	FTD_SB_GPDS_SM_TRDL	B:D	R,I,O	The transfer delay, range 1-62.
l(3)	GPDS	FTD_SB_GPDS_SM_GBRU	B:D	R,I,O	Guaranteed bit rate for uplink, range 1-254.
m(3)	GPDS	FTD_SB_GPDS_SM_GBRD	B:D	R,I,O	Guaranteed bit rate for downlink, range 1-254.
n	GPDS	FTD_SB_GPDS_SM_RELC	B:D	R,I,O	The negotiated reliability class, range 1-5.
o	GPDS	FTD_SB_GPDS_SM_DELC	B:D	R,I,O	The negotiated delay class, range 1-4.
p	GPDS	FTD_SB_GPDS_SM_PREC	B:D	R,I,O	The negotiated precedence class, range 1-3
q	GPDS	FTD_SB_GPDS_SM_PTPC	B:D	R,I,O	The negotiated peak throughput, range 1-9.
r(2)	GPDS	FTD_SB_GPDS_SM_MTPC	B:D	R,I,O	The negotiated mean throughput, range 1-31.
INPUT(4)	GPDS	FTD_SB_GPDS_CHANGE_CONTEXT	DW:D	R,I,O	Context identifier (CID), range 0-10.

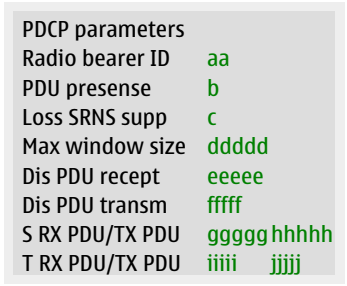
6.18 Display 07.18: PDCP parameters of the selected PDP context

To change PDP context, perform following steps:

1. Press the Menu button.
2. Scroll in the main menu loop to field test display item.
3. Press the Select button.
4. Select this display in input mode by entering 0718 (GPRS Data protocol displays; PDCP parameters of the selected PDP context) to the query prompt.
5. "INPUT" prompt will be shown on the display, enter the PDP context identifier (CID) in display.
6. Confirm with the Ok button.

If change succeeded, new PDCP parameters are displayed. If no PDCP radio bearer is active, xx is shown in all fields.

S60 Data display



Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(2)	GPDS	FTD_SB_GPDS_PDCP_RBID	B:D	R,I,O	The radio bearer ID of the PDP context, range 5-32.
b	GPDS	FTD_SB_GPDS_PDCP_HEADER	B:D	R,I,O	Indicates the presence of the PDCP PDU header, range 0-1.
c	GPDS	FTD_SB_GPDS_PDCP_RELOC	B:D	R,I,O	Indicates whether the lossless SRNS relocation is supported, range 0-1.
d(5)	GPDS	FTD_SB_GPDS_PDCP_MAX_WS	W:D	R,I,O	Maximum window size, 0-65535.
e(5)	GPDS	FTD_SB_GPDS_PDCP_RECV_DISC	W:D	R,I,O	Number of discarded PDUs in reception.
f(5)	GPDS	FTD_SB_GPDS_PDCP_SENT_DISC	W:D	R,I,O	Number of discarded PDUs in transmission.
g(5)	GPDS	FTD_SB_GPDS_PDCP_SEQ_RECV	W:D	R,I,O	Number of PDUs received with sequence number.
h(5)	GPDS	FTD_SB_GPDS_PDCP_SEQ_SENT	W:D	R,I,O	Number of PDUs sent with sequence number.
i(5)	GPDS	FTD_SB_GPDS_PDCP_PDU_RECV	W:D	R,I,O	Total number of received PDUs.
j(5)	GPDS	FTD_SB_GPDS_PDCP_PDU_SENT	W:D	R,I,O	Total number of sent PDUs.
INPUT(4)	GPDS	FTD_SB_GPDS_CHANGE_CONTEXT	DW:D	R,I,O	Context identifier (CID), range 0-10.

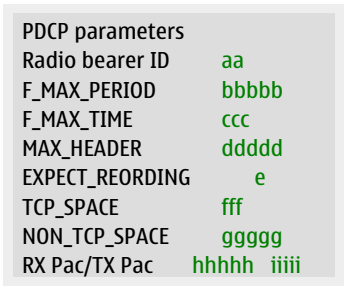
6.19 Display 07.19: RFC2507 parameters of the selected PDP context

To change PDP context, perform following steps:

1. Press the Menu button
2. Scroll in the main menu loop to field test display item
3. Press the Select button
4. Select this display in input mode by entering 0719 (GPRS Data protocol displays; RFC2507 parameters of the selected PDP context) to the query prompt
5. "INPUT" prompt will be shown on the display, enter the PDP context identifier (CID) in display
6. Confirm with the Ok button

If change succeeded, new RFC2507 parameters are displayed. If RFC2507 is not active, xx is shown in all fields.

S60 Data display



Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(2)	GPDS	FTD_SB_GPDS_CID	B:D	R,I,O	CID of the PDP context, range 0-10.
b(5)	GPDS	FTD_ SB_GPDS_RFC2507_MAX_PERIOD	W:D	R,I,O	RFC2507 parameter F_MAX_PERIOD, range 1-65535.
c(3)	GPDS	FTD_ SB_GPDS_RFC2507_MAX_TIME	B:D	R,I,O	RFC2507 parameter F_MAX_TIME, range 1-255.

Abbr	Server	Sub-block id	Format	Mode	Description
d(5)	GPDS	FTD_SB_GPDS_RFC2507_MAX_HEADER	W:D	R,I,O	RFC2507 parameter MAX_HEADER, range 60-65535.
e	GPDS	FTD_SB_GPDS_RFC2507_EXP_REORD	B:D	R,I,O	RFC2507 parameter EXPECT_REORDERING, range 0-1.
f(3)	GPDS	FTD_SB_GPDS_RFC2507_TCP_SPACE	B:D	R,I,O	RFC2507 parameter TCP_SPACE, range 3-255.
g(5)	GPDS	FTD_SB_GPDS_RFC2507_NON_TCP_SPACE	W:D	R,I,O	RFC2507 parameter NON_TCP_SPACE, range 3-65535.
h(5)	GPDS	FTD_SB_GPDS_RFC2507_CTX_STATE_RECV	W:D	R,I,O	Number of received context state packets.
i(5)	GPDS	FTD_SB_GPDS_RFC2507_CTX_STATE_SENT	W:D	R,I,O	Number of sent context state packets.
INPUT(4)	GPDS	FTD_SB_GPDS_CHANGE_CONTEXT	DW:D	R,I,O	Context identifier (CID), range 0-10.

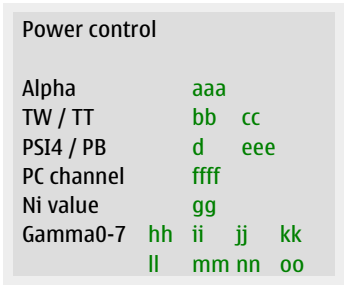
7 Group 08: GPRS Measurement displays

7.1 Group 08 Information

If MS is not GPRS attached, xxx is shown in all displays.

7.2 Display 08.01: Power control parameters

S60 Data display



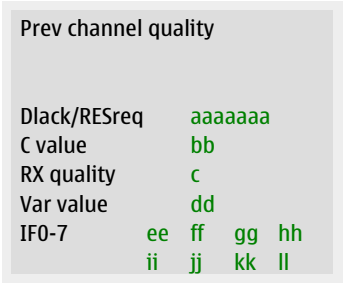
Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(3)	GSS	FTD_SB_ALPHA	S	R,I,O	The value of ALPHA, range 0.0-1.0.
b(2)	GSS	FTD_SB_T_AVG_W	B:D	R,I,O	The k value for T_AVG_W, range 0-25.
c(2)	GSS	FTD_SB_T_AVG_T	B:D	R,I.O	The k value for T_AVG_T, range 0-25.
d	GPDS	FTD_SB_MAC_PSI5_BROADCAST	B:D	R,I,O	The availability of Packet system information 5 (optional) 0: PSI 5 not supported 1: PSI 5 supported
e(3)	GSS	FTD_SB_PB	B:D	R,I.O	The value of Pb, range 0 - -30 [dB]. xxx is shown if PBCCH is not supported.
f(4)	GSS	FTD_SB_PC_MEAS_CHAN	S	R,I.O	The value of PC_MEAS_CHAN, either BCCH or PDCH.
g(2)	GSS	FTD_SB_N_AVG_I	B:D	R,I.O	The k value for N_AVG_I, range 0-15.
h(2)	GSS	FTD_SB_GAMMA_TN0	B:D	R,I.O	The Value of GAMMA_TN0, range 0-62 [dB]. xx is shown in place of unused time slots. (Thus, in packet idle mode value is xx)
i(2)	GSS	FTD_SB_GAMMA_TN1	B:D	R,I.O	The Value of GAMMA_TN1, range 0-62 [dB]. xx is shown in place of unused time slots. (Thus, in packet idle mode value is xx)
j(2)	GSS	FTD_SB_GAMMA_TN2	B:D	R,I.O	The Value of GAMMA_TN2, range 0-62 [dB]. xx is shown in place of unused time slots. (Thus, in packet idle mode value is xx)
k(2)	GSS	FTD_SB_GAMMA_TN3	B:D	R,I.O	The Value of GAMMA_TN3, range 0-62 [dB]. xx is shown in place of unused time slots. (Thus, in packet idle mode value is xx)
l(2)	GSS	FTD_SB_GAMMA_TN4	B:D	R,I.O	The Value of GAMMA_TN4, range 0-62 [dB]. xx is shown in place of unused time slots. (Thus, in packet idle mode value is xx)
m(2)	GSS	FTD_SB_GAMMA_TN5	B:D	R,I.O	The Value of GAMMA_TN5, range 0-62 [dB]. xx is shown in place of unused time slots. (Thus, in packet idle mode value is xx)
n(2)	GSS	FTD_SB_GAMMA_TN6	B:D	R,I.O	The Value of GAMMA_TN6, range 0-62 [dB]. xx is shown in place of unused time slots. (Thus, in packet idle mode value is xx)

Abbr	Server	Sub-block id	Format	Mode	Description
o(2)	GSS	FTD_SB_GAMMA_TN7	B:D	R,I.O	The Value of GAMMA_TN7, range 0-62 [dB]. xx is shown in place of unused time slots. (Thus, in packet idle mode value is xx)

7.3 Display 08.02: The previous channel quality report

S60 Data display



Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(7)	GPDS	FTD_ SB_MAC_QUAL_REP_SENT_IN	S	R,I,O	DL_ACK if the previous channel quality report was sent in PACKET DOWNLINK ACK/NACK message.RES_REQ if the previous channel quality report was sent in PACKET RESOURCE REQUEST
b(2)	GPDS	FTD_SB_MAC_QUAL_REP_C	B:D	R,I,O	The reported C value, range 0-63.
c	GPDS	FTD_SB_MAC_QUAL_REP_RXQUAL	B:D	R,I,O	The reported RXQUAL value, downlink quality, range 0-7. If the previous channel quality report was included in PACKET RESOURCE REQUEST, x is shown.
d(2)	GPDS	FTD_ SB_MAC_QUAL_REP_SIGN_VAR	B:D	R,I,O	The reported SIGN_VAR value, range 0-63. xx is shown if the parameter was not included in the channel quality report (in two-phase access).
e(2)	GPDS	FTD_ SB_MAC_QUAL_REP_I_LEVEL_TN0	B:D	R,I,O	The reported I_LEVEL_TN0, I_LEVEL_TN1 to I_LEVEL_TN7 values, range 0-63 on each. xx is shown if the corresponding interference level was not reported.
f(2)	GPDS	FTD_ SB_MAC_QUAL_REP_I_LEVEL_TN1	B:D	R,I,O	The reported I_LEVEL_TN0, I_LEVEL_TN1 to I_LEVEL_TN7 values, range 0-63 on each. xx is shown if the corresponding interference level was not reported.
g(2)	GPDS	FTD_ SB_MAC_QUAL_REP_I_LEVEL_TN2	B:D	R,I,O	The reported I_LEVEL_TN0, I_LEVEL_TN1 to I_LEVEL_TN7 values, range 0-63 on each. xx is shown if the corresponding interference level was not reported.
h(2)	GPDS	FTD_ SB_MAC_QUAL_REP_I_LEVEL_TN3	B:D	R,I,O	The reported I_LEVEL_TN0, I_LEVEL_TN1 to I_LEVEL_TN7 values, range 0-63 on each. xx is shown if the corresponding interference level was not reported.
i(2)	GPDS	FTD_ SB_MAC_QUAL_REP_I_LEVEL_TN4	B:D	R,I,O	The reported I_LEVEL_TN0, I_LEVEL_TN1 to I_LEVEL_TN7 values, range 0-63 on each. xx is shown if the corresponding interference level was not reported.
j(2)	GPDS	FTD_ SB_MAC_QUAL_REP_I_LEVEL_TN5	B:D	R,I,O	The reported I_LEVEL_TN0, I_LEVEL_TN1 to I_LEVEL_TN7 values, range 0-63 on each. xx is shown if the corresponding interference level was not reported.
k(2)	GPDS	FTD_ SB_MAC_QUAL_REP_I_LEVEL_TN6	B:D	R,I,O	The reported I_LEVEL_TN0, I_LEVEL_TN1 to I_LEVEL_TN7 values, range 0-63 on each. xx is shown if the corresponding interference level was not reported.
l(2)	GPDS	FTD_ SB_MAC_QUAL_REP_I_LEVEL_TN7	B:D	R,I,O	The reported I_LEVEL_TN0, I_LEVEL_TN1 to I_LEVEL_TN7 values, range 0-63 on each. xx is shown if the corresponding interference level was not reported.

8 Group 09: GPRS Test counter displays

8.1 Display 09.02: TBF counters

S60 Data display

TBF counters

UL packet idle	aaaaa
UL TBF idle	bbbbb
UL packet tr	ccccc
UL TBF tr	ddddd
DL TBF idle	eeeee
UL abnormal	fffff

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(5)	GPDS	FTD_SB_MAC_UL_TBF_IDLE_ATTEMPT	W:D	R,I,O	Counter for UL TBF attempts in packet idle mode
b(5)	GPDS	FTD_SB_RLC_UL_TBF_IDLE_SUCC	W:D	R,I,O	Counter for successful UL TBFs, established in packet idle mode
c(5)	GPDS	FTD_SB_MAC_UL_TBF_TRANS_ATTEMPT	W:D	R,I,O	Counter for UL TBF attempts in packet transfer mode
d(5)	GPDS	FTD_SB_RLC_UL_TBF_TRANS_SUCC	W:D	R,I,O	Counter for successful UL TBFs, established in packet transfer mode
e(5)	GPDS	FTD_SB_MAC_DL_TBF_COUNTER	W:D	R,I,O	Counter for DL TBF establishments in packet idle mode
f(5)	GPDS	FTD_SB_RLC_UL_TBF_ABNORM_REL	W:D	R,I,O	Counter for UL TBF abnormal releases, any reason

8.2 Display 09.10: GPRS attach and detach counters

S60 Data display

GPRS attach and detach

Attach failure	aa
Attach attemps	bbb
Attach succeeded	cccc
NI detach cause	dd
NI detach counter	eee

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(2)	GPDS	FTD_SB_GMM_ATTACH_FAIL_CAUSE	B:H	R,I,O	Cause of the last attach failure
b(3)	GPDS	FTD_SB_GMM_ATTACH_ATTEMPT	W:D	R,I,O	Counter for the attach attempts
c(4)	GPDS	FTD_SB_GMM_ATTACH_OK	W:D	R,I,O	Counter for the succeededl attachs

Abbr	Server	Sub-block id	Format	Mode	Description
d(2)	GPDS	FTD_ SB_GMM_NTW_INIT_DET_CAUSE	B:H	R,I,O	Cause of the last network initiated detach
e(3)	GPDS	FTD_ SB_GMM_NTW_INIT_DETACH	W:D	R,I,O	Counter for network initiated detach

8.3 Display 09.11: Periodic routing area update counters

S60 Data display

Periodic routing area update counters

RA update cause aa
RAU attemps bbbb
RAU succeeded cccc

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(2)	GPDS	FTD_SB_GMM_PRAU_FAIL_CAUSE	B:H	R,I,O	Cause of the last periodic routing area update failure
b(4)	GPDS	FTD_SB_GMM_PRAU_ATTEMPT	W:D	R,I,O	Counter for the periodic RAU attempts
c(4)	GPDS	FTD_SB_GMM_PRAU_OK	W:D	R,I,O	Counter for the succeeded periodic RAUs

8.4 Display 09.12: Routing area update counters

S60 Data display

Routing area update counters

RA update cause aa
RAU attemps bbbb
RAU succeeded cccc

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(2)	GPDS	FTD_SB_GMM_RAU_FAIL_CAUSE	B:H	R,I,O	Cause of the last routing area update failure
b(4)	GPDS	FTD_SB_RAU_ATTEMPT	W:D	R,I,O	Counter for the RAU attempts
c(4)	GPDS	FTD_SB_RAU_OK	W:D	R,I,O	Counter for the succeeded RAUs

8.5 Display 09.13: PDP context counters

S60 Data display

PDP context counters

PDP act failure	aa
PDP act attemps	bbb
PDP succeeded	ccc
PDP MS init deact	dd
PDP net init deact	ee

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(2)	GPDS	FTD_SB_SM_MO_PDP_FAIL_CAUSE	B:H	R,I,O	Cause of the last MS initiated PDP context activation failure
b(3)	GPDS	FTD_SB_SM_MO_PDP_ATTEMPT	W:D	R,I,O	Counter for the MS initiated PDP context activation attempts
c(3)	GPDS	FTD_SB_SM_MO_PDP_OK	W:D	R,I,O	Counter for the succeeded MS initiated PDP context activations
d(2)	GPDS	FTD_ SB_SM_MO_PDP_DEAC_CAUSE	B:H	R,I,O	Cause of the last MS initiated PDP context deactivation
e(2)	GPDS	FTD_ SB_SM_MT_PDP_DEAC_CAUSE	B:H	R,I,O	Cause of the last Network initiated PDP context deactivation

8.6 Display 09.14: SMS over GPRS counters

The values in this display concern only SMS transferred via GPRS. Otherwise the SMS counters in GSM displays are valid.

S60 Data display

SMS over GPRS counters

Send failure	aa
MO SMS attemps	bbb
MO SMS send OK	ccc
Receive failure	dd
MT SMS attemps	eee
MT SMS receive OK	fff

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(2)	GSS	FTD_ SB_SMS_SEND_FAIL_CAUSE_GPRS	B:H	R,I,O	Reason of last sending failure
b(3)	GSS	FTD_SB_SMS_MO_ATT_GPRS	W:D	R,I,O	Count of MO short message attempts via GPRS
c(3)	GSS	FTD_SB_SMS_MO_GPRS_OK	W:D	R,I,O	Count of succeeded MO short message sendings
d(2)	GSS	FTD_ SB_SMS_REC_FAIL_CAUSE_GPRS	B:H	R,I,O	Reason of last receiving failure
e(3)	GSS	FTD_SB_SMS_MT_ATT_GPRS	W:D	R,I,O	Count of MT short message attempts via GPRS
f(3)	GSS	FTD_SB_SMS_MT_GPRS_OK	W:D	R,I,O	Count of succeeded MT short message receptions

8.7 Display 09.17: MS initiated cell re-selection counters

S60 Data display
MS init cell reselection counters CCCH => CCCH aaaa CCCH => PCCCH bbbb PCCCH => CCCH cccc PCCCH => PCCCH dddd

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(4)	GPDS	FTD_SB_MAC_RESEL_C_C	W:D	R,I,O	Counter for cell re-selection attempts from CCCH to CCCH in NC0 or NC1 mode
b(4)	GPDS	FTD_SB_MAC_RESEL_C_P	W:D	R,I,O	Counter for cell re-selection attempts from CCCH to PCCCH in NC0 or NC1 mode
c(4)	GPDS	FTD_SB_MAC_RESEL_P_C	W:D	R,I.O	Counter for cell re-selection attempts from PCCCH to CCCH in NC0 or NC1 mode
d(4)	GPDS	FTD_SB_MAC_RESEL_P_P	W:D	R,I,O	Counter for cell re-selection attempts from PCCCH to PCCCH in NC0 or NC1 mode

8.8 Display 09.18: Network initiated cell re-selection counters

S60 Data display
Network init cell reselction counters CCCH => CCCH aaaa bbbb CCCH => PCCCH cccc dddd PCCCH => CCCH eeee ffff PCCCH => PCCCH gggg hhhh

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(4)	GPDS	FTD_SB_MAC_PCCO_C_C_ATT	W:D	R,I,O	Counter for network commanded cell re-selection attempts from CCCH to CCCH
b(4)	GPDS	FTD_SB_MAC_PCCO_C_C_OK	W:D	R,I,O	Counter for succeeded network commanded cell re-selections from CCCH to CCCH
c(4)	GPDS	FTD_SB_MAC_PCCO_C_P_ATT	W:D	R,I,O	Counter for network commanded cell re-selection attempts from CCCH to PCCCH
d(4)	GPDS	FTD_SB_MAC_PCCO_C_P_OK	W:D	R,I,O	Counter for succeeded network commanded cell re-selections from CCCH to PCCCH
e(4)	GPDS	FTD_SB_MAC_PCCO_P_C_ATT	W:D	R,I,O	Counter for network commanded cell re-selection attempts from PCCCH to CCCH

Abbr	Server	Sub-block id	Format	Mode	Description
f(4)	GPDS	FTD_SB_MAC_PCCO_P_C_OK	W:D	R,I,O	Counter for succeeded network commanded cell re-selections from PCCCH to CCCH
g(4)	GPDS	FTD_SB_MAC_PCCO_P_P_ATT	W:D	R,I,O	Counter for network commanded cell re-selection attempts from PCCCH to PCCCH
h(4)	GPDS	FTD_SB_MAC_PCCO_P_P_OK	W:D	R,I,O	Counter for succeeded network commanded cell re-selections from PCCCH to PCCCH

9 Group 10: GSM DSP displays

9.1 Display 10.04: FER measuments for sub ch0: REAL, FULL and SUB values

These values are updated for every 480ms (One SACCH multiframe)

S60 Data display

FER meas for sub ch0

FER real	aa
Correct FACCH	bb
Erroneous TCH	cc
Erroneous FACCH	dd
Erroneous Full	ee
Used frames	ff
Erroneous frames	gg

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(2)	GSM_DSP	FTD_SB_DSP_DATA_25	B:D	R,I,O	FER REAL, a counter for correct frames including TCH, FACCH, SACCH
b(2)	GSM_DSP	FTD_SB_DSP_DATA_26	B:D	R,I,O	FER REAL, a counter for correct FACCH frames
c(2)	GSM_DSP	FTD_SB_DSP_DATA_27	B:D	R,I,O	FER REAL, a counter for erroneous TCH frames
d(2)	GSM_DSP	FTD_SB_DSP_DATA_28	B:D	R,I,O	FER REAL, a counter for erroneous FACCH frames
e(2)	GSM_DSP	FTD_SB_DSP_DATA_29	B:D	R,I,O	FER FULL, a counter for erroneous frames including TCH, SACCH, FACCH and SID frames
f(2)	GSM_DSP	FTD_SB_DSP_DATA_30	B:D	R,I,O	FER SUB, a counter for used frames
g(2)	GSM_DSP	FTD_SB_DSP_DATA_31	B:D	R,I,O	FER SUB, a counter for erroneous frames

9.2 Display 10.05: FER measuments for sub ch1: REAL, FULL and SUB values

These values are updated for every 480ms (One SACCH multiframe)

S60 Data display

FER meas for sub ch1

FER real	aa
Correct FACCH	bb
Erroneous TCH	cc
Erroneous FACCH	dd
Erroneous Full	ee
Used frames	ff
Erroneous frames	gg

Fields

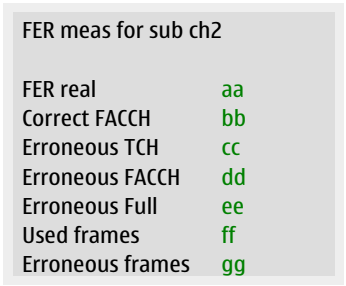
Abbr	Server	Sub-block id	Format	Mode	Description
a(2)	GSM_DSP	FTD_SB_DSP_DATA_32	B:D	R,I,O	FER REAL, a counter for correct frames including TCH, FACCH, SACCH
b(2)	GSM_DSP	FTD_SB_DSP_DATA_33	B:D	R,I,O	FER REAL, a counter for correct FACCH frames

Abbr	Server	Sub-block id	Format	Mode	Description
c(2)	GSM_DSP	FTD_SB_DSP_DATA_34	B:D	R,I,O	FER REAL, a counter for erroneous TCH frames
d(2)	GSM_DSP	FTD_SB_DSP_DATA_35	B:D	R,I,O	FER REAL, a counter for erroneous FACCH frames
e(2)	GSM_DSP	FTD_SB_DSP_DATA_36	B:D	R,I,O	FER FULL, a counter for erroneous frames including TCH, SACCH, FACCH and SID frames
f(2)	GSM_DSP	FTD_SB_DSP_DATA_37	B:D	R,I,O	FER SUB, a counter for used frames
g(2)	GSM_DSP	FTD_SB_DSP_DATA_38	B:D	R,I,O	FER SUB, a counter for erroneous frames

9.3 Display 10.06: FER measuments for sub ch2: REAL, FULL and SUB values

These values are updated for every 480ms (One SACCH multiframe)

S60 Data display



Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(2)	GSM_DSP	FTD_SB_DSP_DATA_39	B:D	R,I,O	FER REAL, a counter for correct frames including TCH, FACCH, SACCH
b(2)	GSM_DSP	FTD_SB_DSP_DATA_40	B:D	R,I,O	FER REAL, a counter for correct FACCH frames
c(2)	GSM_DSP	FTD_SB_DSP_DATA_41	B:D	R,I,O	FER REAL, a counter for erroneous TCH frames
d(2)	GSM_DSP	FTD_SB_DSP_DATA_42	B:D	R,I,O	FER REAL, a counter for erroneous FACCH frames
e(2)	GSM_DSP	FTD_SB_DSP_DATA_43	B:D	R,I,O	FER FULL, a counter for erroneous frames including TCH, SACCH, FACCH and SID frames
f(2)	GSM_DSP	FTD_SB_DSP_DATA_44	B:D	R,I,O	FER SUB, a counter for used frames
g(2)	GSM_DSP	FTD_SB_DSP_DATA_45	B:D	R,I,O	FER SUB, a counter for erroneous frames

10 Group 41: WCDMA CDSP displays

10.1 Group 41 Information

The displays in this group show CDSP specific information.

10.2 Display 41.01: RACH MSG TX profile

RACH MSG TX profile shows detailed information about latest RACH message transmission procedure.

S60 Data display

```
RACH MSG TX profile
Initial TxtxPower          aaa
PO bbb  Pp_m  ccc   SFN   ddd
A_slot   ee     SubChan   fff
Lenght   g      Sign_m    hhhh
Sign_rnd    iiii    Pre   lll
D_CH_G   k   C_CH_G   j
Message  m   data     n
Msg tx power           ooo
```

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(3)	WCDMA_DSP_CS	FTD_WDSP_SB_INIT_TX_PWR	W:D	R,I,O	Initial transmission power, unit dBm. Value range -99 +99.
b(3)	WCDMA_DSP_CS	FTD_WDSP_SB_TX_PO_PARAM	W:D	R,I,O	Po parameter, unit dBm. Value range -99 +99.
c(3)	WCDMA_DSP_CS	FTD_WDSP_SB_TX_PP_M_PARAM	W:D	R,I,O	Pp_m parameter, unit dBm. Value range -99 +99.
d(3)	WCDMA_DSP_CS	FTD_WDSP_SB_TX_START_TIMING	W:H	R,I,O	Base sfn for transmission start timing in hexadecimal format, value range 0x0 -0xFFF
e(2)	WCDMA_DSP_CS	FTD_WDSP_SB_TX_FIRST_ACCESS_SLOT	B:D	R,I,O	First used access slot in decimal format, value range 0 59
f(3)	WCDMA_DSP_CS	FTD_WDSP_SB_TX_SUBCH_MASK	W:H	R,I,O	Subchannel mask in hexadecimal format, value range 0x0 0xFFF
g	WCDMA_DSP_CS	FTD_WDSP_SB_TX_MSG_LEN	B:D	R,I,O	Message length, two values: 1: 10 ms 2: 20 ms
h(4)	WCDMA_DSP_CS	FTD_WDSP_SB_TX_SIGSEL_MASK	W:H	R,I,O	Available signatures selection mask in hexadecimal format, value range 0x0 0xFFFF
i(4)	WCDMA_DSP_CS	FTD_WDSP_SB_TX_SIGSEL_RND	W:H	R,I,O	Signature selection random seed in hexadecimal format, value range 0x0 0xFFFF
j	WCDMA_DSP_CS	FTD_WDSP_SB_TX_CTRL_CH_GAIN	B:H	R,I,O	Control channel gain in hexadecimal format, value range 0x0 0xF
k	WCDMA_DSP_CS	FTD_WDSP_SB_TX_DATA_CH_GAIN	B:H	R,I,O	Data channel gain in hexadecimal format, value range 0x0 0xF
l(3)	WCDMA_DSP_CS	FTD_WDSP_SB_TX_PREAMP_COUNT	W:H	R,I,O	Preamble transmission count in hexadecimal format, value range 0x0 0xFFF
m	WCDMA_DSP_CS	FTD_WDSP_SB_TX_MSG_RES	B:D	R,I,O	Message transmission result, three values: . 0: Message not transmitted 1: Message transmitted 2: Message transmission denied
n	WCDMA_DSP_CS	FTD_WDSP_SB_TX_DATA_CH_SF	B:D	R,I,O	Data channel spreading factor, four values: 0: SF256 1: SF128 2: SF64 3: SF32

Abbr	Server	Sub-block id	Format	Mode	Description
o(3)	WCDMA_ DSP_CS	FTD_WDSP_SB_TX_MSG_PWR	W:D	R,I,O	Message transmission power, unit dBm. Value range -99 +99.

10.3 Display 41.02: Dedicated uplink channel power control status

This display gives a quick overview of the current uplink dedicated channel power control status. From this display the operating point of the uplink power control can be seen

S60 Data display

Dedicated tx power info
Tx min/max aaa bbb
Tx current ccc
Algo d step e SSDT f
Tx loop g DPCCH h
Comp mode i sync j
PhCh min k PhCh max l
PhCh average mmmmm
UI+ nnnnn UI- ooooo

Fields

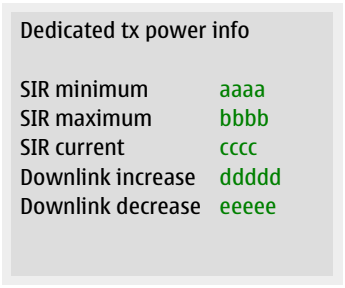
Abbr	Server	Sub-block id	Format	Mode	Description
a(3)	WCDMA_ DSP_CS	FTD_SB_WDSP_TX_MIN_PWR	W:D	R,I,O	Minimum TX power during the display update period, unit dBm. Value range -99 +99.
b(3)	WCDMA_ DSP_CS	FTD_SB_WDSP_TX_MAX_PWR	W:D	R,I,O	Maximum TX power during the display update period, unit dBm. Value range -99 +99.
c(3)	WCDMA_ DSP_CS	FTD_SB_WDSP_TX_CUR_PWR	W:D	R,I,O	Current TX power at display update time, unit dBm. Value range -99 +99.
d	WCDMA_ DSP_CS	FTD_ SB_WDSP_TX_PWR_CTRL_ALG	B:D	R,I,O	Current power control algorithm type, 1 = power control algorithm 1 2 = power control algorithm 2
e	WCDMA_ DSP_CS	FTD_SB_WDSP_TX_PWR_STEP	B:D	R,I,O	Current power control step size, unit dB, value range 1 .. 2.
f	WCDMA_ DSP_CS	FTD_SB_WDSP_TX_SSDT	B:D	R,I,O	Current SSDT state values: 0: not active 1: active
g	WCDMA_ DSP_CS	FTD_SB_WDSP_TX_DIV_MODE	B:D	R,I,O	TX closed loop diversity state, values: 0: not active 1: Closed loop mode 1 2: Closed loop mode 2
h	WCDMA_ DSP_CS	FTD_ SB_WDSP_TX_DPCCH_FFORM	B:D	R,I,O	DPCCH frame format, value range 0 5.
i	WCDMA_ DSP_CS	FTD_SB_WDSP_TX_CM_MODE	B:D	R,I,O	Compressed mode used during display update period, values: 0: No compressed mode 1: Compressed mode active
j	WCDMA_ DSP_CS	FTD_SB_WDSP_TX_OOS	B:D	R,I,O	Out of sync state visited during display update period, values: 0: No out of sync 1: Out of sync active
k	WCDMA_ DSP_CS	FTD_ SB_WDSP_TX_MIN_PHCH_BIT_RATE	B:H	R,I,O	Minimum PhCh bit rate used in the uplink frames during display update period. Value range is 0 12, shown as hexadecimal number. Value coding is as follows: Range 0: 0 Range 1-6: 2^(L - 1) * 150 Range 8-12: (L - 6) * 9600
l	WCDMA_ DSP_CS	FTD_ SB_WDSP_TX_MAX_PHCH_BIT_RATE	B:H	R,I,O	Maximum PhCh bit rate used in the uplink frames during display update period. Value range is 0 12, shown as hexadecimal number. Value coding is as follows: Range 0: 0 Range 1-6: 2^(m - 1) * 150 Range 8-12: (m - 6) * 9600

Abbr	Server	Sub-block id	Format	Mode	Description
m(5)	WCDMA_DSP_CS	FTD_SB_WDSP_TX_AVR_PHCH_BIT_RATE	W:D	R,I,O	Average PhCH frame bit rate during display update period, value range 0 57600
n(5)	WCDMA_DSP_CS	FTD_SB_WDSP_TX_NUM_OF_UL_INC_PWR_COMMANDS	DW:D	R,I,O	Amount of derived "increase power" uplink power control commands during display update period. Value range 0 .. 99999.
o(5)	WCDMA_DSP_CS	FTD_SB_WDSP_TX_NUM_OF_UL_DEC_PWR_COMMANDS	DW:D	R,I,O	Amount of derived "decrease power" uplink power control commands during display update period. Value range 0 99999.

10.4 Display 41.03: Dedicated downlink channel power control status

This display gives a quick overview of the current downlik dedicated channel power control status. From this display the operating point of the downlink power control can be seen

S60 Data display



Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(4)	WCDMA_DSP_CS	FTD_SB_WDSP_TARGET_SIR_MIN	W:D	R,I,O	Minimum target SIR value during display update period. Unit is dBm / 10. Value range is -320 310.
b(4)	WCDMA_DSP_CS	FTD_SB_WDSP_TARGET_SIR_MAX	W:D	R,I,O	Maximum target SIR value during display update period. Unit is dBm / 10 Value range is -320 310.
c(4)	WCDMA_DSP_CS	FTD_SB_WDSP_TARGET_SIR_CURRENT	W:D	R,I,O	Current target SIR at display update time. Unit is dBm / 10. Value range is -320 310.
d(5)	WCDMA_DSP_CS	FTD_SB_WDSP_NUM_OF_DL_INC_PWR_COMMANDS	DW:D	R,I,O	Amount of sent "increase power" downlink power control commands during display update period. Value range is 0 99999
e(5)	WCDMA_DSP_CS	FTD_SB_WDSP_NUM_OF_DL_DEC_PWR_COMMANDS	DW:D	R,I,O	Amount of sent "decrease power" downlink power control commands during display update period. Value range is 0 99999

10.5 Display 41.10: FDD neighbour cell summary

This displays summarises the number of cells in the active, monitored, detected and undetected sets on the 3 frequencies. Active and detected sets only contain cells on the home frequency

S60 Data display

FDD neighbour cell info

Active cells	aa
Intra cells	bb
Inter 1 freq	cc
Inter 2 freq	dd
Detected cells	ee
Intra cells undetect	ff
Inter1 freq undet	gg
Inter2 freq undet	hh

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(2)	WCDMA_DSP_CS	FTD_SB_WDSP_CELL_SUM_INTRA_ACTIVE	W:D	R,I,O	Number of cells in the active set
b(2)	WCDMA_DSP_CS	FTD_SB_WDSP_CELL_SUM_INTRA_MON	W:D	R,I,O	Number of cells in intra-freq monitired set
c(2)	WCDMA_DSP_CS	FTD_SB_WDSP_CELL_SUM_INTER1_MON	W:D	R,I,O	Number of cells in Inter 1 freq monitored set
d(2)	WCDMA_DSP_CS	FTD_SB_WDSP_CELL_SUM_INTER2_MON	W:D	R,I,O	Number of cells in Inter 2 freq monitored set
e(2)	WCDMA_DSP_CS	FTD_SB_WDSP_CELL_SUM_INTRA_DET	W:D	R,I,O	Number of cells in detected set
f(2)	WCDMA_DSP_CS	FTD_SB_WDSP_CELL_SUM_INTRA_UNDET	W:D	R,I,O	Number of cells in Intra freq neighbour list that are undetected
g(2)	WCDMA_DSP_CS	FTD_SB_WDSP_CELL_SUM_INTER1_UNDET	W:D	R,I,O	Number of cells in Inter1 freq neighbour list that are undetected
h(2)	WCDMA_DSP_CS	FTD_SB_WDSP_CELL_SUM_INTER2_UNDET	W:D	R,I,O	Number of cells in Inter2 freq neighbour list that are undetected

10.6 Display 41.11: FDD ranking summary

This display shows the 4 highest ranked cells. The ranking criteria (RSCP, EcNo) will be automatically selected based on the parameters received from the network

S60 Data display

FDD ranking summary

Freq1	BS1	System
aaaaa	eee	i
Freq2	BS2	System
bbbbb	fff	j
Freq3	BS3	System
ccccc	ggg	k
Freq4	BS4	System
ddddd	hhh	l

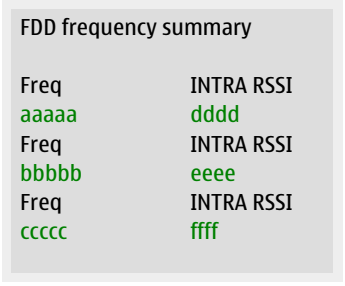
Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(5)	WCDMA_DSP_CS	FTD_SB_WDSP_RANK_FREQ_1	W:D	R,I,O	Cell 1 frequency code, center frequency is value / 5.
b(5)	WCDMA_DSP_CS	FTD_SB_WDSP_RANK_FREQ_2	W:D	R,I,O	Cell 2 frequency code, center frequency is value / 5.
c(5)	WCDMA_DSP_CS	FTD_SB_WDSP_RANK_FREQ_3	W:D	R,I,O	Cell 3 frequency code, center frequency is value / 5.
d(5)	WCDMA_DSP_CS	FTD_SB_WDSP_RANK_FREQ_4	W:D	R,I,O	Cell 4 frequency code, center frequency is value / 5.
e(3)	WCDMA_DSP_CS	FTD_SB_WDSP_RANK_BSID_1	W:D	R,I,O	Cell 1 BS ID
f(3)	WCDMA_DSP_CS	FTD_SB_WDSP_RANK_BSID_2	W:D	R,I,O	Cell 2 BS ID
g(3)	WCDMA_DSP_CS	FTD_SB_WDSP_RANK_BSID_3	W:D	R,I,O	Cell 3 BS ID
h(3)	WCDMA_DSP_CS	FTD_SB_WDSP_RANK_BSID_4	W:D	R,I,O	Cell 4 BS ID
i	WCDMA_DSP_CS	FTD_SB_WDSP_RANK_SYSTEM_1	S	R,I,O	FDD home cell = "W", FDD neighbour cell = "w" GSM neigbour cell = "g" Data not available = "-" In case data is not available also corresponding frequency and BS ID field values are meaningless.
j	WCDMA_DSP_CS	FTD_SB_WDSP_RANK_SYSTEM_2	S	R,I,O	FDD home cell = "W", FDD neighbour cell = "w" GSM neigbour cell = "g" Data not available = "-" In case data is not available also corresponding frequency and BS ID field values are meaningless.
k	WCDMA_DSP_CS	FTD_SB_WDSP_RANK_SYSTEM_3	S	R,I,O	FDD home cell = "W", FDD neighbour cell = "w" GSM neigbour cell = "g" Data not available = "-" In case data is not available also corresponding frequency and BS ID field values are meaningless.
l	WCDMA_DSP_CS	FTD_SB_WDSP_RANK_SYSTEM_4	S	R,I,O	FDD home cell = "W", FDD neighbour cell = "w" GSM neigbour cell = "g" Data not available = "-" In case data is not available also corresponding frequency and BS ID field values are meaningless.

10.7 Display 41.12: FDD Frequency summary

This display shows the RSSI measured on the 3 FDD frequencies being used by the UE

S60 Data display



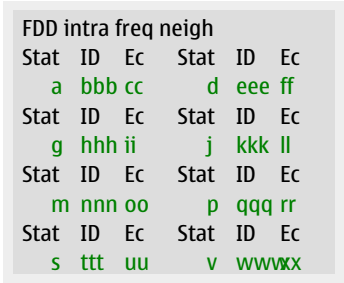
Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(5)	WCDMA_DSP_CS	FTD_SB_WDSP_FREQ_INTRA	W:D	R,I,O	Frequency code of home cell, center frequency is value / 5.
b(5)	WCDMA_DSP_CS	FTD_SB_WDSP_FREQ_INTER1	W:D	R,I,O	Frequency code of measured frequency 1, center frequency is value / 5.
c(5)	WCDMA_DSP_CS	FTD_SB_WDSP_FREQ_INTER2	W:D	R,I,O	Frequency code of measured frequency 2, center frequency is value / 5.
d(4)	WCDMA_DSP_CS	FTD_SB_WDSP_RSSI_INTRA	W:D	R,I,O	INTRA RSSI * -10
e(4)	WCDMA_DSP_CS	FTD_SB_WDSP_RSSI_INTER1	W:D	R,I,O	INTER1 RSSI * -10
f(4)	WCDMA_DSP_CS	FTD_SB_WDSP_RSSI_INTER2	W:D	R,I,O	INTER2 RSSI * - 10

10.8 Display 41.13: FDD intra frequency neighbour summary

This displays shows the status of eight best ranked neighbour cells on home cell frequency

S60 Data display



Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTRA_STATUS_1	S	R,I,O	BS status a = Active set, STTD not active on PCCPCH. m = Monitored set, STTD not active on PCCPCH. d = Detected set, STTD not active on PCCPCH. u = Undetected, STTD not active on PCCPCH. n = Not listed or detected, STTD not active on PCCPCH. A = Active set, STTD active on PCCPCH. M = Monitored set, STTD active on PCCPCH. D = Detected set, STTD active on PCCPCH. U = Undetected, STTD active on PCCPCH. N = Not listed or detected, STTD active on PCCPCH.
b(3)	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTRA_BSID_1	W:D	R,I,O	BS ID on INTRA
c(2)	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTRA_ECNO_1	W:D	R,I,O	Cell Ec/No * -1
d	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTRA_STATUS_2	S	R,I,O	BS status
e(3)	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTRA_BSID_2	W:D	R,I,O	BS ID on INTRA

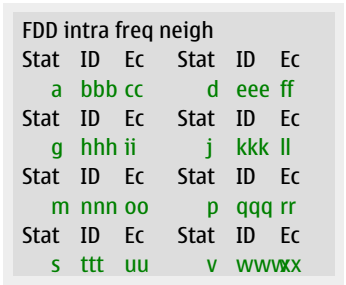
Abbr	Server	Sub-block id	Format	Mode	Description
f(2)	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTRA_ECNO_2	W:D	R,I,O	Cell Ec/No * -1
g	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTRA_STATUS_3	S	R,I,O	BS status
h(3)	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTRA_BSID_3	W:D	R,I,O	BS ID on INTRA
i(2)	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTRA_ECNO_3	W:D	R,I,O	Cell Ec/No * -1
j	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTRA_STATUS_4	S	R,I,O	BS status
k(3)	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTRA_BSID_4	W:D	R,I,O	BS ID on INTRA
l(2)	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTRA_ECNO_4	W:D	R,I,O	Cell Ec/No * -1
m	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTRA_STATUS_5	S	R,I,O	BS status
n(3)	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTRA_BSID_5	W:D	R,I,O	BS ID on INTRA
o(2)	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTRA_ECNO_5	W:D	R,I,O	Cell Ec/No * -1
p	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTRA_STATUS_6	S	R,I,O	BS status
q(3)	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTRA_BSID_6	W:D	R,I,O	BS ID on INTRA
r(2)	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTRA_ECNO_6	W:D	R,I,O	Cell Ec/No * -1
s	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTRA_STATUS_7	S	R,I,O	BS status
t(3)	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTRA_BSID_7	W:D	R,I,O	BS ID on INTRA
u(2)	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTRA_ECNO_7	W:D	R,I,O	Cell Ec/No * -1
v	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTRA_STATUS_8	S	R,I,O	BS status
w(3)	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTRA_BSID_8	W:D	R,I,O	BS ID on INTRA
x(2)	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTRA_ECNO_8	W:D	R,I,O	Cell Ec/No * -1

10.9 Display 41.14: FDD inter frequencies 1 and 2 neighbour summary

These two displays show the status of eight best ranked neighbour cells on inter frequencies 1 and 2. Display 41.14 shows inter frequency 1 summary and 41.15 inter frequency 2 summary.

where "x" denotes the number of the inter frequence., x=1 in display 41.14 and x=2 in display 41.15.

S60 Data display



Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTER1_STATUS_1	S	R,I,O	BS status a = Active set, STTD not active on PCCPCH. m = Monitored set, STTD not active on PCCPCH. d = Detected set, STTD not active on PCCPCH. u = Undetected, STTD not active on PCCPCH. n = Not listed or detected, STTD not active on PCCPCH. A = Active set, STTD active on PCCPCH. M = Monitored set, STTD active on PCCPCH. D = Detected set, STTD active on PCCPCH. U = Undetected, STTD active on PCCPCH. N = Not listed or detected, STTD active on PCCPCH.
b(3)	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTER1_BSID_1	W:D	R,I,O	BS ID on INTERx
c(2)	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTER1_ECNO_1	W:D	R,I,O	Cell Ec/No * -1
d	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTER1_STATUS_2	S	R,I,O	BS status
e(3)	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTER1_BSID_2	W:D	R,I,O	BS ID on INTERx
f(2)	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTER1_ECNO_2	W:D	R,I,O	Cell Ec/No * -1
g	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTER1_STATUS_3	S	R,I,O	BS status
h(3)	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTER1_BSID_3	W:D	R,I,O	BS ID on INTERx
i(2)	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTER1_ECNO_3	W:D	R,I,O	Cell Ec/No * -1
j	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTER1_STATUS_4	S	R,I,O	BS status

Abbr	Server	Sub-block id	Format	Mode	Description
k(3)	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTER1_BSID_4	W:D	R,I,O	BS ID on INTERx
l(2)	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTER1_ECNO_4	W:D	R,I,O	Cell Ec/No * -1
m	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTER1_STATUS_5	S	R,I,O	BS status
n(3)	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTER1_BSID_5	W:D	R,I,O	BS ID on INTERx
o(2)	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTER1_ECNO_5	W:D	R,I,O	Cell Ec/No * -1
p	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTER1_STATUS_6	S	R,I,O	BS status
q(3)	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTER1_BSID_6	W:D	R,I,O	BS ID on INTERx
r(2)	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTER1_ECNO_6	W:D	R,I,O	Cell Ec/No * -1
s	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTER1_STATUS_7	S	R,I,O	BS status
t(3)	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTER1_BSID_7	W:D	R,I,O	BS ID on INTERx
u(2)	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTER1_ECNO_7	W:D	R,I,O	Cell Ec/No * -1
v	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTER1_STATUS_8	S	R,I,O	BS status
w(3)	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTER1_BSID_8	W:D	R,I,O	BS ID on INTERx
x(2)	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTER1_ECNO_8	W:D	R,I,O	Cell Ec/No * -1

10.10 Display 41.15: FDD inter frequencies 1 and 2 neighbour summary

These two displays show the status of eight best ranked neighbour cells on inter frequencies 1 and 2. Display 41.14 shows inter frequency 1 summary and 41.15 inter frequency 2 summary.

where "x" denotes the number of the inter frequence., x=1 in display 41.14 and x=2 in display 41.15.

S60 Data display

FDD intra freq neigh

Stat	ID	Ec	Stat	ID	Ec
a	bbb	cc	d	eee	ff
Stat	ID	Ec	Stat	ID	Ec
g	hhh	ii	j	kkk	ll
Stat	ID	Ec	Stat	ID	Ec
m	nnn	oo	p	qqq	rr
Stat	ID	Ec	Stat	ID	Ec
s	ttt	uu	v	wwww	xx

Fields

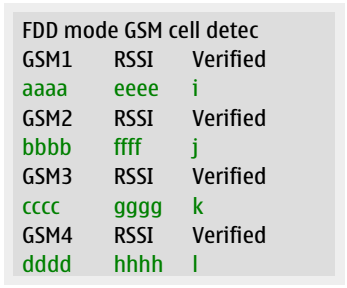
Abbr	Server	Sub-block id	Format	Mode	Description
a	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTER2_STATUS_1	S	R,I,O	BS status a = Active set, STTD not active on PCCPCH. m = Monitored set, STTD not active on PCCPCH. d = Detected set, STTD not active on PCCPCH. u = Undetected, STTD not active on PCCPCH. n = Not listed or detected, STTD not active on PCCPCH. A = Active set, STTD active on PCCPCH. M = Monitored set, STTD active on PCCPCH. D = Detected set, STTD active on PCCPCH. U = Undetected, STTD active on PCCPCH. N = Not listed or detected, STTD active on PCCPCH.
b(3)	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTER2_BSID_1	W:D	R,I,O	BS ID on INTERx
c(2)	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTER2_ECNO_1	W:D	R,I,O	Cell Ec/No * -1
d	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTER2_STATUS_2	S	R,I,O	BS status
e(3)	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTER2_BSID_2	W:D	R,I,O	BS ID on INTERx
f(2)	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTER2_ECNO_2	W:D	R,I,O	Cell Ec/No * -1
g	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTER2_STATUS_3	S	R,I,O	BS status
h(3)	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTER2_BSID_3	W:D	R,I,O	BS ID on INTERx
i(2)	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTER2_ECNO_3	W:D	R,I,O	Cell Ec/No * -1
j	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTER2_STATUS_4	S	R,I,O	BS status
k(3)	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTER2_BSID_4	W:D	R,I,O	BS ID on INTERx
l(2)	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTER2_ECNO_4	W:D	R,I,O	Cell Ec/No * -1

Abbr	Server	Sub-block id	Format	Mode	Description
m	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTER2_STATUS_5	S	R,I,O	BS status
n(3)	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTER2_BSID_5	W:D	R,I,O	BS ID on INTERx
o(2)	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTER2_ECNO_5	W:D	R,I,O	Cell Ec/No * -1
p	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTER2_STATUS_6	S	R,I,O	BS status
q(3)	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTER2_BSID_6	W:D	R,I,O	BS ID on INTERx
r(2)	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTER2_ECNO_6	W:D	R,I,O	Cell Ec/No * -1
s	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTER2_STATUS_7	S	R,I,O	BS status
t(3)	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTER2_BSID_7	W:D	R,I,O	BS ID on INTERx
u(2)	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTER2_ECNO_7	W:D	R,I,O	Cell Ec/No * -1
v	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTER2_STATUS_8	S	R,I,O	BS status
w(3)	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTER2_BSID_8	W:D	R,I,O	BS ID on INTERx
x(2)	WCDMA_DSP_CS	FTD_SB_WDSP_DETECT_INTER2_ECNO_8	W:D	R,I,O	Cell Ec/No * -1

10.11 Display 41.16: FDD mode GSM cell detection summary

Displays the top 4 GSM cells showing the frequency code, measured RSSI and if the BSIC has been verified.

S60 Data display



Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(4)	WCDMA_DSP_CS	FTD_SB_WDSP_GSM_FREQ_1	W:D	R,I,O	GSM Cell 1 frequency code
b(4)	WCDMA_DSP_CS	FTD_SB_WDSP_GSM_FREQ_2	W:D	R,I,O	GSM Cell 2 frequency code
c(4)	WCDMA_DSP_CS	FTD_SB_WDSP_GSM_FREQ_3	W:D	R,I,O	GSM Cell 3 frequency code
d(4)	WCDMA_DSP_CS	FTD_SB_WDSP_GSM_FREQ_4	W:D	R,I,O	GSM Cell 4 frequency code
e(4)	WCDMA_DSP_CS	FTD_SB_WDSP_GSM_RSSI_1	W:D	R,I,O	Cell 1 RSSI *-10
f(4)	WCDMA_DSP_CS	FTD_SB_WDSP_GSM_RSSI_2	W:D	R,I,O	Cell 2 RSSI *-10
g(4)	WCDMA_DSP_CS	FTD_SB_WDSP_GSM_RSSI_3	W:D	R,I,O	Cell 3 RSSI *-10
h(4)	WCDMA_DSP_CS	FTD_SB_WDSP_GSM_RSSI_4	W:D	R,I,O	Cell 4 RSSI *-10
i	WCDMA_DSP_CS	FTD_SB_WDSP_GSM_STATUS_1	S	R,I,O	Cell 1 verified status V =verified, N = Not verified
j	WCDMA_DSP_CS	FTD_SB_WDSP_GSM_STATUS_2	S	R,I,O	Cell 2 verified status V =verified, N = Not verified
k	WCDMA_DSP_CS	FTD_SB_WDSP_GSM_STATUS_3	S	R,I,O	Cell 3 verified status V =verified, N = Not verified
l	WCDMA_DSP_CS	FTD_SB_WDSP_GSM_STATUS_4	S	R,I,O	Cell 4 verified status V =verified, N = Not verified

10.12 Display 41.17: FDD detailed cell info (interactive)

This display promts for a cell frequence code and BSID and shows info about the selected cell.

Use the following steps to activate this display in interactive mode. The display is not activated if the arrow (up, down) buttons are used.

1. Press the Menu button.
2. Scroll in the main menu loop to field test display item
3. Press the Select button.
4. Select this display by giving the display number 4117 to the query prompt.
5. Test input prompt will be shown on the display. Enter frequency code and BSID as specified in the table below.
6. Confirm with the Ok button.
7. Info about the cell is shown if the activation was successful.

S60 Data display

FDD detailed cell info

Frequency code			aaaaa
RSSI	bbbb	BsID	ccc
R_Order	dd	BsStatus	e
Syncro	f	TxDiv	g
Frame timing			hhhhh
SCPICH	i	EcNO	jjj
RSCP	kkkk		

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(5)	WCDMA_ DSP_CS	FTD_ SB_WDSP_CELL_DETAIL_FREQ	W:D	R,I,O	Frequency code
b(4)	WCDMA_ DSP_CS	FTD_ SB_WDSP_CELL_DETAIL_RSSI	W:D	R,I,O	RSSI * -10
c(3)	WCDMA_ DSP_CS	FTD_ SB_WDSP_CELL_DETAIL_BSID	W:D	R,I,O	BS ID
d(2)	WCDMA_ DSP_CS	FTD_ SB_WDSP_CELL_DETAIL_RANK	W:D	R,I,O	cell ranking order
e	WCDMA_ DSP_CS	FTD_ SB_WDSP_CELL_DETAIL_STATUS	S	R,I,O	BS status A = Active set M = Monitored set D = Detected set U = Undetected N = Not listed or detected
f	WCDMA_ DSP_CS	FTD_ SB_WDSP_CELL_DETAIL_SYNC	S	R,I,O	Cell syncronization status: N = Not syncronized, S = Syncronized D = SFN Decoded
g	WCDMA_ DSP_CS	FTD_ SB_WDSP_CELL_DETAIL_STTD	S	R,I,O	Cell tx diversity status: - = STTD not used on PCCPCH S = STTD used on PCCPCH.
h(5)	WCDMA_ DSP_CS	FTD_ SB_WDSP_CELL_DETAIL_TIMING	W:D	R,I,O	Cell frame timing in relation to WCDMA system clock.
i	WCDMA_ DSP_CS	FTD_ SB_WDSP_CELL_DETAIL_SCPICH	S	R,I,O	SCPICH measurement status: - = SCPICH not used S = SCPICH used
j(3)	WCDMA_ DSP_CS	FTD_SB_WDSP_CELL_DETAIL_H	W:D	R,I,O	EcNo * -10
k(4)	WCDMA_ DSP_CS	FTD_SB_WDSP_CELL_DETAIL_G	W:D	R,I,O	RSCP * -10
INPUT(8)	WCDMA_ DSP_CS	FTD_SB_WDSP_CELL_INPUT	DW:D	R,I,O	Format xxxxxyyy, where xxxxx: frequency code (decimal)yyy: BSID (decimal)

10.13 Display 41.18: FDD HSDPA

This display shows the HSDPA L1 information

S60 Data display

No. HS-SCCH	a
Bit rate	bbbbb
CQI	cc
Util	ddd
BLER	eee

Fields

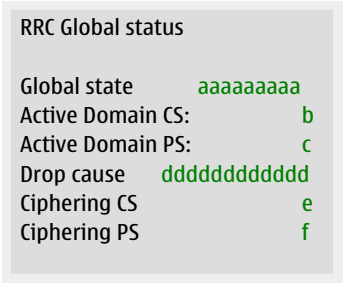
Abbr	Server	Sub-block id	Format	Mode	Description
a	WCDMA_DSP_CS	FTD_SB_WDSP_HS_SCCH	W:D	R,I,O	Number of configured HS-SCCH channels [0..4]
b(5)	WCDMA_DSP_CS	FTD_SB_WDSP_HS_BITRATE	W:D	R,I,O	L1 Data rate in kBit/s [0..7200]
c(2)	WCDMA_DSP_CS	FTD_SB_WDSP_HS_CQI	W:D	R,I,O	Filtered CQI value [0..31]
d(3)	WCDMA_DSP_CS	FTD_SB_WDSP_HS_UTIL	W:D	R,I,O	Percentage of all HS-DSCH subframes received compared to total subframes available[0..100]
e(3)	WCDMA_DSP_CS	FTD_SB_WDSP_HS_BLER	W:D	R,I,O	Percentage of HS-DSCH subframes received in error compared to all received subframes [0..100]

11 Group 46: WCDMA RAN System displays

11.1 Display 46.01: RRC Global Status

This screen shows Global RRC status

S60 Data display



Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(9)	WRAN	FTD_SB_RRC_GLOBAL_STATE	S	R,O	RRC Global State OOZ, idle-pch, cell-dch, cell-fach, cell-pch, ura-pch
b	WRAN	FTD_SB_RRC_GLOBAL_ACTIVE_DOMAIN_CS	B:D	R,O	RRC Active Domain - CS 1/0
c	WRAN	FTD_SB_RRC_GLOBAL_ACTIVE_DOMAIN_PS	B:D	R,O	RRC Active Domain - PS 1/0
d(12)	WRAN	FTD_SB_RRC_CALL_RELEASE_DROP_CAUSE	S	R,O	Last Call Drop/Release Cause
e	WRAN	FTD_SB_RRC_CS_DOMAIN_CIPHERING	B:D	R,O	Ciphering - CS Domain on/off - 1/0
f	WRAN	FTD_SB_RRC_PS_DOMAIN_CIPHERING	B:D	R,O	Ciphering - PS Domain on/off - 1/0

11.2 Display 46.02: PEER message MSC

This screen shows an MSC of last 7 PEER messages Message order runs vertically. The oldest message is blanked out.

ASUp - Active Set Update (C - Complete, F - Failure)

ADD - Assistance Data Delivery CCO - Cell Change Order From UTRAN (F - Failure)

CU - Cell Update (Cnf - Confirm)

CtCk - Counter Check (R - Response)

HOFU - Handover From UTRAN Command (F - Failure)

HOTU - Handover To UTRAN Command (C - Complete)

IRHI - Inter RAT Handover Info

MeCn - Measurement Control (F - Failure)

PAGEx - Paging Type x

PCRc - Physical Channel Reconfiguration (C - Complete, F - Failure)

PSCA - Physical Shared Channel Allocation

PCRq - PUSCH Capacity Request

RBRc - Radio Bearer Reconfiguration (C - Complete, F - Failure)

RBRl - Radio Bearer Release (C - Complete, F - Failure)

RBSt - Radio Bearer Setup (C - Complete, F - Failure)

RCRej - RRC Connection Reject

RCRl - RRC Connection Release (C - Complete)

RCReq - RRC Connection Request

RCSt - RRC Connection Setup (C - Complete)

RFI - RRC Failure Info

RS - RRC Status

SecM - Security Mode Command (C - Complete, F - Failure)

SgCR - Signalling Connection Release (I - Indication)

SICI - System Information Change Indication

TCRc - Transport Channel Reconfiguration (C - Complete, F - Failure)

TFCC - Transport Format Combination Control (F - Failure)

UECEq - UE Capability Enquiry

UECI - UE Capability Information (C - Confirm)

UPCC - Uplink Physical Channel Control

UraU - URA Update (C - Confirm)

UMI - UTRAN Mobility Information (C - Confirm, F - Failure)

S60 Data display

```
PEER message MSC
PEER message ID     aaaaa
PEER message ID     bbbbb
PEER message ID     ccccc
PEER message ID     ddddd
PEER message ID     eeeee
PEER message ID     fffff
PEER message ID     ggggg
PEER message ID     hhhhh
```

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(5)	WRAN	FTD_SB_RRC_PEER_MSG_1_ID	S	R,O	PEER Message ID

Abbr	Server	Sub-block id	Format	Mode	Description
b(5)	WRAN	FTD_SB_RRC_PEER_MSG_5_ID	S	R,0	PEER Message ID
c(5)	WRAN	FTD_SB_RRC_PEER_MSG_2_ID	S	R,0	PEER Message ID
d(5)	WRAN	FTD_SB_RRC_PEER_MSG_6_ID	S	R,0	PEER Message ID
e(5)	WRAN	FTD_SB_RRC_PEER_MSG_3_ID	S	R,0	PEER Message ID
f(5)	WRAN	FTD_SB_RRC_PEER_MSG_7_ID	S	R,0	PEER Message ID
g(5)	WRAN	FTD_SB_RRC_PEER_MSG_4_ID	S	R,0	PEER Message ID
h(5)	WRAN	FTD_SB_RRC_PEER_MSG_8_ID	S	R,0	PEER Message ID

11.3 Display 46.03: RNTI Values

This screen shows current RNTI values

S60 Data display

RNTI values

USRNC identity aaa
USRNTI bbbbb
C-RNTI cccc

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(3)	WRAN	FTD_ SB_RRC_U_RNTI_SRNC_IDENTITY	W:H	R,0	U-RNTI SRNC Identity 0..FFF
b(5)	WRAN	FTD_SB_RRC_U_RNTI_SRNTI	DW:H	R,0	U-RNTI SRNTI 0..FFFFF
c(4)	WRAN	FTD_SB_RRC_C_RNTI	W:H	R,0	C-RNTI 0..FFFF

11.4 Display 46.04: Ciphering Capability

This screen is used to set and display the Ciphering capability - possible inputs are shown on the help text

S60 Data display

Ciphering capability

UEA0 ciphering:
aaaaaaaa

UEA1 ciphering:
bbbbbbbb

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(8)	WRAN	FTD_SB_RRC_UEA0_CIPHER_FLAG	S	R,0	Ciphering capability flag to show if UEA0 is ENABLED or DISABLED

Abbr	Server	Sub-block id	Format	Mode	Description
b(8)	WRAN	FTD_SB_RRC_UEA1_CIPHER_FLAG	S	R,O	Ciphering capability flag to show if UEA1 is ENABLED or DISABLED
INPUT	WRAN	FTD_ SB_INPUT_rrc_ftd_flag_uea_ciphering_capability	DW:D	R,O	callback function subblock identity

11.5 Display 46.05: Cell Selection - Screen 2

This screen shows the current PLMN information

S60 Data display

Cell selection - 2

PLMN number aaaaaa
Search type bbbbbb
Trigger type cccccc
PLMN frequency ddddd
PLMN scramb code eee

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(6)	WRAN	FTD_SB_RRC_PLMN_NUMBER	DW:H	R,O	PLMN Number - 0..FFFFFF
b(6)	WRAN	FTD_ SB_RRC_PLMN_SEARCH_TYPE	S	R,O	Type of search used to find PLMN nonini, init, candid, allcel, emerge, PLMN
c(6)	WRAN	FTD_ SB_RRC_PLMN_SEARCH_TRIGGER	S	R,O	Type of trigger used to find PLMN - L1trig, statch, intRat
d(5)	WRAN	FTD_SB_RRC_PLMN_FREQ	W:D	R,O	PLMN frequeny
e(3)	WRAN	FTD_SB_RRC_PLMN_SCR_CODE	W:D	R,O	PLMN scramble code

11.6 Display 46.06: FDD BTS Carrier Lock Mode

This screen is used in BTS carrier lock mode to retrieve FDD Frequency and Scrambling code. The frequency and scrambling code is entered as one decimal value. Both frequency and scrambling code are five digits. e.g. entered value on FTD is '1060000040', where '10600' is the BTS test frequency and '00040' is the test scrambling code. To clear the BTS test mode user enters '0000000000'.

S60 Data display

FDD BTS carrier lock mode

FDD frequency:
aaaaa

FDD scrambling code:
bbbbb

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(5)	WRAN	FTD_SB_RRC_BTS_CARRIER_LOCK_FREQ	W:D	R,O	FDD Frequency to use in BTS carrier lock mode
b(5)	WRAN	FTD_SB_RRC_BTS_CARRIER_LOCK_SCR_CODE	W:D	R,O	FDD scrambling code to use in BTS carrier lock mode
INPUT (10)	WRAN	FTD_SB_INPUT_rrc_ftd_wcdma_bts_freq_lock_mode	DW:D	R,O	callback function subblock identity

11.7 Display 46.07: Counter Reset

This screen is used to reset counters

S60 Data display

Counter reset

Reset all counters 1

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
INPUT	WRAN	FTD_SB_INPUT_rrc_ftd_reset_counters	DW:D	R,O	callback function subblock identity

11.8 Display 46.08: Call Failure Reasons

This screen shows Counts for each call failure reason

S60 Data display

Call failure reason

RLink	aaa	Handover	bbb
RLC	ccc	Uplayer	ddd
Normal	eee	RLC/SIB7	fff
Config	ggg	V/N300	hhh
CRT	iii	V/N300	jjj
OoS	kkk	Unspec	lll

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(3)	WRAN	FTD_SB_RRC_RADIO_LINK_FAILURE_COUNT	W:D	R,O	Number of Radio link Failures
b(3)	WRAN	FTD_SB_RRC_HO_FROM_UTRAN_COUNT	W:D	R,O	Number of Handover to UTRAN
c(3)	WRAN	FTD_SB_RRC_RLC_LINK_ERROR_COUNT	W:D	R,O	Number of RLC link Error
d(3)	WRAN	FTD_SB_RRC_RELEASE_REQ_COUNT	W:D	R,O	Number of upper layer triggered release
e(3)	WRAN	FTD_SB_RRC_NORMAL_REL_COUNT	W:D	R,O	Number of normal release
f(3)	WRAN	FTD_SB_RRC_SIB7_RECEPTION_FAIL_COUNT	W:D	R,O	Number of RLC link Error
g(3)	WRAN	FTD_SB_RRC_CONFIG_FAILURE_COUNT	W:D	R,O	Number of configuration failures
h(3)	WRAN	FTD_SB_RRC_V300_GR_N300_COUNT	W:D	R,O	Number of V300 > N300 failures
i(3)	WRAN	FTD_SB_RRC_T314_T315_TIMEOUT_COUNT	W:D	R,O	Number of Connection Reestablishment Timers Timeouts failures-T314/T315
j(3)	WRAN	FTD_SB_RRC_V302_GR_N302_COUNT	W:D	R,O	Number of V302 > N302 failures
k(3)	WRAN	FTD_SB_RRC_T316_T317_T307_COUNT	W:D	R,O	Number of Out of Service Timer Timeout failures-T316/T317/T307
l(3)	WRAN	FTD_SB_RRC_UNSPECIFIC_FAILURE_COUNT	W:D	R,O	Number of unspecific failures

11.9 Display 46.09: L1 State

This screen shows L1 State

S60 Data display

L1 state

PCCPCH state a
SCCPCH state b
RACH state c
DPCH state d

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a	WRAN	FTD_SB_RRC_PCCPCH_STATE	B:D	R,O	PCCPCH State

Abbr	Server	Sub-block id	Format	Mode	Description
b	WRAN	FTD_SB_RRC_SCCPCH_STATE	B:D	R,O	SCCPCH State
c	WRAN	FTD_SB_RRC_RACH_STATE	B:D	R,O	RACH State
d	WRAN	FTD_SB_RRC_DPCH_STATE	B:D	R,O	DPCH State

11.10 Display 46.10: Cell Reselection - Screen 1

This screen shows reselection OK and Fail counters

S60 Data display

```
Cell reselection - 1
Idle              OK / Failed
                  aaaaa     bbbbb
Connected         OK / Failed
                  ccccc     ddddd
UMTS=>GSM         OK / Failed
                  eeeee     fffff
GSM=>UMTS         OK / Failed
                  ggggg     hhhhh
```

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(5)	WRAN	FTD_ SB_RRC_IDLE_RESELECTION_OK_C OUNT	W:D	R,O	Number of successful Idle mode reselections
b(5)	WRAN	FTD_ SB_RRC_IDLE_RESELECTION_FAIL _COUNT	W:D	R,O	Number of unsuccessful Idle mode reselections
c(5)	WRAN	FTD_ SB_RRC_CON_RESELECTION_OK_C OUNT	W:D	R,O	Number of successful Connected mode reselections
d(5)	WRAN	FTD_ SB_RRC_CON_RESELECTION_FAIL_ COUNT	W:D	R,O	Number of unsuccessful Connected mode reselections
e(5)	WRAN	FTD_ SB_RRC_UMTS_TO_GSM_OK_COU NT	W:D	R,O	Number of successful UMTS to GSM reselections
f(5)	WRAN	FTD_ SB_RRC_UMTS_TO_GSM_FAIL_CO UNT	W:D	R,O	Number of unsuccessful UMTS to GSM reselections
g(5)	WRAN	FTD_ SB_RRC_GSM_TO_UMTS_OK_COU NT	W:D	R,O	Number of successful GSM to UMTS reselections
h(5)	WRAN	FTD_ SB_RRC_GSM_TO_UMTS_FAIL_CO UNT	W:D	R,O	Number of unsuccessful GSM to UMTS reselections

11.11 Display 46.11: Radio Access Bearer Information

This screen shows Radio Access Bearers currently setup

S60 Data display

RAB information
RAB ID Domain
aaa b
ccc d
eee f
ggg h
iii j
kkk l
SRB's ID mm nn oo pp

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(3)	WRAN	FTD_SB_RRC_RAB_ID1	B:D	R,0	Radio Access Bearer ID
b	WRAN	FTD_SB_RRC_RAB_ID1_DOMAIN	S	R,0	Domain - PS, CS
c(3)	WRAN	FTD_SB_RRC_RAB_ID2	B:D	R,0	Radio Access Bearer ID
d	WRAN	FTD_SB_RRC_RAB_ID2_DOMAIN	S	R,0	Domain - PS, CS
e(3)	WRAN	FTD_SB_RRC_RAB_ID3	B:D	R,0	Radio Access Bearer ID
f	WRAN	FTD_SB_RRC_RAB_ID3_DOMAIN	S	R,0	Domain - PS, CS
g(3)	WRAN	FTD_SB_RRC_RAB_ID4	B:D	R,0	Radio Access Bearer ID
h	WRAN	FTD_SB_RRC_RAB_ID4_DOMAIN	S	R,0	Domain - PS, CS
i(3)	WRAN	FTD_SB_RRC_RAB_ID5	B:D	R,0	Radio Access Bearer ID
j	WRAN	FTD_SB_RRC_RAB_ID5_DOMAIN	S	R,0	Domain - PS, CS
k(3)	WRAN	FTD_SB_RRC_RAB_ID6	B:D	R,0	Radio Access Bearer ID
l	WRAN	FTD_SB_RRC_RAB_ID6_DOMAIN	S	R,0	Domain - PS, CS
m(2)	WRAN	FTD_SB_RRC_SRB_ID1	B:D	R,0	Signalling Radio Bearer ID
n(2)	WRAN	FTD_SB_RRC_SRB_ID2	B:D	R,0	Signalling Radio Bearer ID
o(2)	WRAN	FTD_SB_RRC_SRB_ID3	B:D	R,0	Signalling Radio Bearer ID
p(2)	WRAN	FTD_SB_RRC_SRB_ID4	B:D	R,0	Signalling Radio Bearer ID

11.12 Display 46.12: Radio Bearer Information

This screen shows all Radio Bearers associated with a RAB id. The RAB id and the associated domain are entered as a single decimal value. The RAB id is the first three digits and the domain is input as the last digit, 1 for PS and 0 for CS.

S60 Data display

RB information - 1

RAB ID and domain(P/C):
aaa b

Radio Bearer ID
cc dd ee ff gg hh ii jj
Re-establish tmr
kkkkk

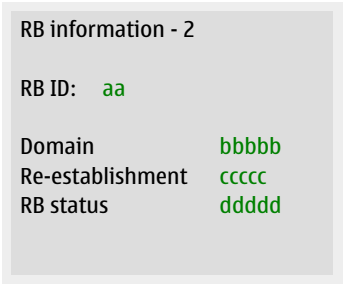
Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(3)	WRAN	FTD_SB_RRC_RAB_ID	B:D	R,0	Radio Access Bearer ID
b	WRAN	FTD_SB_RRC_RAB_ID_DOMAIN	S	R,0	Domain - PS, CS
c(2)	WRAN	FTD_SB_RRC_RB_ID1	B:D	R,0	Radio Bearer ID
d(2)	WRAN	FTD_SB_RRC_RB_ID2	B:D	R,0	Radio Bearer ID
e(2)	WRAN	FTD_SB_RRC_RB_ID3	B:D	R,0	Radio Bearer ID
f(2)	WRAN	FTD_SB_RRC_RB_ID4	B:D	R,0	Radio Bearer ID
g(2)	WRAN	FTD_SB_RRC_RB_ID5	B:D	R,0	Radio Bearer ID
h(2)	WRAN	FTD_SB_RRC_RB_ID6	B:D	R,0	Radio Bearer ID
i(2)	WRAN	FTD_SB_RRC_RB_ID7	B:D	R,0	Radio Bearer ID
j(2)	WRAN	FTD_SB_RRC_RB_ID8	B:D	R,0	Radio Bearer ID
k(5)	WRAN	FTD_SB_RRC_RAB_RE_EST_TIMER	S	R,0	Radio Access Bearer Re-establishment Timer (T314/ T315)
INPUT(4)	WRAN	FTD_ SB_INPUT_rrc_ftd_rab_id_set	DW:D	R,0	callback function subblock identity

11.13 Display 46.13: Radio Bearer Information

This screen takes an input Radio Bearer id and shows associated information

S60 Data display



Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(2)	WRAN	FTD_SB_RRC_RB_ID	B:D	R,0	Radio Bearer ID
b(5)	WRAN	FTD_SB_RRC_RB_DOMAIN	S	R,0	Domain - PS, CS, SRB
c(5)	WRAN	FTD_SB_RRC_RB_RE_EST_TIMER	S	R,0	Radio Bearer Re-establishment Timer (T314/T315)
d(5)	WRAN	FTD_SB_RRC_RB_STATUS	S	R,0	RB Status - Start, Stop
INPUT(2)	WRAN	FTD_SB_INPUT_rrc_ftd_rb_id_set	DW:D	R,0	callback function subblock identity

12 Group 47: WCDMA RRC displays

12.1 Display 47.01: RRC Global State Change Counters

This screen shows Global RRC state Change Countes

S60 Data display

RRC global state change counters

DCH=>FACH	aaaaa
FACH=>DCH	bbbbb
FACH=>CELL_PCH	ccccc
FACH=>URA_PCH	ddddd
DCH=>CELL_PCH	eeeee
DCH=>URA_PCH	fffff

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(5)	WRAN	FTD_SB_RRC_DCH_TO_FACH_COUNT	W:D	R,O	Number of state changes from DCH to FACH
b(5)	WRAN	FTD_SB_RRC_FACH_TO_DCH_COUNT	W:D	R,O	Number of state changes from FACH to DCH
c(5)	WRAN	FTD_SB_RRC_FACH_TO_CELLPCH_COUNT	W:D	R,O	Number of state changes from FACH to CELL_PCH
d(5)	WRAN	FTD_SB_RRC_FACH_TO_URAPCH_COUNT	W:D	R,O	Number of state changes from FACH to URA_PCH
e(5)	WRAN	FTD_SB_RRC_DCH_TO_CELLPCH_COUNT	W:D	R,O	Number of state changes from DCH to CELL_PCH
f(5)	WRAN	FTD_SB_RRC_DCH_TO_URAPCH_COUNT	W:D	R,O	Number of state changes from DCH to URA_PCH

12.2 Display 47.02: Counters for Timeouts - Screen 1

This screen shows the number timeouts for RRC timers

S60 Data display

RRC count timeouts - 1

T300	T312	T301	T302
aaa	bbb	ccc	ddd
T304	T305	T307	T308
eee	fff	ggg	hhh
T309	iii		

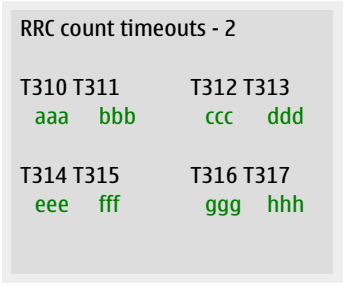
Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(3)	WRAN	FTD_SB_RRC_T300_IDLE_TIMEOUT_COUNT	W:D	R,0	T300 timeout counter
b(3)	WRAN	FTD_SB_RRC_T312_IDLE_TIMEOUT_COUNT	W:D	R,0	T312 timeout counter
c(3)	WRAN	FTD_SB_RRC_T301_TIMEOUT_COUNT	W:D	R,0	T301 timeout counter
d(3)	WRAN	FTD_SB_RRC_T302_TIMEOUT_COUNT	W:D	R,0	T302 timeout counter
e(3)	WRAN	FTD_SB_RRC_T304_TIMEOUT_COUNT	W:D	R,0	T304 timeout counter
f(3)	WRAN	FTD_SB_RRC_T305_TIMEOUT_COUNT	W:D	R,0	T305 timeout counter
g(3)	WRAN	FTD_SB_RRC_T307_TIMEOUT_COUNT	W:D	R,0	T307 timeout counter
h(3)	WRAN	FTD_SB_RRC_T308_TIMEOUT_COUNT	W:D	R,0	T308 timeout counter
i(3)	WRAN	FTD_SB_RRC_T309_TIMEOUT_COUNT	W:D	R,0	T309 timeout counter

12.3 Display 47.03: Counters for Timeouts - Screen 2

This screen shows the number timeouts for RRC timers

S60 Data display



Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(3)	WRAN	FTD_SB_RRC_T310_TIMEOUT_COUNT	W:D	R,0	T310 timeout counter
b(3)	WRAN	FTD_SB_RRC_T311_TIMEOUT_COUNT	W:D	R,0	T311 timeout counter
c(3)	WRAN	FTD_SB_RRC_T312_TIMEOUT_COUNT	W:D	R,0	T312 timeout counter
d(3)	WRAN	FTD_SB_RRC_T313_TIMEOUT_COUNT	W:D	R,0	T313 timeout counter
e(3)	WRAN	FTD_SB_RRC_T314_TIMEOUT_COUNT	W:D	R,0	T314 timeout counter
f(3)	WRAN	FTD_SB_RRC_T315_TIMEOUT_COUNT	W:D	R,0	T315 timeout counter

Abbr	Server	Sub-block id	Format	Mode	Description
g(3)	WRAN	FTD_ SB_RRC_T316_TIMEOUT_COUNT	W:D	R,O	T316 timeout counter
h(3)	WRAN	FTD_ SB_RRC_T317_TIMEOUT_COUNT	W:D	R,O	T317 timeout counter

12.4 Display 47.04: Peer Message Count- Screen1

This screen shows Count for Peer Messages

S60 Data display

Peer message count - 1

MIB	aaa	PMIB	bbb
SIB1	ccc	SIB2	ddd
SIB3	eee	PSIB3	fff
SIB4	ggg	PSIB4	hhh
SIB5	iii	SIB6	jjj
SIB7	kkk	SIB8	lll

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(3)	WRAN	FTD_SB_RRC_MIB_COUNT	W:D	R,O	MIB Message Count
b(3)	WRAN	FTD_SB_RRC_PMIB_COUNT	W:D	R,O	MIB Message Count
c(3)	WRAN	FTD_SB_RRC_SIB1_COUNT	W:D	R,O	SIB1 Message Count
d(3)	WRAN	FTD_SB_RRC_SIB2_COUNT	W:D	R,O	SIB2 Message Count
e(3)	WRAN	FTD_SB_RRC_SIB3_COUNT	W:D	R,O	SIB3 Message Count
f(3)	WRAN	FTD_SB_RRC_PSIB3_COUNT	W:D	R,O	SIB3 Message Count
g(3)	WRAN	FTD_SB_RRC_SIB4_COUNT	W:D	R,O	SIB4 Message Count
h(3)	WRAN	FTD_SB_RRC_PSIB4_COUNT	W:D	R,O	SIB4 Message Count
i(3)	WRAN	FTD_SB_RRC_SIB5_COUNT	W:D	R,O	SIB5 Message Count
j(3)	WRAN	FTD_SB_RRC_SIB6_COUNT	W:D	R,O	SIB6 Message Count
k(3)	WRAN	FTD_SB_RRC_SIB7_COUNT	W:D	R,O	SIB7 Message Count
l(3)	WRAN	FTD_SB_RRC_SIB8_COUNT	W:D	R,O	SIB8 Message Count

12.5 Display 47.05: Peer Message Count- Screen2

This screen shows Peer Message Count

S60 Data display

Peer message count - 2

SIB9	aaa	SIB15	ggg
SIB10	bbb	SIB16	hhh
SIB11	ccc	SIB17	iii
SIB12	ddd	SIB18	jjj
SIB13	eee		
SIB14	fff		

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(3)	WRAN	FTD_SB_RRC_SIB9_COUNT	W:D	R,0	SIB9 Message Count
b(3)	WRAN	FTD_SB_RRC_SIB10_COUNT	W:D	R,0	SIB10 Message Count
c(3)	WRAN	FTD_SB_RRC_SIB11_COUNT	W:D	R,0	SIB11 Message Count
d(3)	WRAN	FTD_SB_RRC_SIB12_COUNT	W:D	R,0	SIB12 Message Count
e(3)	WRAN	FTD_SB_RRC_SIB13_COUNT	W:D	R,0	SIB13 Message Count
f(3)	WRAN	FTD_SB_RRC_SIB14_COUNT	W:D	R,0	SIB14 Message Count
g(3)	WRAN	FTD_SB_RRC_SIB15_COUNT	W:D	R,0	SIB15 Message Count
h(3)	WRAN	FTD_SB_RRC_SIB16_COUNT	W:D	R,0	SIB16 Message Count
i(3)	WRAN	FTD_SB_RRC_SIB17_COUNT	W:D	R,0	SIB17 Message Count
j(3)	WRAN	FTD_SB_RRC_SIB18_COUNT	W:D	R,0	SIB18 Message Count

12.6 Display 47.06: Peer Message Count-Screen3

This screen shows Peer Message Count

S60 Data display

Peer message count - 3
Connect request aaa
Connect reject bbb
Connect setup ccc
Connect setup compl ddd
Connect release eee
Connect rel compl fff
Paging type1 ggg
Paging type2 hhh

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(3)	WRAN	FTD_SB_RRC_CONRQ_COUNT	W:D	R,0	RRC Connection Request Message Count
b(3)	WRAN	FTD_SB_RRC_CONREJ_COUNT	W:D	R,0	RRC Connection Reject Message Count
c(3)	WRAN	FTD_SB_RRC_CONSET_COUNT	W:D	R,0	RRC Connection Setup Message Count
d(3)	WRAN	FTD_SB_RRC_CONSC_COUNT	W:D	R,0	RRC Connection Setup Complete Message Count
e(3)	WRAN	FTD_SB_RRC_CONREL_COUNT	W:D	R,0	RRC Connection Release Message Count
f(3)	WRAN	FTD_SB_RRC_CNRLC_COUNT	W:D	R,0	RRC Connection Release Complete Message Count
g(3)	WRAN	FTD_SB_RRC_PAGE1_COUNT	W:D	R,0	Paging Type1 Message Count
h(3)	WRAN	FTD_SB_RRC_PAGE2_COUNT	W:D	R,0	Paging Type2 Message Count

12.7 Display 47.07: Peer Message Count-Screen4

This screen shows Peer Message Count

S60 Data display
Peer message count - 4 RB setup ok / fail aaa bbb ccc RB reconf ok / fail ddd eee fff RB release ok / fail ggg hhh iii Transport CH ok / fail jjj kkk lll

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(3)	WRAN	FTD_SB_RRC_RBSET_COUNT	W:D	R,0	Radio Bearer Setup Message Count
b(3)	WRAN	FTD_SB_RRC_RBSTC_COUNT	W:D	R,0	Radio Bearer Setup Complete Message Count
c(3)	WRAN	FTD_SB_RRC_RBSTF_COUNT	W:D	R,0	Radio Bearer Setup Failure Message Count
d(3)	WRAN	FTD_SB_RRC_RBRC_COUNT	W:D	R,0	Radio Bearer Reconfiguration Message Count
e(3)	WRAN	FTD_SB_RRC_RBRCC_COUNT	W:D	R,0	Radio Bearer Reconfiguration Complete Message Count
f(3)	WRAN	FTD_SB_RRC_RBRCF_COUNT	W:D	R,0	Radio Bearer Reconfiguration Failure Message Count
g(3)	WRAN	FTD_SB_RRC_RBRL_COUNT	W:D	R,0	Radio Bearer Release Message Count
h(3)	WRAN	FTD_SB_RRC_RBRLC_COUNT	W:D	R,0	Radio Bearer Release Complete Message Count
i(3)	WRAN	FTD_SB_RRC_RBRLF_COUNT	W:D	R,0	Radio Bearer Release Failure Message Count
j(3)	WRAN	FTD_SB_RRC_TCR_COUNT	W:D	R,0	Transport Channel Reconfiguration Message Count
k(3)	WRAN	FTD_SB_RRC_TCHRC_COUNT	W:D	R,0	Transport Channel Reconfiguration Complete Message Count
l(3)	WRAN	FTD_SB_RRC_TCHRF_COUNT	W:D	R,0	Transport Channel Reconfiguration Failure Message Count

12.8 Display 47.08: Peer Message Count-Screen5

This screen shows Peer Message Count

S60 Data display
Peer message count - 5 Physical CH ok / fail aaa bbb ccc Act set update ok / fail ddd eee fff HO to UTRAN ok / fail ggg hhh iii HO from UTRAN jjj

Fields

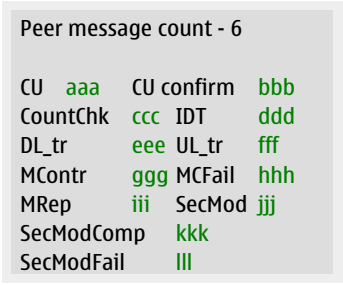
Abbr	Server	Sub-block id	Format	Mode	Description
a(3)	WRAN	FTD_SB_RRC_PCRC_COUNT	W:D	R,0	Physical Channel Reconfiguration Message Count
b(3)	WRAN	FTD_SB_RRC_PCHRC_COUNT	W:D	R,0	Physical Channel Reconfiguration Complete Message Count

Abbr	Server	Sub-block id	Format	Mode	Description
c(3)	WRAN	FTD_SB_RRC_PCHRF_COUNT	W:D	R,0	Physical Channel Reconfiguration Failure Message Count
d(3)	WRAN	FTD_SB_RRC_ASUP_COUNT	W:D	R,0	Active Set Update Message Count
e(3)	WRAN	FTD_SB_RRC_ASUPC_COUNT	W:D	R,0	Active Set Update Complete Message Count
f(3)	WRAN	FTD_SB_RRC_ASUPF_COUNT	W:D	R,0	Active Set Update Failure Message Count
g(3)	WRAN	FTD_SB_RRC_HOTUT_COUNT	W:D	R,0	Handover to UTRAN Message Count
h(3)	WRAN	FTD_SB_RRC_HOTUC_COUNT	W:D	R,0	Handover to UTRAN Complete Message Count
i(3)	WRAN	FTD_SB_RRC_HFUG_COUNT	W:D	R,0	Handover from UTRAN Message Count
j(3)	WRAN	FTD_SB_RRC_HOFUF_COUNT	W:D	R,0	Handover from UTRAN Failure Message Count

12.9 Display 47.09: Peer Message Count-Screen6

This screen shows Peer Message count

S60 Data display



Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(3)	WRAN	FTD_SB_RRC_CELUP_COUNT	W:D	R,0	Cell Update Message Count
b(3)	WRAN	FTD_SB_RRC_CUCNF_COUNT	W:D	R,0	Cell Update Confirm Message Count
c(3)	WRAN	FTD_SB_RRC_CTCK_COUNT	W:D	R,0	Counter Check Message Count
d(3)	WRAN	FTD_SB_RRC_IDT_COUNT	W:D	R,0	Initial Direct Transfer Message Count
e(3)	WRAN	FTD_SB_RRC_DDT_COUNT	W:D	R,0	Downlink Direct Transfer Message Count
f(3)	WRAN	FTD_SB_RRC_UDT_COUNT	W:D	R,0	Uplink Direct Transfer Message Count
g(3)	WRAN	FTD_SB_RRC_MECON_COUNT	W:D	R,0	Measurement Control Message Count
h(3)	WRAN	FTD_SB_RRC_MECOF_COUNT	W:D	R,0	Measurement Control Failure Message Count
i(3)	WRAN	FTD_SB_RRC_MEREP_COUNT	W:D	R,0	Measurement Report Message Count
j(3)	WRAN	FTD_SB_RRC_SECM_COUNT	W:D	R,0	Security Mode Command Message Count
k(3)	WRAN	FTD_SB_RRC_SECMC_COUNT	W:D	R,0	Security Mode Complete Message Count
l(3)	WRAN	FTD_SB_RRC_SECMF_COUNT	W:D	R,0	Security Mode Failure Message Count

12.10 Display 47.10: Peer Message Count-Screen7

This screen shows Peer Message Count

S60 Data display
Peer message count - 7 SG_CR mes/ind aaa bbb UE_CE URA ccc ddd RRC URA_conf eee fff UTRAN UTRAN_cf ggg hhh UTRAN_fail iii CCO_from_UTRAN jjj CCO_from_UTRAN_Fail kkk

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(3)	WRAN	FTD_SB_RRC_SGCR_COUNT	W:D	R,O	Signalling Connection Release Message Count
b(3)	WRAN	FTD_SB_RRC_SGCRI_COUNT	W:D	R,O	Signalling Connection Release Indication Message Count
c(3)	WRAN	FTD_SB_RRC_UECEQ_COUNT	W:D	R,O	UE Capability Enquiry Message Count
d(3)	WRAN	FTD_SB_RRC_URAUP_COUNT	W:D	R,O	URA Update Message Count
e(3)	WRAN	FTD_SB_RRC_RRCST_COUNT	W:D	R,O	RRC Status Message Count
f(3)	WRAN	FTD_SB_RRC_URAUC_COUNT	W:D	R,O	URA Update Confirm Message Count
g(3)	WRAN	FTD_SB_RRC_UTMI_COUNT	W:D	R,O	UTRAN Mobility Information Message Count
h(3)	WRAN	FTD_SB_RRC_UMIC_COUNT	W:D	R,O	UTRAN Mobility Information Confirm Message Count
i(3)	WRAN	FTD_SB_RRC_UMIF_COUNT	W:D	R,O	UTRAN Mobility Information Failure Message Count
j(3)	WRAN	FTD_SB_RRC_CCOFU_COUNT	W:D	R,O	CellChangeOrderFromUTRAN message Count
k(3)	WRAN	FTD_SB_RRC_CCOFUF_COUNT	W:D	R,O	CellChangeOrderFromUTRANFailure message Count

12.11 Display 47.11: FDD HSDPA

This display shows the HSDPA L3 Indentifier information

S60 Data display
HSDPA Identifier HRNTI aaaaa SCR bbbbb

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(5)	WRAN	FTD_SB_HSDPA_H_RNTI	W:D	R,I,O	Network assigned H_RNTI
b(5)	WRAN	FTD_ SB_HSDPA_PRIMARY_SCR_CODE	W:D	R,I,O	Scrambling code for HSDPA serving RL

12.12 Display 47.12: FDD HSDPA

This display shows HSDPA L3 HS_SCCH information

S60 Data display

HSDPA HSSCCH
Channelisation Codes

Ch1	aaaaa
Ch2	bbbbb
Ch3	ccccc
Ch4	ddddd

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(5)	WRAN	FTD_SB_HSDPA_HS_SCCH_CHANNELISATION_CODE1	W:D	R,I,O	HS_SCCH Channelisation Code 1
b(5)	WRAN	FTD_SB_HSDPA_HS_SCCH_CHANNELISATION_CODE2	W:D	R,I,O	HS_SCCH Channelisation Code 2
c(5)	WRAN	FTD_SB_HSDPA_HS_SCCH_CHANNELISATION_CODE3	W:D	R,I,O	HS_SCCH Channelisation Code 3
d(5)	WRAN	FTD_SB_HSDPA_HS_SCCH_CHANNELISATION_CODE4	W:D	R,I,O	HS_SCCH Channelisation Code 4

12.13 Display 47.13: FDD HSDPA

This display shows HSDPA L3 Measurement Feedback Information

S60 Data display

Measurement
Feedback Info

Cycle	aaaaa
Rep	b
dCQI	c

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(5)	WRAN	FTD_SB_HSDPA_CQI_FEEDBACK_CYCLE	W:D	R,I,O	Actual value in milliseconds
b	WRAN	FTD_SB_HSDPA_CQI_REPETITION_FACTOR	W:D	R,I,O	CQI Repetition factor
c	WRAN	FTD_SB_HSDPA_CQI_DELTA_CQI	W:D	R,I,O	Delta CQI

12.14 Display 47.14: FDD HSDPA

This display shows HSDPA L3 HARQ Memory Partition Type Information

S60 Data display

Harq Memory Type

HQ MemType a

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a	WRAN	FTD_ SB_HSDPA_HARQ_MEMORY_PARTITION_TYPE	W:D	R,I,O	HARQ Memory Partition Type0 =Implicit, 1 = Explicit

12.15 Display 47.15: FDD HSDPA

This display shows HSDPA L3 HARQ Memory Size Information - Processes 1 - 4

S60 Data display

Harq Memory Sizes 1 - 4

HQ1 aaaaaaaa
HQ2 bbbbbbbb
HQ3 cccccccc
HQ4 dddddddd

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(8)	WRAN	FTD_ SB_HSDPA_HARQ_MEMORY_SIZE_PROCESS1	DW:H	R,I,O	HARQ Memory Size
b(8)	WRAN	FTD_ SB_HSDPA_HARQ_MEMORY_SIZE_PROCESS2	DW:H	R,I,O	HARQ Memory Size
c(8)	WRAN	FTD_ SB_HSDPA_HARQ_MEMORY_SIZE_PROCESS3	DW:H	R,I,O	HARQ Memory Size
d(8)	WRAN	FTD_ SB_HSDPA_HARQ_MEMORY_SIZE_PROCESS4	DW:H	R,I,O	HARQ Memory Size

12.16 Display 47.16: FDD HSDPA

This display shows HSDPA L3 HARQ Memory Size Information - Processes 5 - 8

S60 Data display

Harq Memory
Sizes 5 - 8

HQ5	aaaaaaaa
HQ6	bbbbbbbb
HQ7	cccccccc
HQ8	dddddddd

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(8)	WRAN	FTD_SB_HSDPA_HARQ_MEMORY_SIZE_PROCESS5	DW:H	R,I,O	HARQ Memory Size
b(8)	WRAN	FTD_SB_HSDPA_HARQ_MEMORY_SIZE_PROCESS6	DW:H	R,I,O	HARQ Memory Size
c(8)	WRAN	FTD_SB_HSDPA_HARQ_MEMORY_SIZE_PROCESS7	DW:H	R,I,O	HARQ Memory Size
d(8)	WRAN	FTD_SB_HSDPA_HARQ_MEMORY_SIZE_PROCESS8	DW:H	R,I,O	HARQ Memory Size

12.17 Display 47.17: FDD HSDPA

This display shows HSDPA L3 DPCH Power Control Information

S60 Data display

DPCH PwrCtrl

dAck	a
dNack	b
Rep	c

Fields

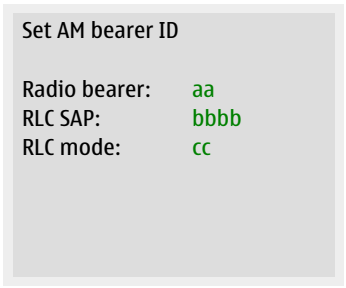
Abbr	Server	Sub-block id	Format	Mode	Description
a	WRAN	FTD_SB_HSDPA_DPCH_PWRCTRL_DELTA_ACK	W:D	R,I,O	DPCH Power Control - deltaAck value
b	WRAN	FTD_SB_HSDPA_DPCH_PWRCTRL_DELTA_NACK	W:D	R,I,O	DPCH Power Control - deltaNack value
c	WRAN	FTD_SB_HSDPA_DPCH_PWRCTRL_ACKNACK_REPETITION_FACTOR	W:D	R,I,O	DPCH Power Control - ACK/NACKRepetition Factor

13 Group 48: WCDMA RLC displays

13.1 Display 48.01: Set AM Bearer ID

Set the RLC AM bearer ID for which the AM info will be displayed

S60 Data display



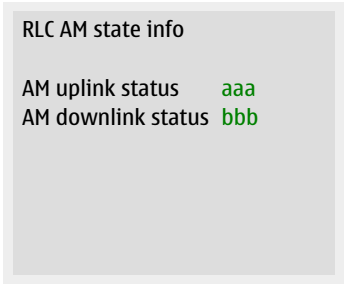
Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(2)	WRAN	FTD_SB_RLC_FTD_SELECTED_AM_RADIO_BEARER	B:D	R,O	AM radio bearer for which data is to be displayed. It is uint8 data. It can be 1 - 32.
b(4)	WRAN	FTD_SB_RLC_FTD_SAP_USER	S	R,O	RLC SAP user for selected radio bearer. It is string data. It can be "RRC" or "PDCP".
c(2)	WRAN	FTD_SB_RLC_FTD_MODE	S	R,O	RLC mode for selected radio bearer. It is string data. It can be "AM" or "UM".
INPUT(2)	WRAN	FTD_SB_INPUT_RLC_FTD_AM_BEARER_SELECT	DW:D	R,O	callback function subblock identity

13.2 Display 48.02: RLC AM State information

This screen displays state information for the AM bearer selected using display 48.01

S60 Data display



Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(3)	WRAN	FTD_SB_RLC_FTD_AM_UL_FLOW_CTRL	S	R,O	AM Uplink flow control status. It is string data. It can be "ON" or "OFF".
b(3)	WRAN	FTD_SB_RLC_FTD_AM_DL_FLOW_CTRL	S	R,O	AM Downlink flow control status. It is string data. It can be "ON" or "OFF".

14 Group 75: Location Displays

14.1 Group 75 Information

Location displays are grouped in the following way:

Displays 75.0X: Common location FTDs

Displays 75.2X: GSM specific General FTDs

Displays 75.3X: GPS specific General FTDs

14.2 Display 75.01: WGS-84 Coordinates

Location displays are grouped in the following way:

This display shows latitude / longitude for the last requested location

NOTE!

All numerical values are shown in decimal.

In case no location request has been requested all fields shall show "x".

In case the latest received location request did not result in any latitude / longitude, these fields shall display "-", but method and status fields shall display actual values.

S60 Data display

```
LATITUDE
        a     bb    cccccc
LONGITUDE
        d     eee   ffffff
STATUS
        ggggggggggg
METHOD
        hhhhhhhhhh
```

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a	LOCATION	LS_SB_FTD_LATITUDE_DIR	S	R,I,O	Latitude direction: **N** : North, **S** : South
b(2)	LOCATION	LS_SB_FTD_LATITUDE_DEG	S	R,I,O	Latitude: degree
c(6)	LOCATION	LS_SB_FTD_LATITUDE	S	R,I,O	Latitude: decimal degrees
d	LOCATION	LS_SB_FTD_LONGITUDE_DIR	S	R,I,O	Longitude direction: **E** : East, **W** : West
e(3)	LOCATION	LS_SB_FTD_LONGITUDE_DEG	S	R,I,O	longitude: degrees
f(6)	LOCATION	LS_SB_FTD_LONGITUDE	S	R,I,O	longitude:decimal degrees
g(11)	LOCATION	LS_ SB_FTD_LOCATE_RESP_STATUS	S	R,I,O	Status: **OK**: Successful location response **DONE**: Successful location response - last of multiple **FAIL**: Fatal error occurred, no location estimate **TIME-OUT**: Desired Response Time exceeded. **PRIV-NOT-OK**: Privacy not ok

Abbr	Server	Sub-block id	Format	Mode	Description
h(11)	LOCATION	LS_SB_FTD_LOCATE_RESP_METHOD	S	R,I,O	Method: **NW SELECT**: The method is selected by the NW. **AGPS, MS BAS:** MS based AGPS method used **AGPS, MS ASS:** MS assisted AGPS method used **AFLT, MS BAS**: MS based AFLT method used **SECTOR**: Brew sector information **HYBRID**: More than 1

14.3 Display 75.02: Altitude and Velocity vector

This display shows altitude and velocity for the last requested location.

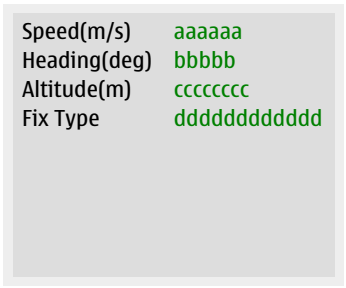
NOTE!

All numerical values are shown in decimal.

In case no location request has been requested all fields shall display "x".

In case the latest location estimate did not include altitude/velocity these fields shall display "-".

S60 Data display



Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(6)	LOCATION	LS_SB_FTD_SPEED	S	R,I,O	Speed in m/s. Format aaa.aa.
b(5)	LOCATION	LS_SB_FTD_DIRECTION	S	R,I,O	Heading in degrees relative to north (clockwise). Format bbb.b
c(8)	LOCATION	LS_SB_FTD_ALTITUDE	S	R,I,O	Altitude above WGS-84 ellipsoid in meters. Can be negative or positive (+/-). Format ccccc.c
d(12)	LOCATION	LS_SB_FTD_FIX_TYPE	S	R,I,O	Fix Type: **2D** 2 dimensional fix **3D** 3 dimensional fix

14.4 Display 75.03: Error Estimate Ellipsoid

This display shows error estimation for the last requested location.

All numerical values are shown in decimal.

In case no location request has been requested all fields shall display "x".

In case the latest location estimate did not include uncertainty information these fields shall display "-".

S60 Data display
Orientation aaa Perpendi.(m) bbbbb Along (m) ccccc Vertical (m) ddddd

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(3)	LOCATION	LS_SB_FTD_ERR_ORIENTAT	S	R,I,O	Error estimate ellipsoid orientation clockwise from north in degrees (0..89 degrees)
b(5)	LOCATION	LS_SB_FTD_ERR_EAST	S	R,I,O	Error estimate East in meters, 1 sigma value
c(5)	LOCATION	LS_SB_FTD_ERR_NORTH	S	R,I,O	Error estimate North in meters, 1 sigma value
d(5)	LOCATION	LS_SB_FTD_ERR_VERT	S	R,I,O	Error estimate Vertical in meters, 1 sigma value

14.5 Display 75.04: MS Time of the Location Estimate

This display shows the time stamp for the last location estimate .

The time stamp is always based on local time, i.e. the time of the clock in MS.

NOTE!

All numerical values are shown in decimal.

If MS time in ISA Time Server is not set one might experience invalid time stamps.

S60 Data display
MS Date aaaaaaaaaa MS Time bbbbbbbb STATUS cccccccccc

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(10)	LOCATION	LS_SB_FTD_MS_DATE	S	R,I,O	MS date: (format: dd:mm:yyyy; dd day, mm month, yy year)
b(8)	LOCATION	LS_SB_FTD_MS_TIME	S	R,I,O	MS Time: (format: hh:mm:ss; hh hours, mm minutes, ss seconds)

Abbr	Server	Sub-block id	Format	Mode	Description
c(11)	LOCATION	LS_SB_FTD_LOCATE_RESP_STATUS	S	R,I,O	Status: **OK**: Successful location response **DONE**: Successful location response - last of multiple **FAIL**: Fatal error occurred, no location estimate **TIME-OUT**: Desired Response Time exceeded. **PRIV-NOT-OK**: Privacy not ok

14.6 Display 75.10: Test Display #1

To start a location request, perform following steps:

1. Press the Menu button
2. Scroll in the main menu loop to field test display item
3. Press the Select button
4. Select this display in input mode by entering 75.10
5. "INPUT" prompt will be shown on the display, enter the location request parameters in display following this:L XYANNN

Value of L	NMEA logfile handling (this only applies to S40 products)
0	Logfile is not created in root directory of the memorycard
1	Logfile is created in root directory of the memorycard

Value of X	Location method
0	Stand-Alone GPS
1	MS-Based AGPS

Value of Y	Start type
0	Cold start (all GPS data cleared)
1	Warm start (GPS Ephemeris data cleared)
2	Hot start (no GPS data cleared)

Value of A	Multiple request type
0	Multiple requests for single-fix. Request treated as NNN * single fix (e.g each can start as cold start)
1	Single request for multiple fixes. Request treated as 1 * multiple fixes (with NNN number of fixes, e.g. only first one can start as cold start). The interval between the fixes will be 1 second.

Value of NNN	Number of fixes
000	Stop ongoing location request

XXX	Number of fixes to be made (ranging in [001, FFE])
FFF	Infinite number of fixes - continuous until stopped (NNN=000)

6. Confirm with the Ok button

If change succeeded the status will show appropriate value.

TTF (Time To Fix) will show the measured time to get the first fix only.

S60 Data display

```
Status          aaaaaaaaaaa
TTF(s)          bbbbb
```

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(11)	LOCATION	LS_SB_FTD_LOCATE_RESP_STATUS	S	R,I,O	Status: **OK**: Successful location response **DONE**: Successful location response - last of multiple **FAIL**: Fatal error occurred, no location estimate **TIME-OUT**: Desired Response Time exceeded. **PRIV-NOT-OK**: Privacy not ok
b(5)	LOCATION	LS_SB_FTD_FIX_TIME	S	R,I,O	Measured Time to fix (bbb.b) seconds
INPUT(7)	LOCATION	LS_SB_FTD_LOCATION_REQ	DW:H	R,I,O	Trigger location request xyannn

14.7 Display 75.11: Test Display #2

This display is associated to 75.10.

When a location request is started from display 75.10, all fields in 75.11 will be cleared (set to zero, 000). If NNN * single fixes was requested, Location Server will measure the actual time to each fix, and increment the appropriate counter by one.

S60 Data display

```
<05 <10 <15
aaa   bbb   ccc
<20 <25 <30
ddd   eee   fff
<35 <40 <45
ggg   hhh   iii
<50 <55 >55
jjj     kkk   lll
```

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(3)	LOCATION	LS_SB_FTD_TTF_LESS_5	W:D	R,I,O	counter for fixes, TTF < 5s
b(3)	LOCATION	LS_SB_FTD_TTF_LESS_10	W:D	R,I,O	counter for fixes, 5s=<TTF<10s
c(3)	LOCATION	LS_SB_FTD_TTF_LESS_15	W:D	R,I,O	counter for fixes, 10s=<TTF<15s
d(3)	LOCATION	LS_SB_FTD_TTF_LESS_20	W:D	R,I,O	counter for fixes, 15s=<TTF<20s
e(3)	LOCATION	LS_SB_FTD_TTF_LESS_25	W:D	R,I,O	counter for fixes 20s=<TTF<25s
f(3)	LOCATION	LS_SB_FTD_TTF_LESS_30	W:D	R,I,O	counter for fixes 25s=<TTF<30s
g(3)	LOCATION	LS_SB_FTD_TTF_LESS_35	W:D	R,I,O	counter for fixes 30s=<TTF<35s
h(3)	LOCATION	LS_SB_FTD_TTF_LESS_40	W:D	R,I,O	counter for fixes 35s=<TTF<40s
i(3)	LOCATION	LS_SB_FTD_TTF_LESS_45	W:D	R,I,O	counter for fixes 40s=<TTF<45s
j(3)	LOCATION	LS_SB_FTD_TTF_LESS_50	W:D	R,I,O	counter for fixes 45s=<TTF<50s
k(3)	LOCATION	LS_SB_FTD_TTF_LESS_55	W:D	R,I,O	counter for fixes 50s=<TTF<55s
l(3)	LOCATION	LS_SB_FTD_TTF_GREATER_55	W:D	R,I,O	counter for fixes 55s=<TTF

14.8 Display 75.20: GSM Location Request Counters, E-OTD

NOTE!

Examples for how the counters should behave for display 75.20, 75.21 and 75.22 can be found together with description for display 75.22 (chapter 7.42.10).

S60 Data display
EOTD REQUESTS aaaaa RESP OK bbbbb RESP FAIL ccccc

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(5)	LOCATION	LS_SB_FTD_EOTD_REQS	W:D	R,I,O	Received GSM Measure Position Request requiring location method E-OTD since power-up.
b(5)	LOCATION	LS_SB_FTD_EOTD_OK	W:D	R,I,O	E-OTD locations or measurements sent successfully to CS SW as a response to GSM Measure Position Request with requested method E-OTD since power-up.

Abbr	Server	Sub-block id	Format	Mode	Description
c(5)	LOCATION	LS_SB_FTD_EOTD_FAIL	W:D	R,I,O	Responses to E-OTD GSM Position Request requesting the method "E-OTD" that have contained GSM Location Information error element since power-up.

14.9 Display 75.21: GSM Measure Position Request Counters, GPS

Sub-Group: GSM, General Location FTDs

NOTE!

The following shows some examples how the counters in the FTD should behave in different situations. For the examples the initial status for all counters is “0”.

Example Situation	Display 75.21: GSM Measure Position Request Counters, GPS (Status: Proposal)
Measure Position Request with the required method 'GPS' and successful GPS measurement	++++++++++++++ + GPS + + REQ 1+ + OK 1+ + FAIL 0+ ++++++++++++++
Measure Position Request with the required method 'GPS' and failed GPS measurement	++++++++++++++ + GPS + + REQ 1+ + OK 0+ + FAIL 1+ ++++++++++++++

S60 Data display
GPS REQUESTS aaaaa RESP OK bbbbb RESP FAIL ccccc

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(5)	LOCATION	LS_SB_FTD_GPS_REQS	W:D	R,I,O	Received GSM Measure Position Request
b(5)	LOCATION	LS_SB_FTD_GPS_OK	W:D	R,I,O	GPS locations or measurements sent successfully to CS SW as a response to GSM Measure Position Request with requested method "GPS" since power-up.
c(5)	LOCATION	LS_SB_FTD_GPS_FAIL	W:D	R,I,O	Responses to GSM Position Request requesting the method "GPS" that have contained GSM Location Information error element since power-up.

14.10 Display 75.22: GSM Measure Position Request Counters, E-OTD or GPS

Sub-Group: GSM, General Location FTDs

NOTE!

The following page shows some examples how the counters in the FTD's should behave in different situations. For the examples the initial status for all counters is "0".

Example Situation	Display 75.20: GSM Location Request Counters, E-OTD (Status: Proposal)	Display 75.21: GSM Measure Position Request Counters, GPS (Status: Proposal)	Display 75.22: GSM Measure Position Request Counters, E-OTD or GPS (Status: Proposal)
Measure Position Request with the required method 'E-OTD' and successful E-OTD measurement	+ EOTD + + REQ 1+ + OK 1+ + FAIL 0+	+ GPS + + REQ 0+ + OK 0+ + FAIL 0+	+EOTD or GPS + +REQ 0+ +OK:E 0 G 0+ +FA:E 0 G 0+
Measure Position Request with the required method 'E-OTD' and failed E-OTD measurement	+ EOTD + + REQ 1+ + OK 0+ + FAIL 1+	+ GPS + + REQ 0+ + OK 0+ + FAIL 0+	+EOTD or GPS + +REQ 0+ +OK:E 0 G 0+ +FA:E 0 G 0+
Measure Position Request with the required method 'GPS' and successful GPS measurement	+ EOTD + + REQ 0+ + OK 0+ + FAIL 0+	+ GPS + + REQ 1+ + OK 1+ + FAIL 0+	+EOTD or GPS + +REQ 0+ +OK:E 0 G 0+ +FA:E 0 G 0+
Measure Position Request with the required method 'GPS' and failed GPS measurement	+ EOTD + + REQ 0+ + OK 0+ + FAIL 0+	+ GPS + + REQ 1+ + OK 0+ + FAIL 1+	+EOTD or GPS + +REQ 0+ +OK:E 0 G 0+ +FA:E 0 G 0+
Measure Position Request with the required method 'E-OTD or GPS', both methods successful	+ EOTD + + REQ 0+ + OK 0+ + FAIL 0+	+ GPS + + REQ 0+ + OK 0+ + FAIL 0+	+EOTD or GPS + +REQ 1+ +OK:E 1 G 1+ +FA:E 0 G 0+
Measure Position Request with the required method 'E-OTD or GPS ', GPS successful, E-OTD failed	+ EOTD + + REQ 0+ + OK 0+ + FAIL 0+	+ GPS + + REQ 0+ + OK 0+ + FAIL 0+	+EOTD or GPS + +REQ 1+ +OK:E 0 G 1+ +FA:E 1 G 0+
Measure Position Request with the required method 'E-OTD or GPS', GPS failed, E-OTD successful	+ EOTD + + REQ 0+ + OK 0+ + FAIL 0+	+ GPS + + REQ 0+ + OK 0+ + FAIL 0+	+EOTD or GPS + +REQ 1+ +OK:E 1 G 0+ +FA:E 0 G 1+
Measure Position Request with the required method 'E-OTD or GPS' and both methods failed	+ EOTD + + REQ 0+ + OK 0+ + FAIL 0+	+ GPS + + REQ 0+ + OK 0+ + FAIL 0+	+EOTD or GPS + +REQ 1+ +OK:E 0 G 0+ +FA:E 1 G 1+

S60 Data display
EOTD or GPS REQUESTS aaaaa OK:EOTD GPS bbb ccc FA:EOTD GPS ddd eee

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(5)	LOCATION	LS_SB_FTD_EOTD_OR_GPS_REQS	W:D	R,I,O	Received GSM Measure Position Request requiring location method E-OTD or GPS since power-up.
b(3)	LOCATION	LS_ SB_FTD_EOTD_OR_GPS_EOTD_OK	W:D	R,I,O	E-OTD locations or measurements sent successfully to CS SW as a response to GSM Measure Position Request with requested method E-OTD or GPS since power-up.
c(3)	LOCATION	LS_ SB_FTD_EOTD_OR_GPS_GPS_OK	W:D	R,I,O	GPS locations or measurements sent successfully to CS SW as a response to GSM Measure Position Request with requested method E-OTD or GPS since power-up.
d(3)	LOCATION	LS_ SB_FTD_EOTD_OR_GPS_EOTD_FAIL	W:D	R,I,O	Responses since power-up to GSM Position Request requesting the method E-OTD or GPS where Location Server has decided to use E-OTD, but E-OTD measurements failed.
e(3)	LOCATION	LS_ SB_FTD_EOTD_OR_GPS_GPS_FAIL	W:D	R,I,O	Responses since power-up to GSM Position Request requesting the method E-OTD or GPS where Location Server has decided to use GPS but GPS measurements failed. Note: In case of using LCS Test UI, counter will only be incremented if: - GPS is connected AND - GPS with E-OTD sending is activated AND - no GPS coordinates were sent to the network.

14.11 Display 75.23: GSM Positioning Instructions

This display will be based on last received LS_GSM_ LOCATE_REQ and its LS_SB_GSM_POSITIONING_INSTR sub block

NOTE!

All numerical values are shown in decimal.

If no GSM_LS_LOCATE_REQ with LS_SB_GSM_POSITIONING_INSTR has not been received the display shall show "x" in all data fields.

S60 Data display
Method Type aaaaaaaaaaaa Method bbbbbbbbbbbb RespT ccc Sets ddd Req. Accur. eeeeeee

Fields

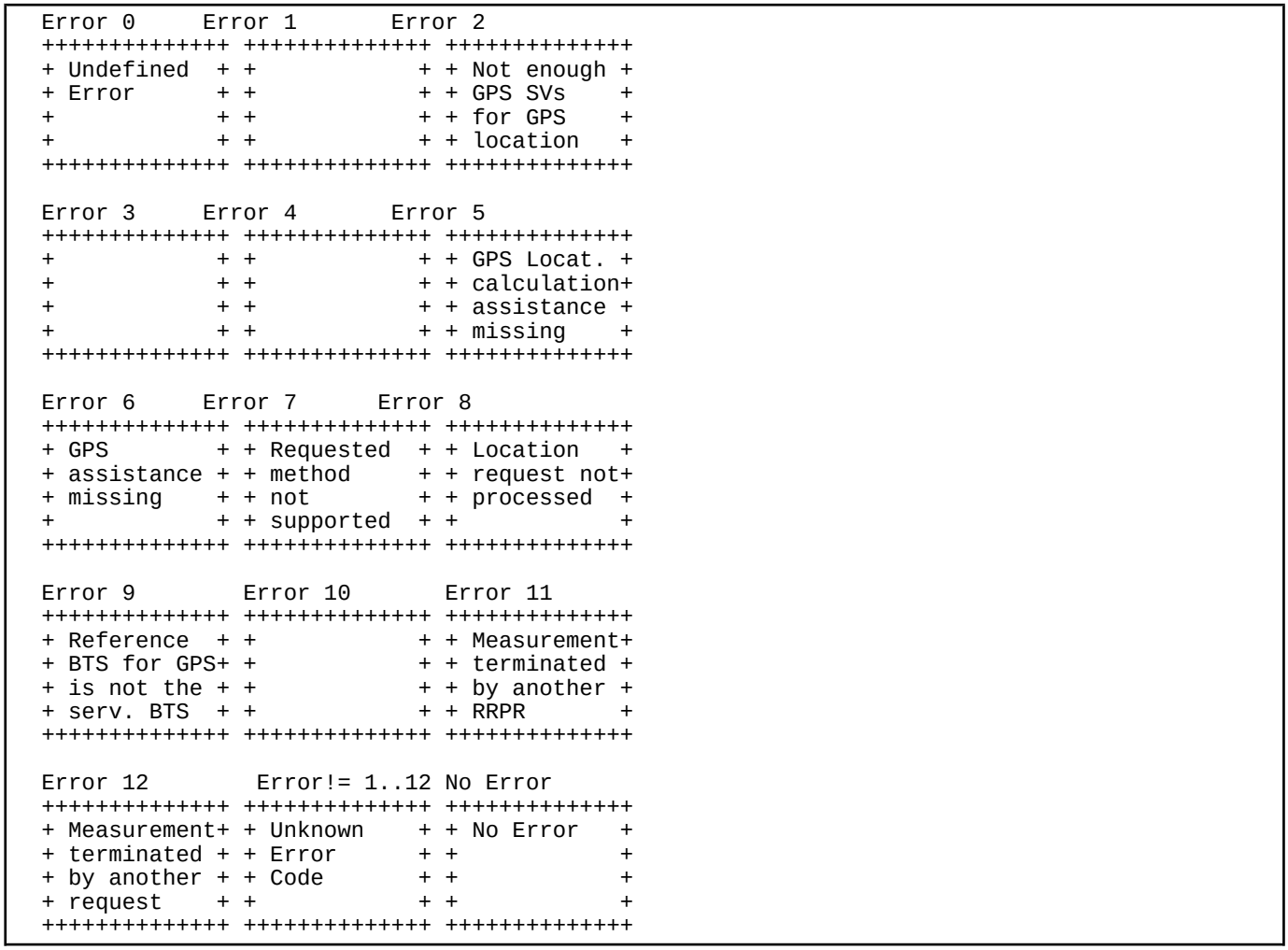
Abbr	Server	Sub-block id	Format	Mode	Description
a(12)	LOCATION	LS_SB_FTD_GSM_METHOD_TYP	S	R,I,O	Method Type: **ASSISTED**: MS-assisted method requested **BASED**: MS-based method requested **ASS.PREFERED**: MS assisted method preferred, but MS based allowed **BAS.PREFERED**: MS based method prefered, but MS assisted allowed
b(12)	LOCATION	LS_SB_FTD_GSM_POSIT_METHOD	S	R,I,O	Positioning Method: **E-OTD**: E-OTD method should be used. **GPS**: GPS method should be used. **E-OTD** or **GPS**: E-OTD or GPS method should be used.
c(3)	LOCATION	LS_SB_FTD_GSM_RESP_TIME	S	R,I,O	This field indicates the desired response time in seconds, 0 to 128. The value for this field shall be calculated according to GSM 04.31 based on the response time field.
d(3)	LOCATION	LS_SB_FTD_GSM_MULTIPLE_SET	S	R,I,O	Multiple Sets: **MS**: Multiple E-OTD/GPS measurement information sets can be sent from MS. **nMS**: Sending of Multiple E-OTD/GPS measurement information sets is not allowed.
e(7)	LOCATION	LS_SB_FTD_GSM_POSIT_ACC	S	R,I,O	This field indicates the required accuracy in meters, 0 m to 1800000m. The value for this field shall be calculated according to GSM 03.32 based on the position accuracy field.

14.12 Display 75.24: GSM Measurement Error Info

This display will be based on last sent LS_GSM_ LOCATE_RESP and its LS_SB_GSM_MEAS_ERROR_INFO subblock

The strings form displays like this:

Data Display:



NOTE!

This display contains the measurement error info in the Measure Position Response component in RRLP that is sent from MS to the network.

If no LS_GSM_ LOCATE_RESP has been sent, the display shall show "x" in all data fields.

If LS_GSM_ LOCATE_RESP has been sent but no LS_SB_GSM_MEAS_ERROR_INFO was included, the display shall show display "No error".

If LS_GSM_ LOCATE_RESP has been sent with LS_SB_GSM_MEAS_ERROR_INFO, the display shall show the appropriate error.

S60 Data display

Location
aaaaaaaaaaaa
Information
bbbbbbbbbbbb
ErrorElement
ccccccccccc
in RRLP
ddddddddddd

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(12)	LOCATION	LS_SB_FTD_EOTD_ERR_1	S	R,I,O	Error code: text 0: Undefined 1: Not enough 2: Not enough 3: E-OTD loc. 4: E-OTD 5: GPS Locat. 6: GPS 7: Requested 8: Location 9: Reference 10: Reference 11: Measurement 12: Measurement other: Unknown
b(12)	LOCATION	LS_SB_FTD_EOTD_ERR_2	S	R,I,O	Error code: text 0: Error 1: BTSs for 2: GPS SVs 3: calculation 4: assistance 5: calculation 6: assistance 7: method 8: request not 9: BTS for GPS 10: BTS for 11: terminated 12: terminated other: Error
c(12)	LOCATION	LS_SB_FTD_EOTD_ERR_3	S	R,I,O	Error code: text 1: MS Based 2: for GPS 3: assistance 4: missing 5: assistance 6: missing 7: not 8: processed 9: is not the 10: EOT-D not 11: by another 12: by another other: Code
d(12)	LOCATION	LS_SB_FTD_EOTD_ERR_4	S	R,I,O	Error code: text1: E-OTD2: location3: missing5: missing7: supported9: serv. BTS10: serv. BTS11: RRPR12: request

14.13 Display 75.31 GPS Pseudorange measurements, channels 1

12 identical screens, one for each channel.

Used during MS Assisted A-GPS measurements.

where x is the channel number 1 - 12.

The channels are reported in the order of C/N0 level. Display 75.31 has the highest C/N0 and display 75.42 has the lowest C/N0. If more than 12 measurements are available, only the 12 strongest measurements will be shown.

S60 Data display

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(3)	LOCATION	LS_SB_FTD_SV_1	S	R,I,O	Satellite PRN code.
b(4)	LOCATION	LS_SB_FTD_CNO_1	S	R,I,O	Satellite C/N0 in dB-Hz.Format bb.b
c(8)	LOCATION	LS_SB_FTD_PSEUDORANGE_1	S	R,I,O	Measured satellite code phase in C/A chips.Format cccc.ccc
d(9)	LOCATION	LS_SB_FTD_DOPPLER_1	S	R,I,O	Measured satellite doppler in Hz. Signed value (+/-).Format dddddd.dd

14.14 Display 75.32 GPS Pseudorange measurements, channels 2

12 identical screens, one for each channel.

Used during MS Assisted A-GPS measurements.

where x is the channel number 1 - 12.

The channels are reported in the order of C/N0 level. Display 75.31 has the highest C/N0 and display 75.42 has the lowest C/N0. If more than 12 measurements are available, only the 12 strongest measurements will be shown.

S60 Data display

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(3)	LOCATION	LS_SB_FTD_SV_2	S	R,I,O	Satellite PRN code.
b(4)	LOCATION	LS_SB_FTD_CNO_2	S	R,I,O	Satellite C/N0 in dB-Hz.Format bb.b
c(8)	LOCATION	LS_SB_FTD_PSEUDORANGE_2	S	R,I,O	Measured satellite code phase in C/A chips.Format cccc.ccc
d(9)	LOCATION	LS_SB_FTD_DOPPLER_2	S	R,I,O	Measured satellite doppler in Hz. Signed value (+/-).Format dddddd.dd

14.15 Display 75.33 GPS Pseudorange measurements, channels 3

12 identical screens, one for each channel.

Used during MS Assisted A-GPS measurements.

where x is the channel number 1 - 12.

The channels are reported in the order of C/N0 level. Display 75.31 has the highest C/N0 and display 75.42 has the lowest C/N0. If more than 12 measurements are available, only the 12 strongest measurements will be shown.

S60 Data display
SV(PRN) aaa C/No bbbb Pseudorange cccccccc Doppler(Hz) ddddddddd

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(3)	LOCATION	LS_SB_FTD_SV_3	S	R,I,O	Satellite PRN code.
b(4)	LOCATION	LS_SB_FTD_CNO_3	S	R,I,O	Satellite C/N0 in dB-Hz.Format bb.b
c(8)	LOCATION	LS_SB_FTD_PSEUDORANGE_3	S	R,I,O	Measured satellite code phase in C/A chips.Format cccc.ccc
d(9)	LOCATION	LS_SB_FTD_DOPPLER_3	S	R,I,O	Measured satellite doppler in Hz. Signed value (+/-).Format dddddd.dd

14.16 Display 75.34 GPS Pseudorange measurements, channels 4

12 identical screens, one for each channel.

Used during MS Assisted A-GPS measurements.

where x is the channel number 1 - 12.

The channels are reported in the order of C/N0 level. Display 75.31 has the highest C/N0 and display 75.42 has the lowest C/N0. If more than 12 measurements are available, only the 12 strongest measurements will be shown.

S60 Data display
SV(PRN) aaa C/No bbbb Pseudorange cccccccc Doppler(Hz) ddddddddd

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(3)	LOCATION	LS_SB_FTD_SV_4	S	R,I,O	Satellite PRN code.
b(4)	LOCATION	LS_SB_FTD_CNO_4	S	R,I,O	Satellite C/N0 in dB-Hz.Format bb.b
c(8)	LOCATION	LS_SB_FTD_PSEUDORANGE_4	S	R,I,O	Measured satellite code phase in C/A chips.Format cccc.ccc

Abbr	Server	Sub-block id	Format	Mode	Description
d(9)	LOCATION	LS_SB_FTD_DOPPLER_4	S	R,I,O	Measured satellite doppler in Hz. Signed value (+/-).Format dddddd.dd

14.17 Display 75.35 GPS Pseudorange measurements, channels 5

12 identical screens, one for each channel.

Used during MS Assisted A-GPS measurements.

where x is the channel number 1 - 12.

The channels are reported in the order of C/N0 level. Display 75.31 has the highest C/N0 and display 75.42 has the lowest C/N0. If more than 12 measurements are available, only the 12 strongest measurements will be shown.

S60 Data display

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(3)	LOCATION	LS_SB_FTD_SV_5	S	R,I,O	Satellite PRN code.
b(4)	LOCATION	LS_SB_FTD_CNO_5	S	R,I,O	Satellite C/N0 in dB-Hz.Format bb.b
c(8)	LOCATION	LS_SB_FTD_PSEUDORANGE_5	S	R,I,O	Measured satellite code phase in C/A chips.Format cccc.ccc
d(9)	LOCATION	LS_SB_FTD_DOPPLER_5	S	R,I,O	Measured satellite doppler in Hz. Signed value (+/-).Format dddddd.dd

14.18 Display 75.36 GPS Pseudorange measurements, channels 6

12 identical screens, one for each channel.

Used during MS Assisted A-GPS measurements.

where x is the channel number 1 - 12.

The channels are reported in the order of C/N0 level. Display 75.31 has the highest C/N0 and display 75.42 has the lowest C/N0. If more than 12 measurements are available, only the 12 strongest measurements will be shown.

S60 Data display
SV(PRN) aaa C/No bbbb Pseudorange cccccccc Doppler(Hz) ddddddddd

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(3)	LOCATION	LS_SB_FTD_SV_6	S	R,I,O	Satellite PRN code.
b(4)	LOCATION	LS_SB_FTD_CNO_6	S	R,I,O	Satellite C/N0 in dB-Hz.Format bb.b
c(8)	LOCATION	LS_SB_FTD_PSEUDORANGE_6	S	R,I,O	Measured satellite code phase in C/A chips.Format cccc.ccc
d(9)	LOCATION	LS_SB_FTD_DOPPLER_6	S	R,I,O	Measured satellite doppler in Hz. Signed value (+/-).Format dddddd.dd

14.19 Display 75.37 GPS Pseudorange measurements, channels 7

12 identical screens, one for each channel.

Used during MS Assisted A-GPS measurements.

where x is the channel number 1 - 12.

The channels are reported in the order of C/N0 level. Display 75.31 has the highest C/N0 and display 75.42 has the lowest C/N0. If more than 12 measurements are available, only the 12 strongest measurements will be shown.

S60 Data display
SV(PRN) aaa C/No bbbb Pseudorange cccccccc Doppler(Hz) ddddddddd

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(3)	LOCATION	LS_SB_FTD_SV_7	S	R,I,O	Satellite PRN code.
b(4)	LOCATION	LS_SB_FTD_CNO_7	S	R,I,O	Satellite C/N0 in dB-Hz.Format bb.b
c(8)	LOCATION	LS_SB_FTD_PSEUDORANGE_7	S	R,I,O	Measured satellite code phase in C/A chips.Format cccc.ccc

Abbr	Server	Sub-block id	Format	Mode	Description
d(9)	LOCATION	LS_SB_FTD_DOPPLER_7	S	R,I,O	Measured satellite doppler in Hz. Signed value (+/-).Format dddddd.dd

14.20 Display 75.38 GPS Pseudorange measurements, channels 8

12 identical screens, one for each channel.

Used during MS Assisted A-GPS measurements.

where x is the channel number 1 - 12.

The channels are reported in the order of C/N0 level. Display 75.31 has the highest C/N0 and display 75.42 has the lowest C/N0. If more than 12 measurements are available, only the 12 strongest measurements will be shown.

S60 Data display

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(3)	LOCATION	LS_SB_FTD_SV_8	S	R,I,O	Satellite PRN code.
b(4)	LOCATION	LS_SB_FTD_CNO_8	S	R,I,O	Satellite C/N0 in dB-Hz.Format bb.b
c(8)	LOCATION	LS_SB_FTD_PSEUDORANGE_8	S	R,I,O	Measured satellite code phase in C/A chips.Format cccc.ccc
d(9)	LOCATION	LS_SB_FTD_DOPPLER_8	S	R,I,O	Measured satellite doppler in Hz. Signed value (+/-).Format dddddd.dd

14.21 Display 75.39 GPS Pseudorange measurements, channels 9

12 identical screens, one for each channel.

Used during MS Assisted A-GPS measurements.

where x is the channel number 1 - 12.

The channels are reported in the order of C/N0 level. Display 75.31 has the highest C/N0 and display 75.42 has the lowest C/N0. If more than 12 measurements are available, only the 12 strongest measurements will be shown.

S60 Data display
SV(PRN) aaa C/No bbbb Pseudorange cccccccc Doppler(Hz) ddddddddd

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(3)	LOCATION	LS_SB_FTD_SV_9	S	R,I,O	Satellite PRN code.
b(4)	LOCATION	LS_SB_FTD_CNO_9	S	R,I,O	Satellite C/N0 in dB-Hz.Format bb.b
c(8)	LOCATION	LS_SB_FTD_PSEUDORANGE_9	S	R,I,O	Measured satellite code phase in C/A chips.Format cccc.ccc
d(9)	LOCATION	LS_SB_FTD_DOPPLER_9	S	R,I,O	Measured satellite doppler in Hz. Signed value (+/-).Format dddddd.dd

14.22 Display 75.40 GPS Pseudorange measurements, channels 10

12 identical screens, one for each channel.

Used during MS Assisted A-GPS measurements.

where x is the channel number 1 - 12.

The channels are reported in the order of C/N0 level. Display 75.31 has the highest C/N0 and display 75.42 has the lowest C/N0. If more than 12 measurements are available, only the 12 strongest measurements will be shown.

S60 Data display
SV(PRN) aaa C/No bbbb Pseudorange cccccccc Doppler(Hz) ddddddddd

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(3)	LOCATION	LS_SB_FTD_SV_10	S	R,I,O	Satellite PRN code.
b(4)	LOCATION	LS_SB_FTD_CNO_10	S	R,I,O	Satellite C/N0 in dB-Hz.Format bb.b
c(8)	LOCATION	LS_SB_FTD_PSEUDORANGE_10	S	R,I,O	Measured satellite code phase in C/A chips.Format cccc.ccc

Abbr	Server	Sub-block id	Format	Mode	Description
d(9)	LOCATION	LS_SB_FTD_DOPPLER_10	S	R,I,O	Measured satellite doppler in Hz. Signed value (+/-).Format dddddd.dd

14.23 Display 75.41 GPS Pseudorange measurements, channels 11

12 identical screens, one for each channel.

Used during MS Assisted A-GPS measurements.

where x is the channel number 1 - 12.

The channels are reported in the order of C/N0 level. Display 75.31 has the highest C/N0 and display 75.42 has the lowest C/N0. If more than 12 measurements are available, only the 12 strongest measurements will be shown.

S60 Data display

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(3)	LOCATION	LS_SB_FTD_SV_11	S	R,I,O	Satellite PRN code.
b(4)	LOCATION	LS_SB_FTD_CNO_11	S	R,I,O	Satellite C/N0 in dB-Hz.Format bb.b
c(8)	LOCATION	LS_SB_FTD_PSEUDORANGE_11	S	R,I,O	Measured satellite code phase in C/A chips.Format cccc.ccc
d(9)	LOCATION	LS_SB_FTD_DOPPLER_11	S	R,I,O	Measured satellite doppler in Hz. Signed value (+/-).Format dddddd.dd

14.24 Display 75.42 GPS Pseudorange measurements, channels 12

12 identical screens, one for each channel.

Used during MS Assisted A-GPS measurements.

where x is the channel number 1 - 12.

The channels are reported in the order of C/N0 level. Display 75.31 has the highest C/N0 and display 75.42 has the lowest C/N0. If more than 12 measurements are available, only the 12 strongest measurements will be shown.

S60 Data display	
SV(PRN)	aaa
C/No	bbbb
Pseudorange	cccccccc
Doppler(Hz)	ddddddddd

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(3)	LOCATION	LS_SB_FTD_SV_12	S	R,I,O	Satellite PRN code.
b(4)	LOCATION	LS_SB_FTD_CNO_12	S	R,I,O	Satellite C/N0 in dB-Hz.Format bb.b
c(8)	LOCATION	LS_SB_FTD_PSEUDORANGE_12	S	R,I,O	Measured satellite code phase in C/A chips.Format cccc.ccc
d(9)	LOCATION	LS_SB_FTD_DOPPLER_12	S	R,I,O	Measured satellite doppler in Hz. Signed value (+/-).Format dddddd.dd

14.25 Display 75.50: GPS Position fix Information

Data displayed are valid for the last requested location. In case no location has been requested all fields shall show "x". In case the latest location estimate did not include proper information, these fields shall display "-".

S60 Data display	
UTC time	aaaaaaaaaa
Num.of SVs	bb
Alt.AMSL	cccccccc
Geoidal Sep.	ddddd

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(10)	LOCATION	LS_SB_FTD_UTC	S	R,I,O	UTC time: hhmmss.nnn hh = hour mm = minutes ss = seconds nnn = milliseconds
b(2)	LOCATION	LS_SB_FTD_NUMBER_OF_SV	S	R,I,O	Number of SVs used for calculated position fix
c(8)	LOCATION	LS_SB_FTD_ALT_AMSL	S	R,I,O	Altitude above mean sea level
d(5)	LOCATION	LS_SB_FTD_GEOID_SEP	S	R,I,O	Difference between the WGS-84 earth ellipsoid surface and the mean sea level surface. Altitude difference in meters.

14.26 Display 75.51 GPS Satellite Information, channels 1

12 identical screens, one for each channel.

Used during MS Based A-GPS and Stand alone GPS positioning.

where x is the channel number 1 - 12.

The channels are reported in the order of C/N0 level. Display 75.51 has the highest C/N0 and display 75.62 has the lowest C/N0. If more than 12 measurements are available, only the 12 strongest measurements will be shown.

S60 Data display

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(8)	LOCATION	LS_SB_FTD_SV_USED_1	S	R,I,O	Used: Satellite used for calculated positionNot used: Satellite not used for calculated position
b(3)	LOCATION	LS_SB_FTD_SV_1	S	R,I,O	Satellite PRN code.
c(6)	LOCATION	LS_SB_FTD_SV_HEALTH_1	S	R,I,O	OK: All NAV data are okIf not ok a 6 bit binary value is displayed (MSB at the left), please refer to ICD-GPS-200 for details
d(4)	LOCATION	LS_SB_FTD_CNO_1	S	R,I,O	Satellite C/N0 in dB-Hz.Format bb.b
e(6)	LOCATION	LS_SB_FTD_ELEVATION_1	S	R,I,O	Satellite elevation.Format ccc.cc (range –90.00 to +90.00 degrees)
f(6)	LOCATION	LS_SB_FTD_AZIMUTH_1	S	R,I,O	Satellite azimuth.Format ddd.dd (range 0 to 359.99 degrees)

14.27 Display 75.52 GPS Satellite Information, channels 2

12 identical screens, one for each channel.

Used during MS Based A-GPS and Stand alone GPS positioning.

where x is the channel number 1 - 12.

The channels are reported in the order of C/N0 level. Display 75.51 has the highest C/N0 and display 75.62 has the lowest C/N0. If more than 12 measurements are available, only the 12 strongest measurements will be shown.

S60 Data display
Used SV aaaaaaaa (PRN) bbb Health cccccc C/No dddd Elevation eeeeee Azimuth ffffff

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(8)	LOCATION	LS_SB_FTD_SV_USED_2	S	R,I,O	Used: Satellite used for calculated positionNot used: Satellite not used for calculated position
b(3)	LOCATION	LS_SB_FTD_SV_2	S	R,I,O	Satellite PRN code.
c(6)	LOCATION	LS_SB_FTD_SV_HEALTH_2	S	R,I,O	OK: All NAV data are okIf not ok a 6 bit binary value is displayed (MSB at the left), please refer to ICD-GPS-200 for details
d(4)	LOCATION	LS_SB_FTD_CNO_2	S	R,I,O	Satellite C/N0 in dB-Hz.Format bb.b
e(6)	LOCATION	LS_SB_FTD_ELEVATION_2	S	R,I,O	Satellite elevation.Format ccc.cc (range –90.00 to +90.00 degrees)
f(6)	LOCATION	LS_SB_FTD_AZIMUTH_2	S	R,I,O	Satellite azimuth.Format ddd.dd (range 0 to 359.99 degrees)

14.28 Display 75.53 GPS Satellite Information, channels 3

12 identical screens, one for each channel.

Used during MS Based A-GPS and Stand alone GPS positioning.

where x is the channel number 1 - 12.

The channels are reported in the order of C/N0 level. Display 75.51 has the highest C/N0 and display 75.62 has the lowest C/N0. If more than 12 measurements are available, only the 12 strongest measurements will be shown.

S60 Data display
Used SV aaaaaaaa (PRN) bbb Health cccccc C/No dddd Elevation eeeeee Azimuth ffffff

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(8)	LOCATION	LS_SB_FTD_SV_USED_3	S	R,I,O	Used: Satellite used for calculated positionNot used: Satellite not used for calculated position
b(3)	LOCATION	LS_SB_FTD_SV_3	S	R,I,O	Satellite PRN code.
c(6)	LOCATION	LS_SB_FTD_SV_HEALTH_3	S	R,I,O	OK: All NAV data are okIf not ok a 6 bit binary value is displayed (MSB at the left), please refer to ICD-GPS-200 for details
d(4)	LOCATION	LS_SB_FTD_CNO_3	S	R,I,O	Satellite C/N0 in dB-Hz.Format bb.b
e(6)	LOCATION	LS_SB_FTD_ELEVATION_3	S	R,I,O	Satellite elevation.Format ccc.cc (range –90.00 to +90.00 degrees)
f(6)	LOCATION	LS_SB_FTD_AZIMUTH_3	S	R,I,O	Satellite azimuth.Format ddd.dd (range 0 to 359.99 degrees)

14.29 Display 75.54 GPS Satellite Information, channels 4

12 identical screens, one for each channel.

Used during MS Based A-GPS and Stand alone GPS positioning.

where x is the channel number 1 - 12.

The channels are reported in the order of C/N0 level. Display 75.51 has the highest C/N0 and display 75.62 has the lowest C/N0. If more than 12 measurements are available, only the 12 strongest measurements will be shown.

S60 Data display	
Used SV	aaaaaaaa
(PRN)	bbb
Health	cccccc
C/No	dddd
Elevation	eeeeee
Azimuth	ffffff

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(8)	LOCATION	LS_SB_FTD_SV_USED_4	S	R,I,O	Used: Satellite used for calculated positionNot used: Satellite not used for calculated position
b(3)	LOCATION	LS_SB_FTD_SV_4	S	R,I,O	Satellite PRN code.
c(6)	LOCATION	LS_SB_FTD_SV_HEALTH_4	S	R,I,O	OK: All NAV data are okIf not ok a 6 bit binary value is displayed (MSB at the left), please refer to ICD-GPS-200 for details
d(4)	LOCATION	LS_SB_FTD_CNO_4	S	R,I,O	Satellite C/N0 in dB-Hz.Format bb.b
e(6)	LOCATION	LS_SB_FTD_ELEVATION_4	S	R,I,O	Satellite elevation.Format ccc.cc (range –90.00 to +90.00 degrees)

Abbr	Server	Sub-block id	Format	Mode	Description
f(6)	LOCATION	LS_SB_FTD_AZIMUTH_4	S	R,I,O	Satellite azimuth.Format ddd.dd (range 0 to 359.99 degrees)

14.30 Display 75.55 GPS Satellite Information, channels 5

12 identical screens, one for each channel.

Used during MS Based A-GPS and Stand alone GPS positioning.

where x is the channel number 1 - 12.

The channels are reported in the order of C/N0 level. Display 75.51 has the highest C/N0 and display 75.62 has the lowest C/N0. If more than 12 measurements are available, only the 12 strongest measurements will be shown.

S60 Data display

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(8)	LOCATION	LS_SB_FTD_SV_USED_5	S	R,I,O	Used: Satellite used for calculated positionNot used: Satellite not used for calculated position
b(3)	LOCATION	LS_SB_FTD_SV_5	S	R,I,O	Satellite PRN code.
c(6)	LOCATION	LS_SB_FTD_SV_HEALTH_5	S	R,I,O	OK: All NAV data are okIf not ok a 6 bit binary value is displayed (MSB at the left), please refer to ICD-GPS-200 for details
d(4)	LOCATION	LS_SB_FTD_CNO_5	S	R,I,O	Satellite C/N0 in dB-Hz.Format bb.b
e(6)	LOCATION	LS_SB_FTD_ELEVATION_5	S	R,I,O	Satellite elevation.Format ccc.cc (range –90.00 to +90.00 degrees)
f(6)	LOCATION	LS_SB_FTD_AZIMUTH_5	S	R,I,O	Satellite azimuth.Format ddd.dd (range 0 to 359.99 degrees)

14.31 Display 75.56 GPS Satellite Information, channels 6

12 identical screens, one for each channel.

Used during MS Based A-GPS and Stand alone GPS positioning.

where x is the channel number 1 - 12.

The channels are reported in the order of C/N0 level. Display 75.51 has the highest C/N0 and display 75.62 has the lowest C/N0. If more than 12 measurements are available, only the 12 strongest measurements will be shown.

S60 Data display
Used SV aaaaaaaa (PRN) bbb Health cccccc C/No dddd Elevation eeeeee Azimuth ffffff

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(8)	LOCATION	LS_SB_FTD_SV_USED_6	S	R,I,O	Used: Satellite used for calculated positionNot used: Satellite not used for calculated position
b(3)	LOCATION	LS_SB_FTD_SV_6	S	R,I,O	Satellite PRN code.
c(6)	LOCATION	LS_SB_FTD_SV_HEALTH_6	S	R,I,O	OK: All NAV data are okIf not ok a 6 bit binary value is displayed (MSB at the left), please refer to ICD-GPS-200 for details
d(4)	LOCATION	LS_SB_FTD_CNO_6	S	R,I,O	Satellite C/N0 in dB-Hz.Format bb.b
e(6)	LOCATION	LS_SB_FTD_ELEVATION_6	S	R,I,O	Satellite elevation.Format ccc.cc (range –90.00 to +90.00 degrees)
f(6)	LOCATION	LS_SB_FTD_AZIMUTH_6	S	R,I,O	Satellite azimuth.Format ddd.dd (range 0 to 359.99 degrees)

14.32 Display 75.57 GPS Satellite Information, channels 7

12 identical screens, one for each channel.

Used during MS Based A-GPS and Stand alone GPS positioning.

where x is the channel number 1 - 12.

The channels are reported in the order of C/N0 level. Display 75.51 has the highest C/N0 and display 75.62 has the lowest C/N0. If more than 12 measurements are available, only the 12 strongest measurements will be shown.

S60 Data display
Used SV aaaaaaaa (PRN) bbb Health cccccc C/No dddd Elevation eeeeee Azimuth ffffff

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(8)	LOCATION	LS_SB_FTD_SV_USED_7	S	R,I,O	Used: Satellite used for calculated positionNot used: Satellite not used for calculated position
b(3)	LOCATION	LS_SB_FTD_SV_7	S	R,I,O	Satellite PRN code.
c(6)	LOCATION	LS_SB_FTD_SV_HEALTH_7	S	R,I,O	OK: All NAV data are okIf not ok a 6 bit binary value is displayed (MSB at the left), please refer to ICD-GPS-200 for details
d(4)	LOCATION	LS_SB_FTD_CNO_7	S	R,I,O	Satellite C/N0 in dB-Hz.Format bb.b
e(6)	LOCATION	LS_SB_FTD_ELEVATION_7	S	R,I,O	Satellite elevation.Format ccc.cc (range –90.00 to +90.00 degrees)
f(6)	LOCATION	LS_SB_FTD_AZIMUTH_7	S	R,I,O	Satellite azimuth.Format ddd.dd (range 0 to 359.99 degrees)

14.33 Display 75.58 GPS Satellite Information, channels 8

12 identical screens, one for each channel.

Used during MS Based A-GPS and Stand alone GPS positioning.

where x is the channel number 1 - 12.

The channels are reported in the order of C/N0 level. Display 75.51 has the highest C/N0 and display 75.62 has the lowest C/N0. If more than 12 measurements are available, only the 12 strongest measurements will be shown.

S60 Data display

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(8)	LOCATION	LS_SB_FTD_SV_USED_8	S	R,I,O	Used: Satellite used for calculated positionNot used: Satellite not used for calculated position
b(3)	LOCATION	LS_SB_FTD_SV_8	S	R,I,O	Satellite PRN code.
c(6)	LOCATION	LS_SB_FTD_SV_HEALTH_8	S	R,I,O	OK: All NAV data are okIf not ok a 6 bit binary value is displayed (MSB at the left), please refer to ICD-GPS-200 for details
d(4)	LOCATION	LS_SB_FTD_CNO_8	S	R,I,O	Satellite C/N0 in dB-Hz.Format bb.b
e(6)	LOCATION	LS_SB_FTD_ELEVATION_8	S	R,I,O	Satellite elevation.Format ccc.cc (range –90.00 to +90.00 degrees)

Abbr	Server	Sub-block id	Format	Mode	Description
f(6)	LOCATION	LS_SB_FTD_AZIMUTH_8	S	R,I,O	Satellite azimuth.Format ddd.dd (range 0 to 359.99 degrees)

14.34 Display 75.59 GPS Satellite Information, channels 9

12 identical screens, one for each channel.

Used during MS Based A-GPS and Stand alone GPS positioning.

where x is the channel number 1 - 12.

The channels are reported in the order of C/N0 level. Display 75.51 has the highest C/N0 and display 75.62 has the lowest C/N0. If more than 12 measurements are available, only the 12 strongest measurements will be shown.

S60 Data display

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(8)	LOCATION	LS_SB_FTD_SV_USED_9	S	R,I,O	Used: Satellite used for calculated positionNot used: Satellite not used for calculated position
b(3)	LOCATION	LS_SB_FTD_SV_9	S	R,I,O	Satellite PRN code.
c(6)	LOCATION	LS_SB_FTD_SV_HEALTH_9	S	R,I,O	OK: All NAV data are okIf not ok a 6 bit binary value is displayed (MSB at the left), please refer to ICD-GPS-200 for details
d(4)	LOCATION	LS_SB_FTD_CNO_9	S	R,I,O	Satellite C/N0 in dB-Hz.Format bb.b
e(6)	LOCATION	LS_SB_FTD_ELEVATION_9	S	R,I,O	Satellite elevation.Format ccc.cc (range –90.00 to +90.00 degrees)
f(6)	LOCATION	LS_SB_FTD_AZIMUTH_9	S	R,I,O	Satellite azimuth.Format ddd.dd (range 0 to 359.99 degrees)

14.35 Display 75.60 GPS Satellite Information, channels 10

12 identical screens, one for each channel.

Used during MS Based A-GPS and Stand alone GPS positioning.

where x is the channel number 1 - 12.

The channels are reported in the order of C/N0 level. Display 75.51 has the highest C/N0 and display 75.62 has the lowest C/N0. If more than 12 measurements are available, only the 12 strongest measurements will be shown.

S60 Data display	
Used SV	aaaaaaaa
(PRN)	bbb
Health	cccccc
C/No	dddd
Elevation	eeeeee
Azimuth	ffffff

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(8)	LOCATION	LS_SB_FTD_SV_USED_10	S	R,I,O	Used: Satellite used for calculated positionNot used: Satellite not used for calculated position
b(3)	LOCATION	LS_SB_FTD_SV_10	S	R,I,O	Satellite PRN code.
c(6)	LOCATION	LS_SB_FTD_SV_HEALTH_10	S	R,I,O	OK: All NAV data are okIf not ok a 6 bit binary value is displayed (MSB at the left), please refer to ICD-GPS-200 for details
d(4)	LOCATION	LS_SB_FTD_CNO_10	S	R,I,O	Satellite C/N0 in dB-Hz.Format bb.b
e(6)	LOCATION	LS_SB_FTD_ELEVATION_10	S	R,I,O	Satellite elevation.Format ccc.cc (range –90.00 to +90.00 degrees)
f(6)	LOCATION	LS_SB_FTD_AZIMUTH_10	S	R,I,O	Satellite azimuth.Format ddd.dd (range 0 to 359.99 degrees)

14.36 Display 75.61 GPS Satellite Information, channels 11

12 identical screens, one for each channel.

Used during MS Based A-GPS and Stand alone GPS positioning.

where x is the channel number 1 - 12.

The channels are reported in the order of C/N0 level. Display 75.51 has the highest C/N0 and display 75.62 has the lowest C/N0.If more than 12 measurements are available, only the 12 strongest measurements will be shown.

S60 Data display	
Used SV	aaaaaaaa
(PRN)	bbb
Health	cccccc
C/No	dddd
Elevation	eeeeee
Azimuth	ffffff

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(8)	LOCATION	LS_SB_FTD_SV_USED_11	S	R,I,O	Used: Satellite used for calculated positionNot used: Satellite not used for calculated position
b(3)	LOCATION	LS_SB_FTD_SV_11	S	R,I,O	Satellite PRN code.
c(6)	LOCATION	LS_SB_FTD_SV_HEALTH_11	S	R,I,O	OK: All NAV data are okIf not ok a 6 bit binary value is displayed (MSB at the left), please refer to ICD-GPS-200 for details
d(4)	LOCATION	LS_SB_FTD_CNO_11	S	R,I,O	Satellite C/N0 in dB-Hz.Format bb.b
e(6)	LOCATION	LS_SB_FTD_ELEVATION_11	S	R,I,O	Satellite elevation.Format ccc.cc (range –90.00 to +90.00 degrees)
f(6)	LOCATION	LS_SB_FTD_AZIMUTH_11	S	R,I,O	Satellite azimuth.Format ddd.dd (range 0 to 359.99 degrees)

14.37 Display 75.62 GPS Satellite Information, channels 12

12 identical screens, one for each channel.

Used during MS Based A-GPS and Stand alone GPS positioning.

where x is the channel number 1 - 12.

The channels are reported in the order of C/N0 level. Display 75.51 has the highest C/N0 and display 75.62 has the lowest C/N0. If more than 12 measurements are available, only the 12 strongest measurements will be shown.

S60 Data display
Used SV aaaaaaaa (PRN) bbb Health cccccc C/No dddd Elevation eeeeee Azimuth ffffff

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(8)	LOCATION	LS_SB_FTD_SV_USED_12	S	R,I,O	Used: Satellite used for calculated positionNot used: Satellite not used for calculated position
b(3)	LOCATION	LS_SB_FTD_SV_12	S	R,I,O	Satellite PRN code.
c(6)	LOCATION	LS_SB_FTD_SV_HEALTH_12	S	R,I,O	OK: All NAV data are okIf not ok a 6 bit binary value is displayed (MSB at the left), please refer to ICD-GPS-200 for details
d(4)	LOCATION	LS_SB_FTD_CNO_12	S	R,I,O	Satellite C/N0 in dB-Hz.Format bb.b
e(6)	LOCATION	LS_SB_FTD_ELEVATION_12	S	R,I,O	Satellite elevation.Format ccc.cc (range –90.00 to +90.00 degrees)

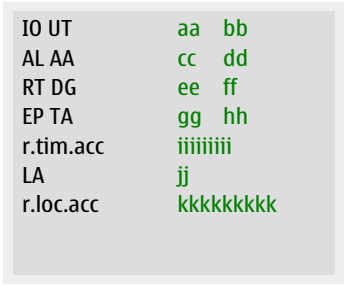
Abbr	Server	Sub-block id	Format	Mode	Description
f(6)	LOCATION	LS_SB_FTD_AZIMUTH_12	S	R,I,O	Satellite azimuth.Format ddd.dd (range 0 to 359.99 degrees)

14.38 Display 75.68: GPS Assistance data from network

This display shows which GPS assistance data has been received from the network.

When Location Server starts a new Location procedure, all fields in this display will be cleared. When assistance data are received from network the appropriate fields will be updated. "xx" = unavailable, "11" = available. Furthermore actual values for reference time accuracy (microsec) and Reference location accuracy (m) are displayed.

S60 Data display



Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(2)	LOCATION	LS_SB_FTD_ASS_IONO	S	R,I,O	Ionospheric
b(2)	LOCATION	LS_SB_FTD_ASS_UTC	S	R,I,O	UTC
c(2)	LOCATION	LS_SB_FTD_ASS_ALMANAC	S	R,I,O	Almanac
d(2)	LOCATION	LS_SB_FTD_ASS_AA	S	R,I,O	Aqcusition assistance
e(2)	LOCATION	LS_SB_FTD_ASS_RTI	S	R,I,O	RTI
f(2)	LOCATION	LS_SB_FTD_ASS_DGPS	S	R,I,O	DGPS corrections
g(2)	LOCATION	LS_SB_FTD_ASS_EPHEMERIS	S	R,I,O	Ephemeris
h(2)	LOCATION	LS_SB_FTD_ASS_REF_TIME_AVAIL	S	R,I,O	Ref time availability
i(9)	LOCATION	LS_SB_FTD_ASS_REF_TIME_ACC	S	R,I,O	Ref.time accuracy in microsecs
j(2)	LOCATION	LS_SB_FTD_ASS_REF_LOC_AVAIL	S	R,I,O	Ref.loc availability
k(9)	LOCATION	LS_SB_FTD_ASS_REF_LOC_ACC	S	R,I,O	Ref.loc. accuracy in meters.

14.39 Display 75.69: GPS User DOP Information

DOPs displayed are valid for the last requested location.

If the DOPs were not requested from the latest location request, the specific fields shall display "x". If the DOPs were requested but not available the fields shall show "-".

S60 Data display
HDOP aaaaaa PDOP bbbbbb VDOP cccccc

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(6)	LOCATION	LS_SB_FTD_HDOP	S	R,I,O	Horizontal DOP (Dilution Of Precision) (aaa.aa)
b(6)	LOCATION	LS_SB_FTD_PDOP	S	R,I,O	Position DOP (bbb.bb)
c(6)	LOCATION	LS_SB_FTD_VDOP	S	R,I,O	Vertical DOP (ccc.cc)

14.40 Display 75.71 CDMA AFLT measurements, Pilots 1

This display will be based on last received IS-801-1 PDDM Pilot Phase Measurement. Pilot Phase Measurements of 6 strongest pilots will be provided. There will be 6 identical screens, one for each pilot phase measurement.

where x is the number of the pilot phase measurement 1 - 6.

See also CDMA NAV-1 specific details 8.1.7.

S60 Data display
PN aaa Channel bbbb Phase(chips) cccccccc Ec/Io(dB) ddddd RMS(m) eeeeeeeeeeee

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(3)	LOCATION	LS_SB_FTD_AFLT_PN_1	S	R,I,O	PN sequence offset of the measured pilot.
b(4)	LOCATION	LS_SB_FTD_AFLT_CH_1	S	R,I,O	CDMA channel number of the pilot.
c(8)	LOCATION	LS_SB_FTD_AFLT_PH_1	S	R,I,O	Measured pilot phase in chips.Format ccccc.cc
d(5)	LOCATION	LS_SB_FTD_AFLT_PS_1	S	R,I,O	Measured pilot strength in dB.Format ddd.d
e(12)	LOCATION	LS_SB_FTD_AFLT_ER_1	S	R,I,O	RMS error in phase measurement in meters.

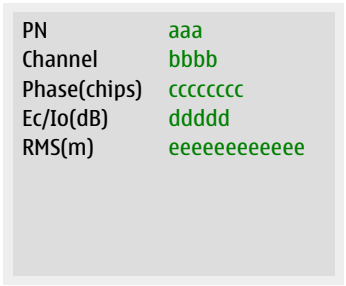
14.41 Display 75.72 CDMA AFLT measurements, Pilots 2

This display will be based on last received IS-801-1 PDDM Pilot Phase Measurement. Pilot Phase Measurements of 6 strongest pilots will be provided. There will be 6 identical screens, one for each pilot phase measurement.

where x is the number of the pilot phase measurement 1 - 6.

See also CDMA NAV-1 specific details 8.1.7.

S60 Data display



Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(3)	LOCATION	LS_SB_FTD_AFLT_PN_2	S	R,I,O	PN sequence offset of the measured pilot.
b(4)	LOCATION	LS_SB_FTD_AFLT_CH_2	S	R,I,O	CDMA channel number of the pilot.
c(8)	LOCATION	LS_SB_FTD_AFLT_PH_2	S	R,I,O	Measured pilot phase in chips.Format ccccc.cc
d(5)	LOCATION	LS_SB_FTD_AFLT_PS_2	S	R,I,O	Measured pilot strength in dB.Format ddd.d
e(12)	LOCATION	LS_SB_FTD_AFLT_ER_2	S	R,I,O	RMS error in phase measurement in meters.

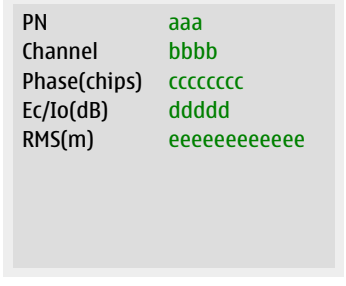
14.42 Display 75.73 CDMA AFLT measurements, Pilots 3

This display will be based on last received IS-801-1 PDDM Pilot Phase Measurement. Pilot Phase Measurements of 6 strongest pilots will be provided. There will be 6 identical screens, one for each pilot phase measurement.

where x is the number of the pilot phase measurement 1 - 6.

See also CDMA NAV-1 specific details 8.1.7.

S60 Data display



Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(3)	LOCATION	LS_SB_FTD_AFLT_PN_3	S	R,I,O	PN sequence offset of the measured pilot.
b(4)	LOCATION	LS_SB_FTD_AFLT_CH_3	S	R,I,O	CDMA channel number of the pilot.
c(8)	LOCATION	LS_SB_FTD_AFLT_PH_3	S	R,I,O	Measured pilot phase in chips.Format ccccc.cc
d(5)	LOCATION	LS_SB_FTD_AFLT_PS_3	S	R,I,O	Measured pilot strength in dB.Format ddd.d
e(12)	LOCATION	LS_SB_FTD_AFLT_ER_3	S	R,I,O	RMS error in phase measurement in meters.

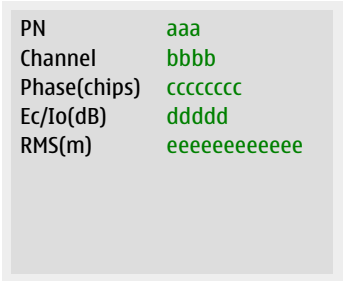
14.43 Display 75.74 CDMA AFLT measurements, Pilots 4

This display will be based on last received IS-801-1 PDDM Pilot Phase Measurement. Pilot Phase Measurements of 6 strongest pilots will be provided. There will be 6 identical screens, one for each pilot phase measurement.

where x is the number of the pilot phase measurement 1 - 6.

See also CDMA NAV-1 specific details 8.1.7.

S60 Data display



Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(3)	LOCATION	LS_SB_FTD_AFLT_PN_4	S	R,I,O	PN sequence offset of the measured pilot.
b(4)	LOCATION	LS_SB_FTD_AFLT_CH_4	S	R,I,O	CDMA channel number of the pilot.
c(8)	LOCATION	LS_SB_FTD_AFLT_PH_4	S	R,I,O	Measured pilot phase in chips.Format ccccc.cc
d(5)	LOCATION	LS_SB_FTD_AFLT_PS_4	S	R,I,O	Measured pilot strength in dB.Format ddd.d
e(12)	LOCATION	LS_SB_FTD_AFLT_ER_4	S	R,I,O	RMS error in phase measurement in meters.

14.44 Display 75.75 CDMA AFLT measurements, Pilots 5

This display will be based on last received IS-801-1 PDDM Pilot Phase Measurement. Pilot Phase Measurements of 6 strongest pilots will be provided. There will be 6 identical screens, one for each pilot phase measurement.

where x is the number of the pilot phase measurement 1 - 6.

See also CDMA NAV-1 specific details 8.1.7.

S60 Data display
PN aaa Channel bbbb Phase(chips) cccccccc Ec/Io(dB) ddddd RMS(m) eeeeeeeeeeee

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(3)	LOCATION	LS_SB_FTD_AFLT_PN_5	S	R,I,O	PN sequence offset of the measured pilot.
b(4)	LOCATION	LS_SB_FTD_AFLT_CH_5	S	R,I,O	CDMA channel number of the pilot.
c(8)	LOCATION	LS_SB_FTD_AFLT_PH_5	S	R,I,O	Measured pilot phase in chips.Format ccccc.cc
d(5)	LOCATION	LS_SB_FTD_AFLT_PS_5	S	R,I,O	Measured pilot strength in dB.Format ddd.d
e(12)	LOCATION	LS_SB_FTD_AFLT_ER_5	S	R,I,O	RMS error in phase measurement in meters.

14.45 Display 75.76 CDMA AFLT measurements, Pilots 6

This display will be based on last received IS-801-1 PDDM Pilot Phase Measurement. Pilot Phase Measurements of 6 strongest pilots will be provided. There will be 6 identical screens, one for each pilot phase measurement.

where x is the number of the pilot phase measurement 1 - 6.

See also CDMA NAV-1 specific details 8.1.7.

S60 Data display
PN aaa Channel bbbb Phase(chips) cccccccc Ec/Io(dB) ddddd RMS(m) eeeeeeeeeeee

Fields

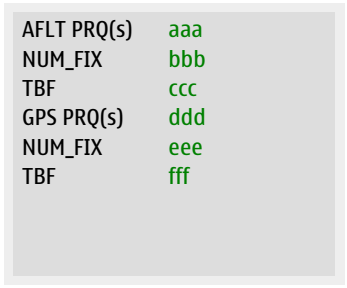
Abbr	Server	Sub-block id	Format	Mode	Description
a(3)	LOCATION	LS_SB_FTD_AFLT_PN_6	S	R,I,O	PN sequence offset of the measured pilot.
b(4)	LOCATION	LS_SB_FTD_AFLT_CH_6	S	R,I,O	CDMA channel number of the pilot.
c(8)	LOCATION	LS_SB_FTD_AFLT_PH_6	S	R,I,O	Measured pilot phase in chips.Format ccccc.cc

Abbr	Server	Sub-block id	Format	Mode	Description
d(5)	LOCATION	LS_SB_FTD_AFLT_PS_6	S	R,I,O	Measured pilot strength in dB.Format ddd.d
e(12)	LOCATION	LS_SB_FTD_AFLT_ER_6	S	R,I,O	RMS error in phase measurement in meters.

14.46 Display 75.77: Pseudorange and Pilot Phase Measurement Requests

This display will be based on last received IS-801-1 PDDM Request Pilot Phase Measurement and Request Pseudorange Measurement.

S60 Data display



Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(3)	LOCATION	LS_SB_FTD_AFLT_PRQ	S	R,I,O	Preferred Response Quality from the last Request Pilot Phase Measurement PDDM.
b(3)	LOCATION	LS_SB_FTD_AFLT_NUM_FIXES	S	R,I,O	Number of Fixes from the last Request Pilot Phase Measurement PDDM.
c(3)	LOCATION	LS_SB_FTD_AFLT_TBF	S	R,I,O	Time Between Fixes from the last Request Pilot Phase Measurement PDDM.
d(3)	LOCATION	LS_SB_FTD_GPS_PRQ	S	R,I,O	Preferred Response Quality from the last Request Pseudorange Measurement PDDM.
e(3)	LOCATION	LS_SB_FTD_GPS_NUM_FIXES	S	R,I,O	Number of Fixes from the last Request Pseudorange Measurement PDDM.
f(3)	LOCATION	LS_SB_FTD_GPS_TBF	S	R,I,O	Time Between Fixes from the last Request Pseudorange Measurement PDDM.

14.47 Display 75.78: Pilot Phase and Pseudorange measurement count

This display will be based on

-last received IS-801-1 PDDM Pilot Phase Measurement

-last received IS-801-1 PDDM Pseudorange Measurement

See also CDMA NAV-1 specific details 8.1.9.

S60 Data display
PPhase count aaa Meas.Time(s) bbbbb PRange count ccc Meas.Time(s) ddddd

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(3)	LOCATION	LS_SB_FTD_AFLT_PILOT_COUNT	S	R,I,O	Number of Pilot Phase measurement sent in last Provide Pilot Phase Measurement PDDM.
b(5)	LOCATION	LS_ SB_FTD_AFLT_PILOT_RESP_TIME	S	R,I,O	Time it took to make measurements for this particular Pilot Phase Measurement Request in seconds, resolution 0.1 sec. Format bbb.b
c(3)	LOCATION	LS_ SB_FTD_PSEUDORANGE_COUNT	S	R,I,O	Number of Pseudorange measurement sent in last Provide Pseudorange Measurement PDDM
d(5)	LOCATION	LS_SB_FTD_TIME_BASE	S	R,I,O	Time it took to make measurements for this particular Pseudorange Measurement Request in seconds, resolution 0.1 sec. Format ddd.d

14.48 Display 75.80: E-OTD Measurement Info

This display will be based on last sent LS_GSM_ LOCATE_RESP and itsLS_SB_GSM_EOTD_MEAS_INFO and LS_GSM_EOTD_MEASD_SETS_SEQ elements

NOTE!

All numerical values are shown in decimal.

This display contains E-OTD measurement information in the Measure Position Response component in RRLP that is sent from MS to the network.

If no GSM_LS_LOCATE_RESP with LS_SB_GSM_EOTD_MEAS_INFO has been sent, the display shall show "x" in all data fields.

S60 Data display
Nr of Sets a Ref. FN bbbbb TA Corr. ccc Nr of Neighs dd

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a	LOCATION	LS_ SB_FTD_GSM_MEAS_SET_COUNT	S	R,I,O	Number of Measurement Sets: This field indicates the number of E-OTD measurement sets.

Abbr	Server	Sub-block id	Format	Mode	Description
b(5)	LOCATION	LS_SB_FTD_GSM_REF_FN	S	R,I,O	Reference Frame Number: This field indicates the frame number of the last measured burst from the reference BTS modulo 42432.
c(3)	LOCATION	LS_SB_FTD_GSM_TA_CORR	S	R,I,O	TA Correction: This field indicates the measured TA correction value.
d(2)	LOCATION	LS_SB_FTD_GSM_MEASD_NEIGH	S	R,I,O	Number Of Neighbors: This field indicates the number of measured neighbors.

14.49 Display 75.81: E-OTD Reference BTS, Reference BTS set 1

This display will be based on last sent LS_GSM_ LOCATE_RESP with LS_SB_GSM_EOTD_REF_BTS_ID

NOTE!

All numerical values are shown in decimal.

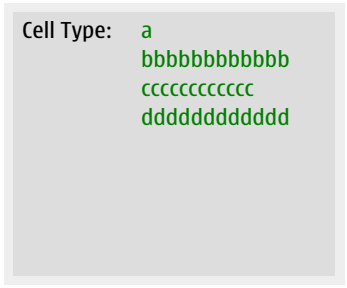
These displays indentifies the reference BTS of the first measurement set in the Measure Position Response component in RRLP that is sent from MS to the network.

The content of the display varies depending on the CellIDType.

If no LS_GSM_ LOCATE_RESP with LS_SB_GSM_EOTD_REF_BTS_ID has not been sent, the display shall show "x" in all data fields.

If Cell ID Type is not in range 0..4 then the displays shall show "?" in all data fields.

S60 Data display



Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a	LOCATION	LS_SB_FTD_GSM_CELLID_TYP	S	R,I,O	CellIDType: Indicates the identity method of the Reference BTS
b(12)	LOCATION	LS_SB_FTD_GSM_REF_LAC	S	R,I,O	Cell ID type: (text + value) 0: empty (no text, no value) 1: empty (no text, no value) 2: empty (no text, no value) 3: empty (no text, no value) 4: Area: xxxxx xxxxx is Reference LAC: Indicates the Location Area Code of the reference BTS.
c(12)	LOCATION	LS_SB_FTD_GSM_REF_BTS_1	S	R,I,O	Cell ID type: (text + value) 0: BS ID: yy yy is Reference BSIC: Indicates the Base Station Indentity. 1: Cell ID: 2: ReqIndex: zz zz is Request Index: Indicates an index identifying the reference BTSs by referring to the BTSs listed in the Measure Position Request component. 3: System Info 4: Cell ID:
d(12)	LOCATION	LS_SB_FTD_GSM_REF_BTS_2	S	R,I,O	Cell ID type: (text + value) 0: BCCH: uuuu uuuu is Reference BCCH carrier: This field indicates the absolute RF channel number of the BCCH of the reference base station. 1: vvvvvvvvv vvvvvvvvv is Reference CI: Indicates the Cell Identity value of the reference BTS. 2: empty (no text, no value) 3: Index: www www is System Info Index: Indicates an index

Abbr	Server	Sub-block id	Format	Mode	Description
					identifying the reference BTS by referring to BCCH allocation list of the serving BTS. 4: vvvvvvvvvv vvvvvvvvvv is Reference CI: Indicates the Cell Identity value of the reference BTS.

14.50 Display 75.82 E-OTD Measurement Info, Measurement Set 1, Neighbours 1

The 15 displays in range 75.82..75.96 are all identical. However, each display will concern only one specific neighbour base station. The mapping between display and neighbour base station is shown below:

Display	75.82	75.83	75.84	75.85	75.86	75.87	75.88	75.89	75.90	75.91	75.92	75.93	75.94	75.95	75.96
Neighbour	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

This display will be based on last sent LS_GSM_ LOCATE_RESP and its LS_SB_GSM_EOTD_MEAS_INFO, LS_GSM_EOTD_MEASD_SETS_SEQ and LS_GSM_EOTD_MEASD_NB_SEQ elements

The display for neighbour 1 is shown below:

NOTE!

1. The "1" character shown in first column of the "Data Display" is the neighbour id. It will have range 1..9, A..F, - depending on the display.

2. The "1" character shown in first column of the "Help Display" is the neighbour id. It will have range 1..15, - depending on the display

3. The Sub Block IDs written above will have similar names for each of the 15 neighbours, - however the ending "_1" is exchanged with the corresponding neighbour number (1..15).

S60 Data display

1. Neigh ID aaaaaaaaaa
Nbr of Meas. bbbbbbb
Std of Meas. cccccccc
OTD value ddddd

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(10)	LOCATION	LS_SB_FTD_GSM_NEIGH_ID_1	S	R,I,O	Neighbor BCCH carrier or cell identity: This field indicates the absolute RF channel number of the BCCH (Cell ID Type 0 and 2) or the Cell Identity value (Cell ID Type 1 and 5) of the neighbor base station.
b(7)	LOCATION	LS_SB_FTD_GSM_EOTD_MEAS_COUNT_1	S	R,I,O	Number of E-OTD Measurements (shown as an interval, e.g. 00 04). If the Number of EOTD Measurements field has a bit value 111 , this field will show 55 xx to indicate situation 55 or more EOTD measurements

Abbr	Server	Sub-block id	Format	Mode	Description
c(8)	LOCATION	LS_ SB_FTD_GSM_STD_EOTD_MEAS_1	S	R,I,O	Std of EOTD Measurements (shown as an interval, e.g. 000..009). Defines standard deviation of EOTD measurements in meters. Calculated according to GSM 04.31 using STD resolution field in LS_GSM_EOTD_MEASD_SETS_SEQ and STD of EOTD measurement field in LS_GSM_EOTD_MEASD_NB_SEQ. If the Std of EOTD Measurements field has a bit value 11111 , this field will show ccc..xxx to indicate situation ccc meters or more , e.g. "620..xxx".
d(5)	LOCATION	LS_SB_FTD_GSM_MEASD_OTD_1	S	R,I,O	OTD: Indicates the measured OTD value between the receptions of signals from the reference and the neighbor BTS.

14.51 Display 75.83 E-OTD Measurement Info, Measurement Set 1, Neighbours 2

The 15 displays in range 75.82..75.96 are all identical. However, each display will concern only one specific neighbour base station. The mapping between display and neighbour base station is shown below:

Display	75.82	75.83	75.84	75.85	75.86	75.87	75.88	75.89	75.90	75.91	75.92	75.93	75.94	75.95	75.96
Neighbour	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

This display will be based on last sent LS_GSM_ LOCATE_RESP and its LS_SB_GSM_EOTD_MEAS_INFO, LS_GSM_EOTD_MEASD_SETS_SEQ and LS_GSM_EOTD_MEASD_NB_SEQ elements

The display for neighbour 1 is shown below:

NOTE!

1. The "1" character shown in first column of the "Data Display" is the neighbour id. It will have range 1..9, A..F, - depending on the display.

2. The "1" character shown in first column of the "Help Display" is the neighbour id. It will have range 1..15, - depending on the display

3. The Sub Block IDs written above will have similar names for each of the 15 neighbours, - however the ending "_1" is exchanged with the corresponding neighbour number (1..15).

S60 Data display

2. Neigh ID	aaaaaaaaaa
Nbr of Meas.	bbbbbbb
Std of Meas.	cccccccc
OTD value	ddddd

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(10)	LOCATION	LS_SB_FTD_GSM_NEIGH_ID_2	S	R,I,O	Neighbor BCCH carrier or cell identity: This field indicates the absolute RF channel number of the BCCH (Cell ID Type 0 and 2) or the Cell Identity value (Cell ID Type 1 and 5) of the neighbor base station.
b(7)	LOCATION	LS_SB_FTD_GSM_EOTD_MEAS_COUNT_2	S	R,I,O	Number of E-OTD Measurements (shown as an interval, e.g. 00 04). If the Number of EOTD Measurements field has a bit value 111 , this field will show 55 xx to indicate situation 55 or more EOTD measurements
c(8)	LOCATION	LS_SB_FTD_GSM_STD_EOTD_MEAS_2	S	R,I,O	Std of EOTD Measurements (shown as an interval, e.g. 000..009). Defines standard deviation of EOTD measurements in meters. Calculated according to GSM 04.31 using STD resolution field in LS_GSM_EOTD_MEASD_SETS_SEQ and STD of EOTD measurement field in LS_GSM_EOTD_MEASD_NB_SEQ. If the Std of EOTD Measurements field has a bit value 11111 , this field will show ccc..xxx to indicate situation ccc meters or more , e.g. "620..xxx".
d(5)	LOCATION	LS_SB_FTD_GSM_MEASD_OTD_2	S	R,I,O	OTD: Indicates the measured OTD value between the receptions of signals from the reference and the neighbor BTS.

14.52 Display 75.84 E-OTD Measurement Info, Measurement Set 1, Neighbours 3

The 15 displays in range 75.82..75.96 are all identical. However, each display will concern only one specific neighbour base station. The mapping between display and neighbour base station is shown below:

Display	75.82	75.83	75.84	75.85	75.86	75.87	75.88	75.89	75.90	75.91	75.92	75.93	75.94	75.95	75.96
Neighbour	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

This display will be based on last sent LS_GSM_ LOCATE_RESP and its LS_SB_GSM_EOTD_MEAS_INFO, LS_GSM_EOTD_MEASD_SETS_SEQ and LS_GSM_EOTD_MEASD_NB_SEQ elements

The display for neighbour 1 is shown below:

NOTE!

1. The "1" character shown in first column of the "Data Display" is the neighbour id. It will have range 1..9, A..F, - depending on the display.

2. The "1" character shown in first column of the "Help Display" is the neighbour id. It will have range 1..15, - depending on the display

3. The Sub Block IDs written above will have similar names for each of the 15 neighbours, - however the ending "_1" is exchanged with the corresponding neighbour number (1..15).

S60 Data display
3. Neigh ID aaaaaaaaaa Nbr of Meas. bbbbbbb Std of Meas. cccccccc OTD value ddddd

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(10)	LOCATION	LS_SB_FTD_GSM_NEIGH_ID_3	S	R,I,O	Neighbor BCCH carrier or cell identity: This field indicates the absolute RF channel number of the BCCH (Cell ID Type 0 and 2) or the Cell Identity value (Cell ID Type 1 and 5) of the neighbor base station.
b(7)	LOCATION	LS_SB_FTD_GSM_EOTD_MEAS_COUNT_3	S	R,I,O	Number of E-OTD Measurements (shown as an interval, e.g. 00 04). If the Number of EOTD Measurements field has a bit value 111 , this field will show 55 xx to indicate situation 55 or more EOTD measurements
c(8)	LOCATION	LS_SB_FTD_GSM_STD_EOTD_MEAS_3	S	R,I,O	Std of EOTD Measurements (shown as an interval, e.g. 000..009). Defines standard deviation of EOTD measurements in meters. Calculated according to GSM 04.31 using STD resolution field in LS_GSM_EOTD_MEASD_SETS_SEQ and STD of EOTD measurement field in LS_GSM_EOTD_MEASD_NB_SEQ. If the Std of EOTD Measurements field has a bit value 11111 , this field will show ccc..xxx to indicate situation ccc meters or more , e.g. "620..xxx".
d(5)	LOCATION	LS_SB_FTD_GSM_MEASD_OTD_3	S	R,I,O	OTD: Indicates the measured OTD value between the receptions of signals from the reference and the neighbor BTS.

14.53 Display 75.85 E-OTD Measurement Info, Measurement Set 1, Neighbours 4

The 15 displays in range 75.82..75.96 are all identical. However, each display will concern only one specific neighbour base station. The mapping between display and neighbour base station is shown below:

Display	75.82	75.83	75.84	75.85	75.86	75.87	75.88	75.89	75.90	75.91	75.92	75.93	75.94	75.95	75.96
Neighbour	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

This display will be based on last sent LS_GSM_ LOCATE_RESP and its LS_SB_GSM_EOTD_MEAS_INFO, LS_GSM_EOTD_MEASD_SETS_SEQ and LS_GSM_EOTD_MEASD_NB_SEQ elements

The display for neighbour 1 is shown below:

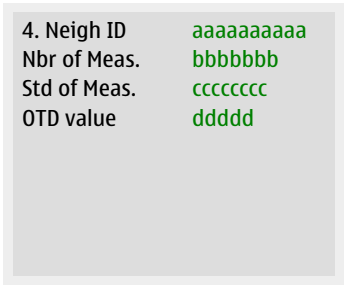
NOTE!

1. The "1" character shown in first column of the "Data Display" is the neighbour id. It will have range 1..9, A..F, - depending on the display.

2. The "1" character shown in first column of the "Help Display" is the neighbour id. It will have range 1..15, - depending on the display

3. The Sub Block IDs written above will have similar names for each of the 15 neighbours, - however the ending "_1" is exchanged with the corresponding neighbour number (1..15).

S60 Data display



Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(10)	LOCATION	LS_SB_FTD_GSM_NEIGH_ID_4	S	R,I,O	Neighbor BCCH carrier or cell identity: This field indicates the absolute RF channel number of the BCCH (Cell ID Type 0 and 2) or the Cell Identity value (Cell ID Type 1 and 5) of the neighbor base station.
b(7)	LOCATION	LS_SB_FTD_GSM_EOTD_MEAS_COUNT_4	S	R,I,O	Number of E-OTD Measurements (shown as an interval, e.g. 00 04). If the Number of EOTD Measurements field has a bit value 111 , this field will show 55 xx to indicate situation 55 or more EOTD measurements
c(8)	LOCATION	LS_SB_FTD_GSM_STD_EOTD_MEAS_4	S	R,I,O	Std of EOTD Measurements (shown as an interval, e.g. 000..009). Defines standard deviation of EOTD measurements in meters. Calculated according to GSM 04.31 using STD resolution field in LS_GSM_EOTD_MEASD_SETS_SEQ and STD of EOTD measurement field in LS_GSM_EOTD_MEASD_NB_SEQ. If the Std of EOTD Measurements field has a bit value 11111 , this field will show ccc..xxx to indicate situation ccc meters or more , e.g. "620..xxx".
d(5)	LOCATION	LS_SB_FTD_GSM_MEASD_OTD_4	S	R,I,O	OTD: Indicates the measured OTD value between the receptions of signals from the reference and the neighbor BTS.

14.54 Display 75.86 E-OTD Measurement Info, Measurement Set 1, Neighbours 5

The 15 displays in range 75.82..75.96 are all identical. However, each display will concern only one specific neighbour base station. The mapping between display and neighbour base station is shown below:

Display	75.82	75.83	75.84	75.85	75.86	75.87	75.88	75.89	75.90	75.91	75.92	75.93	75.94	75.95	75.96
Neighbour	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

This display will be based on last sent LS_GSM_ LOCATE_RESP and its LS_SB_GSM_EOTD_MEAS_INFO, LS_GSM_EOTD_MEASD_SETS_SEQ and LS_GSM_EOTD_MEASD_NB_SEQ elements

The display for neighbour 1 is shown below:

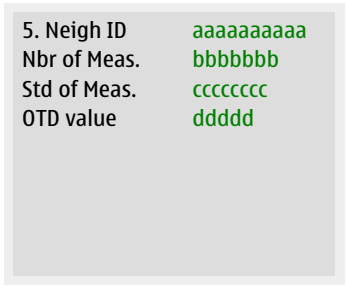
NOTE!

1. The "1" character shown in first column of the "Data Display" is the neighbour id. It will have range 1..9, A..F, - depending on the display.

2. The "1" character shown in first column of the "Help Display" is the neighbour id. It will have range 1..15, - depending on the display

3. The Sub Block IDs written above will have similar names for each of the 15 neighbours, - however the ending "_1" is exchanged with the corresponding neighbour number (1..15).

S60 Data display



Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(10)	LOCATION	LS_SB_FTD_GSM_NEIGH_ID_5	S	R,I,O	Neighbor BCCH carrier or cell identity: This field indicates the absolute RF channel number of the BCCH (Cell ID Type 0 and 2) or the Cell Identity value (Cell ID Type 1 and 5) of the neighbor base station.
b(7)	LOCATION	LS_SB_FTD_GSM_EOTD_MEAS_COUNT_5	S	R,I,O	Number of E-OTD Measurements (shown as an interval, e.g. 00 04). If the Number of EOTD Measurements field has a bit value 111 , this field will show 55 xx to indicate situation 55 or more EOTD measurements
c(8)	LOCATION	LS_SB_FTD_GSM_STD_EOTD_MEAS_5	S	R,I,O	Std of EOTD Measurements (shown as an interval, e.g. 000..009). Defines standard deviation of EOTD measurements in meters. Calculated according to GSM 04.31 using STD resolution field in LS_GSM_EOTD_MEASD_SETS_SEQ and STD of EOTD measurement field in LS_GSM_EOTD_MEASD_NB_SEQ. If the Std of EOTD Measurements field has a bit value 11111 , this field will show ccc..xxx to indicate situation ccc meters or more , e.g. "620..xxx".
d(5)	LOCATION	LS_SB_FTD_GSM_MEASD_OTD_5	S	R,I,O	OTD: Indicates the measured OTD value between the receptions of signals from the reference and the neighbor BTS.

14.55 Display 75.87 E-OTD Measurement Info, Measurement Set 1, Neighbours 6

The 15 displays in range 75.82..75.96 are all identical. However, each display will concern only one specific neighbour base station. The mapping between display and neighbour base station is shown below:

Display	75.82	75.83	75.84	75.85	75.86	75.87	75.88	75.89	75.90	75.91	75.92	75.93	75.94	75.95	75.96
Neighbour	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

This display will be based on last sent LS_GSM_ LOCATE_RESP and its LS_SB_GSM_EOTD_MEAS_INFO, LS_GSM_EOTD_MEASD_SETS_SEQ and LS_GSM_EOTD_MEASD_NB_SEQ elements

The display for neighbour 1 is shown below:

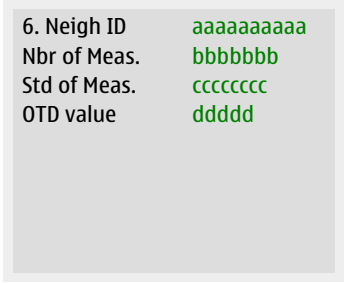
NOTE!

1. The "1" character shown in first column of the "Data Display" is the neighbour id. It will have range 1..9, A..F, - depending on the display.

2. The "1" character shown in first column of the "Help Display" is the neighbour id. It will have range 1..15, - depending on the display

3. The Sub Block IDs written above will have similar names for each of the 15 neighbours, - however the ending "_1" is exchanged with the corresponding neighbour number (1..15).

S60 Data display



Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(10)	LOCATION	LS_SB_FTD_GSM_NEIGH_ID_6	S	R,I,O	Neighbor BCCH carrier or cell identity: This field indicates the absolute RF channel number of the BCCH (Cell ID Type 0 and 2) or the Cell Identity value (Cell ID Type 1 and 5) of the neighbor base station.
b(7)	LOCATION	LS_ SB_FTD_GSM_EOTD_MEAS_COUNT_6	S	R,I,O	Number of E-OTD Measurements (shown as an interval, e.g. 00 04). If the Number of EOTD Measurements field has a bit value 111 , this field will show 55 xx to indicate situation 55 or more EOTD measurements
c(8)	LOCATION	LS_ SB_FTD_GSM_STD_EOTD_MEAS_6	S	R,I,O	Std of EOTD Measurements (shown as an interval, e.g. 000..009). Defines standard deviation of EOTD measurements in meters. Calculated according to GSM 04.31 using STD resolution field in LS_GSM_EOTD_MEASD_SETS_SEQ and STD of EOTD measurement field in LS_GSM_EOTD_MEASD_NB_SEQ. If the Std of EOTD Measurements field has a bit value 11111 , this field will show ccc..xxx to indicate situation ccc meters or more , e.g. "620..xxx".
d(5)	LOCATION	LS_SB_FTD_GSM_MEASD_OTD_6	S	R,I,O	OTD: Indicates the measured OTD value between the receptions of signals from the reference and the neighbor BTS.

14.56 Display 75.88 E-OTD Measurement Info, Measurement Set 1, Neighbours 7

The 15 displays in range 75.82..75.96 are all identical. However, each display will concern only one specific neighbour base station. The mapping between display and neighbour base station is shown below:

Display	75.82	75.83	75.84	75.85	75.86	75.87	75.88	75.89	75.90	75.91	75.92	75.93	75.94	75.95	75.96

Neighbour	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

This display will be based on last sent LS_GSM_ LOCATE_RESP and its LS_SB_GSM_EOTD_MEAS_INFO, LS_GSM_EOTD_MEASD_SETS_SEQ and LS_GSM_EOTD_MEASD_NB_SEQ elements

The display for neighbour 1 is shown below:

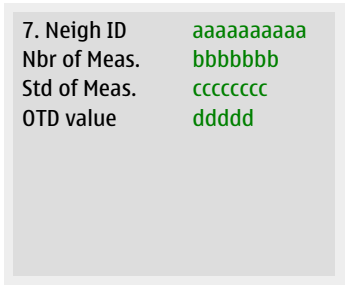
NOTE!

1. The "1" character shown in first column of the "Data Display" is the neighbour id. It will have range 1..9, A..F, - depending on the display.

2. The "1" character shown in first column of the "Help Display" is the neighbour id. It will have range 1..15, - depending on the display

3. The Sub Block IDs written above will have similar names for each of the 15 neighbours, - however the ending "_1" is exchanged with the corresponding neighbour number (1..15).

S60 Data display



Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(10)	LOCATION	LS_SB_FTD_GSM_NEIGH_ID_7	S	R,I,O	Neighbor BCCH carrier or cell identity: This field indicates the absolute RF channel number of the BCCH (Cell ID Type 0 and 2) or the Cell Identity value (Cell ID Type 1 and 5) of the neighbor base station.
b(7)	LOCATION	LS_SB_FTD_GSM_EOTD_MEAS_COUNT_7	S	R,I,O	Number of E-OTD Measurements (shown as an interval, e.g. 00 04). If the Number of EOTD Measurements field has a bit value 111 , this field will show 55 xx to indicate situation 55 or more EOTD measurements
c(8)	LOCATION	LS_SB_FTD_GSM_STD_EOTD_MEAS_7	S	R,I,O	Std of EOTD Measurements (shown as an interval, e.g. 000..009). Defines standard deviation of EOTD measurements in meters. Calculated according to GSM 04.31 using STD resolution field in LS_GSM_EOTD_MEASD_SETS_SEQ and STD of EOTD measurement field in LS_GSM_EOTD_MEASD_NB_SEQ. If the Std of EOTD Measurements field has a bit value 11111 , this field will show ccc..xxx to indicate situation ccc meters or more , e.g. "620..xxx".
d(5)	LOCATION	LS_SB_FTD_GSM_MEASD_OTD_7	S	R,I,O	OTD: Indicates the measured OTD value between the receptions of signals from the reference and the neighbor BTS.

14.57 Display 75.89 E-OTD Measurement Info, Measurement Set 1, Neighbours 8

The 15 displays in range 75.82..75.96 are all identical. However, each display will concern only one specific neighbour base station. The mapping between display and neighbour base station is shown below:

Display	75.82	75.83	75.84	75.85	75.86	75.87	75.88	75.89	75.90	75.91	75.92	75.93	75.94	75.95	75.96
Neighbour	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

This display will be based on last sent LS_GSM_ LOCATE_RESP and its LS_SB_GSM_EOTD_MEAS_INFO, LS_GSM_EOTD_MEASD_SETS_SEQ and LS_GSM_EOTD_MEASD_NB_SEQ elements

The display for neighbour 1 is shown below:

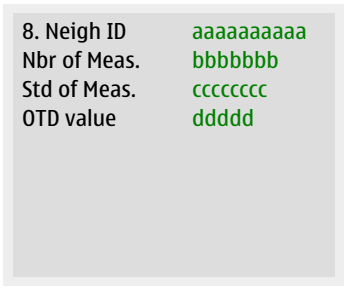
NOTE!

1. The "1" character shown in first column of the "Data Display" is the neighbour id. It will have range 1..9, A..F, - depending on the display.

2. The "1" character shown in first column of the "Help Display" is the neighbour id. It will have range 1..15, - depending on the display

3. The Sub Block IDs written above will have similar names for each of the 15 neighbours, - however the ending "_1" is exchanged with the corresponding neighbour number (1..15).

S60 Data display



Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(10)	LOCATION	LS_SB_FTD_GSM_NEIGH_ID_8	S	R,I,O	Neighbor BCCH carrier or cell identity: This field indicates the absolute RF channel number of the BCCH (Cell ID Type 0 and 2) or the Cell Identity value (Cell ID Type 1 and 5) of the neighbor base station.
b(7)	LOCATION	LS_SB_FTD_GSM_EOTD_MEAS_COUNT_8	S	R,I,O	Number of E-OTD Measurements (shown as an interval, e.g. 00 04). If the Number of EOTD Measurements field has a bit value 111 , this field will show 55 xx to indicate situation 55 or more EOTD measurements
c(8)	LOCATION	LS_SB_FTD_GSM_STD_EOTD_MEAS_8	S	R,I,O	Std of EOTD Measurements (shown as an interval, e.g. 000..009). Defines standard deviation of EOTD measurements in meters. Calculated according to GSM 04.31 using STD resolution field in LS_GSM_EOTD_MEASD_SETS_SEQ and STD of EOTD measurement field in LS_GSM_EOTD_MEASD_NB_SEQ. If the Std of EOTD Measurements field has a bit value 11111 , this field will show ccc..xxx to indicate situation ccc meters or more , e.g. "620..xxx".
d(5)	LOCATION	LS_SB_FTD_GSM_MEASD_OTD_8	S	R,I,O	OTD: Indicates the measured OTD value between the receptions of signals from the reference and the neighbor BTS.

14.58 Display 75.90 E-OTD Measurement Info, Measurement Set 1, Neighbours 9

The 15 displays in range 75.82..75.96 are all identical. However, each display will concern only one specific neighbour base station. The mapping between display and neighbour base station is shown below:

Display	75.82	75.83	75.84	75.85	75.86	75.87	75.88	75.89	75.90	75.91	75.92	75.93	75.94	75.95	75.96
Neighbour	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

This display will be based on last sent LS_GSM_ LOCATE_RESP and its LS_SB_GSM_EOTD_MEAS_INFO, LS_GSM_EOTD_MEASD_SETS_SEQ and LS_GSM_EOTD_MEASD_NB_SEQ elements

The display for neighbour 1 is shown below:

NOTE!

1. The "1" character shown in first column of the "Data Display" is the neighbour id. It will have range 1..9, A..F, - depending on the display.

2. The "1" character shown in first column of the "Help Display" is the neighbour id. It will have range 1..15, - depending on the display

3. The Sub Block IDs written above will have similar names for each of the 15 neighbours, - however the ending "_1" is exchanged with the corresponding neighbour number (1..15).

S60 Data display

9. Neigh ID	aaaaaaaaaa
Nbr of Meas.	bbbbbbb
Std of Meas.	cccccccc
OTD value	ddddd

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(10)	LOCATION	LS_SB_FTD_GSM_NEIGH_ID_9	S	R,I,O	Neighbor BCCH carrier or cell identity: This field indicates the absolute RF channel number of the BCCH (Cell ID Type 0 and 2) or the Cell Identity value (Cell ID Type 1 and 5) of the neighbor base station.
b(7)	LOCATION	LS_ SB_FTD_GSM_EOTD_MEAS_COUNT_9	S	R,I,O	Number of E-OTD Measurements (shown as an interval, e.g. 00 04). If the Number of EOTD Measurements field has a bit value 111 , this field will show 55 xx to indicate situation 55 or more EOTD measurements
c(8)	LOCATION	LS_ SB_FTD_GSM_STD_EOTD_MEAS_9	S	R,I,O	Std of EOTD Measurements (shown as an interval, e.g. 000..009). Defines standard deviation of EOTD measurements in meters. Calculated according to GSM 04.31 using STD resolution field in LS_GSM_EOTD_MEASD_SETS_SEQ and STD of EOTD measurement field in LS_GSM_EOTD_MEASD_NB_SEQ. If

Abbr	Server	Sub-block id	Format	Mode	Description
					the Std of EOTD Measurements field has a bit value 11111 , this field will show ccc..xxx to indicate situation ccc meters or more , e.g. "620..xxx".
d(5)	LOCATION	LS_SB_FTD_GSM_MEASD_OTD_9	S	R,I,O	OTD: Indicates the measured OTD value between the receptions of signals from the reference and the neighbor BTS.

14.59 Display 75.91 E-OTD Measurement Info, Measurement Set 1, Neighbours 10

The 15 displays in range 75.82..75.96 are all identical. However, each display will concern only one specific neighbour base station. The mapping between display and neighbour base station is shown below:

Display	75.82	75.83	75.84	75.85	75.86	75.87	75.88	75.89	75.90	75.91	75.92	75.93	75.94	75.95	75.96
Neighbour	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

This display will be based on last sent LS_GSM_ LOCATE_RESP and its LS_SB_GSM_EOTD_MEAS_INFO, LS_GSM_EOTD_MEASD_SETS_SEQ and LS_GSM_EOTD_MEASD_NB_SEQ elements

The display for neighbour 1 is shown below:

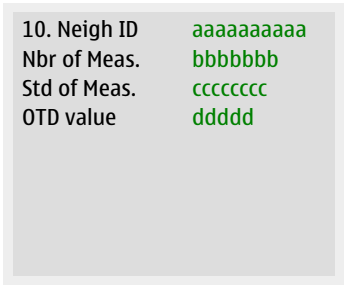
NOTE!

1. The "1" character shown in first column of the "Data Display" is the neighbour id. It will have range 1..9, A..F, - depending on the display.

2. The "1" character shown in first column of the "Help Display" is the neighbour id. It will have range 1..15, - depending on the display

3. The Sub Block IDs written above will have similar names for each of the 15 neighbours, - however the ending "_1" is exchanged with the corresponding neighbour number (1..15).

S60 Data display



Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(10)	LOCATION	LS_SB_FTD_GSM_NEIGH_ID_10	S	R,I,O	Neighbor BCCH carrier or cell identity: This field indicates the absolute RF channel number of the BCCH (Cell ID Type 0 and 2) or the Cell Identity value (Cell ID Type 1 and 5) of the neighbor base station.

Abbr	Server	Sub-block id	Format	Mode	Description
b(7)	LOCATION	LS_ SB_FTD_GSM_EOTD_MEAS_COUNT_10	S	R,I,O	Number of E-OTD Measurements (shown as an interval, e.g. 00 04). If the Number of EOTD Measurements field has a bit value 111 , this field will show 55 xx to indicate situation 55 or more EOTD measurements
c(8)	LOCATION	LS_ SB_FTD_GSM_STD_EOTD_MEAS_10	S	R,I,O	Std of EOTD Measurements (shown as an interval, e.g. 000..009). Defines standard deviation of EOTD measurements in meters. Calculated according to GSM 04.31 using STD resolution field in LS_GSM_EOTD_MEASD_SETS_SEQ and STD of EOTD measurement field in LS_GSM_EOTD_MEASD_NB_SEQ. If the Std of EOTD Measurements field has a bit value 11111 , this field will show ccc..xxx to indicate situation ccc meters or more , e.g. "620..xxx".
d(5)	LOCATION	LS_SB_FTD_GSM_MEASD_OTD_10	S	R,I,O	OTD: Indicates the measured OTD value between the receptions of signals from the reference and the neighbor BTS.

14.60 Display 75.92 E-OTD Measurement Info, Measurement Set 1, Neighbours 11

The 15 displays in range 75.82..75.96 are all identical. However, each display will concern only one specific neighbour base station. The mapping between display and neighbour base station is shown below:

Display	75.82	75.83	75.84	75.85	75.86	75.87	75.88	75.89	75.90	75.91	75.92	75.93	75.94	75.95	75.96
Neighbour	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

This display will be based on last sent LS_GSM_ LOCATE_RESP and its LS_SB_GSM_EOTD_MEAS_INFO, LS_GSM_EOTD_MEASD_SETS_SEQ and LS_GSM_EOTD_MEASD_NB_SEQ elements

The display for neighbour 1 is shown below:

NOTE!

1. The "1" character shown in first column of the "Data Display" is the neighbour id. It will have range 1..9, A..F, - depending on the display.

2. The "1" character shown in first column of the "Help Display" is the neighbour id. It will have range 1..15, - depending on the display

3. The Sub Block IDs written above will have similar names for each of the 15 neighbours, - however the ending "_1" is exchanged with the corresponding neighbour number (1..15).

S60 Data display

11. Neigh ID	aaaaaaaaaa
Nbr of Meas.	bbbbbbb
Std of Meas.	cccccccc
OTD value	ddddd

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(10)	LOCATION	LS_SB_FTD_GSM_NEIGH_ID_11	S	R,I,O	Neighbor BCCH carrier or cell identity: This field indicates the absolute RF channel number of the BCCH (Cell ID Type 0 and 2) or the Cell Identity value (Cell ID Type 1 and 5) of the neighbor base station.
b(7)	LOCATION	LS_SB_FTD_GSM_EOTD_MEAS_COUNT_11	S	R,I,O	Number of E-OTD Measurements (shown as an interval, e.g. 00 04). If the Number of EOTD Measurements field has a bit value 111 , this field will show 55 xx to indicate situation 55 or more EOTD measurements
c(8)	LOCATION	LS_SB_FTD_GSM_STD_EOTD_MEAS_11	S	R,I,O	Std of EOTD Measurements (shown as an interval, e.g. 000..009). Defines standard deviation of EOTD measurements in meters. Calculated according to GSM 04.31 using STD resolution field in LS_GSM_EOTD_MEASD_SETS_SEQ and STD of EOTD measurement field in LS_GSM_EOTD_MEASD_NB_SEQ. If the Std of EOTD Measurements field has a bit value 11111 , this field will show ccc..xxx to indicate situation ccc meters or more , e.g. "620..xxx".
d(5)	LOCATION	LS_SB_FTD_GSM_MEASD_OTD_11	S	R,I,O	OTD: Indicates the measured OTD value between the receptions of signals from the reference and the neighbor BTS.

14.61 Display 75.93 E-OTD Measurement Info, Measurement Set 1, Neighbours 12

The 15 displays in range 75.82..75.96 are all identical. However, each display will concern only one specific neighbour base station. The mapping between display and neighbour base station is shown below:

Display	75.82	75.83	75.84	75.85	75.86	75.87	75.88	75.89	75.90	75.91	75.92	75.93	75.94	75.95	75.96
Neighbour	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

This display will be based on last sent LS_GSM_ LOCATE_RESP and its LS_SB_GSM_EOTD_MEAS_INFO, LS_GSM_EOTD_MEASD_SETS_SEQ and LS_GSM_EOTD_MEASD_NB_SEQ elements

The display for neighbour 1 is shown below:

NOTE!

1. The "1" character shown in first column of the "Data Display" is the neighbour id. It will have range 1..9, A..F, - depending on the display.

2. The "1" character shown in first column of the "Help Display" is the neighbour id. It will have range 1..15, - depending on the display

3. The Sub Block IDs written above will have similar names for each of the 15 neighbours, - however the ending "_1" is exchanged with the corresponding neighbour number (1..15).

S60 Data display
12. Neigh ID aaaaaaaaaa Nbr of Meas. bbbbbbb Std of Meas. cccccccc OTD value ddddd

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(10)	LOCATION	LS_SB_FTD_GSM_NEIGH_ID_12	S	R,I,O	Neighbor BCCH carrier or cell identity: This field indicates the absolute RF channel number of the BCCH (Cell ID Type 0 and 2) or the Cell Identity value (Cell ID Type 1 and 5) of the neighbor base station.
b(7)	LOCATION	LS_SB_FTD_GSM_EOTD_MEAS_COUNT_12	S	R,I,O	Number of E-OTD Measurements (shown as an interval, e.g. 00 04). If the Number of EOTD Measurements field has a bit value 111 , this field will show 55 xx to indicate situation 55 or more EOTD measurements
c(8)	LOCATION	LS_SB_FTD_GSM_STD_EOTD_MEAS_12	S	R,I,O	Std of EOTD Measurements (shown as an interval, e.g. 000..009). Defines standard deviation of EOTD measurements in meters. Calculated according to GSM 04.31 using STD resolution field in LS_GSM_EOTD_MEASD_SETS_SEQ and STD of EOTD measurement field in LS_GSM_EOTD_MEASD_NB_SEQ. If the Std of EOTD Measurements field has a bit value 11111 , this field will show ccc..xxx to indicate situation ccc meters or more , e.g. "620..xxx".
d(5)	LOCATION	LS_SB_FTD_GSM_MEASD_OTD_12	S	R,I,O	OTD: Indicates the measured OTD value between the receptions of signals from the reference and the neighbor BTS.

14.62 Display 75.94 E-OTD Measurement Info, Measurement Set 1, Neighbours 13

The 15 displays in range 75.82..75.96 are all identical. However, each display will concern only one specific neighbour base station. The mapping between display and neighbour base station is shown below:

Display	75.82	75.83	75.84	75.85	75.86	75.87	75.88	75.89	75.90	75.91	75.92	75.93	75.94	75.95	75.96
Neighbour	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

This display will be based on last sent LS_GSM_ LOCATE_RESP and its LS_SB_GSM_EOTD_MEAS_INFO, LS_GSM_EOTD_MEASD_SETS_SEQ and LS_GSM_EOTD_MEASD_NB_SEQ elements

The display for neighbour 1 is shown below:

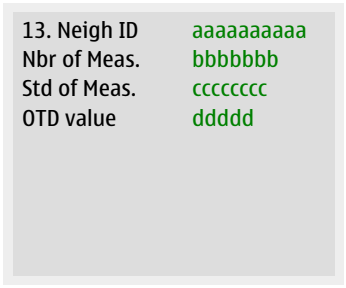
NOTE!

1. The "1" character shown in first column of the "Data Display" is the neighbour id. It will have range 1..9, A..F, - depending on the display.

2. The "1" character shown in first column of the "Help Display" is the neighbour id. It will have range 1..15, - depending on the display

3. The Sub Block IDs written above will have similar names for each of the 15 neighbours, - however the ending "_1" is exchanged with the corresponding neighbour number (1..15).

S60 Data display



Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(10)	LOCATION	LS_SB_FTD_GSM_NEIGH_ID_13	S	R,I,O	Neighbor BCCH carrier or cell identity: This field indicates the absolute RF channel number of the BCCH (Cell ID Type 0 and 2) or the Cell Identity value (Cell ID Type 1 and 5) of the neighbor base station.
b(7)	LOCATION	LS_SB_FTD_GSM_EOTD_MEAS_COUNT_13	S	R,I,O	Number of E-OTD Measurements (shown as an interval, e.g. 00 04). If the Number of EOTD Measurements field has a bit value 111 , this field will show 55 xx to indicate situation 55 or more EOTD measurements
c(8)	LOCATION	LS_SB_FTD_GSM_STD_EOTD_MEAS_13	S	R,I,O	Std of EOTD Measurements (shown as an interval, e.g. 000..009). Defines standard deviation of EOTD measurements in meters. Calculated according to GSM 04.31 using STD resolution field in LS_GSM_EOTD_MEASD_SETS_SEQ and STD of EOTD measurement field in LS_GSM_EOTD_MEASD_NB_SEQ. If the Std of EOTD Measurements field has a bit value 11111 , this field will show ccc..xxx to indicate situation ccc meters or more , e.g. "620..xxx".
d(5)	LOCATION	LS_SB_FTD_GSM_MEASD_OTD_13	S	R,I,O	OTD: Indicates the measured OTD value between the receptions of signals from the reference and the neighbor BTS.

14.63 Display 75.95 E-OTD Measurement Info, Measurement Set 1, Neighbours 14

The 15 displays in range 75.82..75.96 are all identical. However, each display will concern only one specific neighbour base station. The mapping between display and neighbour base station is shown below:

Display	75.82	75.83	75.84	75.85	75.86	75.87	75.88	75.89	75.90	75.91	75.92	75.93	75.94	75.95	75.96
Neighbour	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

This display will be based on last sent LS_GSM_ LOCATE_RESP and its LS_SB_GSM_EOTD_MEAS_INFO, LS_GSM_EOTD_MEASD_SETS_SEQ and LS_GSM_EOTD_MEASD_NB_SEQ elements

The display for neighbour 1 is shown below:

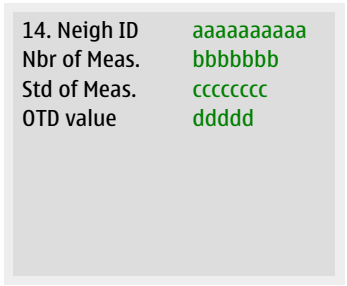
NOTE!

1. The "1" character shown in first column of the "Data Display" is the neighbour id. It will have range 1..9, A..F, - depending on the display.

2. The "1" character shown in first column of the "Help Display" is the neighbour id. It will have range 1..15, - depending on the display

3. The Sub Block IDs written above will have similar names for each of the 15 neighbours, - however the ending "_1" is exchanged with the corresponding neighbour number (1..15).

S60 Data display



Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(10)	LOCATION	LS_SB_FTD_GSM_NEIGH_ID_14	S	R,I,O	Neighbor BCCH carrier or cell identity: This field indicates the absolute RF channel number of the BCCH (Cell ID Type 0 and 2) or the Cell Identity value (Cell ID Type 1 and 5) of the neighbor base station.
b(7)	LOCATION	LS_SB_FTD_GSM_EOTD_MEAS_COUNT_14	S	R,I,O	Number of E-OTD Measurements (shown as an interval, e.g. 00 04). If the Number of EOTD Measurements field has a bit value 111 , this field will show 55 xx to indicate situation 55 or more EOTD measurements
c(8)	LOCATION	LS_SB_FTD_GSM_STD_EOTD_MEAS_14	S	R,I,O	Std of EOTD Measurements (shown as an interval, e.g. 000..009). Defines standard deviation of EOTD measurements in meters. Calculated according to GSM 04.31 using STD resolution field in LS_GSM_EOTD_MEASD_SETS_SEQ and STD of EOTD measurement field in LS_GSM_EOTD_MEASD_NB_SEQ. If the Std of EOTD Measurements field has a bit value 11111 , this field will show ccc..xxx to indicate situation ccc meters or more , e.g. "620..xxx".
d(5)	LOCATION	LS_SB_FTD_GSM_MEASD_OTD_14	S	R,I,O	OTD: Indicates the measured OTD value between the receptions of signals from the reference and the neighbor BTS.

14.64 Display 75.96 E-OTD Measurement Info, Measurement Set 1, Neighbours 15

The 15 displays in range 75.82..75.96 are all identical. However, each display will concern only one specific neighbour base station. The mapping between display and neighbour base station is shown below:

Display	75.82	75.83	75.84	75.85	75.86	75.87	75.88	75.89	75.90	75.91	75.92	75.93	75.94	75.95	75.96
Neighbour	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

This display will be based on last sent LS_GSM_ LOCATE_RESP and its LS_SB_GSM_EOTD_MEAS_INFO, LS_GSM_EOTD_MEASD_SETS_SEQ and LS_GSM_EOTD_MEASD_NB_SEQ elements

The display for neighbour 1 is shown below:

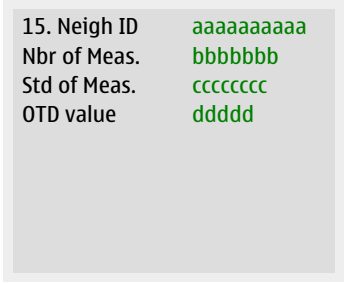
NOTE!

1. The "1" character shown in first column of the "Data Display" is the neighbour id. It will have range 1..9, A..F, - depending on the display.

2. The "1" character shown in first column of the "Help Display" is the neighbour id. It will have range 1..15, - depending on the display

3. The Sub Block IDs written above will have similar names for each of the 15 neighbours, - however the ending "_1" is exchanged with the corresponding neighbour number (1..15).

S60 Data display



Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(10)	LOCATION	LS_SB_FTD_GSM_NEIGH_ID_15	S	R,I,O	Neighbor BCCH carrier or cell identity: This field indicates the absolute RF channel number of the BCCH (Cell ID Type 0 and 2) or the Cell Identity value (Cell ID Type 1 and 5) of the neighbor base station.
b(7)	LOCATION	LS_SB_FTD_GSM_EOTD_MEAS_COUNT_15	S	R,I,O	Number of E-OTD Measurements (shown as an interval, e.g. 00 04). If the Number of EOTD Measurements field has a bit value 111 , this field will show 55 xx to indicate situation 55 or more EOTD measurements
c(8)	LOCATION	LS_SB_FTD_GSM_STD_EOTD_MEAS_15	S	R,I,O	Std of EOTD Measurements (shown as an interval, e.g. 000..009). Defines standard deviation of EOTD measurements in meters. Calculated according to GSM 04.31 using STD resolution field in LS_GSM_EOTD_MEASD_SETS_SEQ and STD of EOTD measurement field in LS_GSM_EOTD_MEASD_NB_SEQ. If the Std of EOTD Measurements field has a bit value 11111 , this field will show ccc..xxx to indicate situation ccc meters or more , e.g. "620..xxx".
d(5)	LOCATION	LS_SB_FTD_GSM_MEASD_OTD_15	S	R,I,O	OTD: Indicates the measured OTD value between the receptions of signals from the reference and the neighbor BTS.

15 Group 78: Email displays

15.1 Group 78 Information

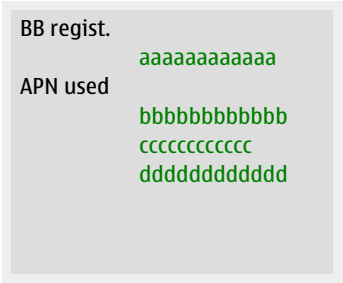
This group is for Email displays. Initially it consists of only BlackBerry displays. Blackberry is a proprietary wireless email protocol. Common email displays may be added later.

15.2 Display 78.01: BlackBerry - Registration APN information

NOTE!

This group is for Email displays. Initially it consists of only BlackBerry displays. Blackberry is a proprietary wireless email protocol. Common email displays may be added later.

S60 Data display

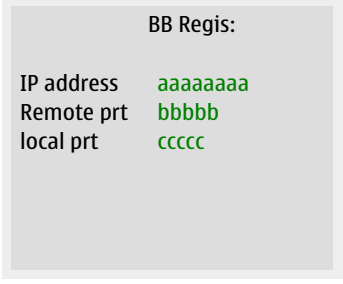


Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(12)	BLACKBERRY_EMAIL	FTD_SB_BB_REGISTRATION_ROUTING_PART1	S	R,0	First 12 characters of the APN used for the registration server.
b(12)	BLACKBERRY_EMAIL	FTD_SB_BB_REGISTRATION_ROUTING_PART2	S	R,0	Second set of 12 characters of the APN used for the registration server.
c(12)	BLACKBERRY_EMAIL	FTD_SB_BB_REGISTRATION_ROUTING_PART3	S	R,0	Third set of 12 characters of the APN used for the registration server.
d(12)	BLACKBERRY_EMAIL	FTD_SB_BB_REGISTRATION_ROUTING_PART4	S	R,0	Fourth set of 12 characters of the APN used for the registration server.

15.3 Display 78.02: BlackBerry - Registration and Routing information

S60 Data display

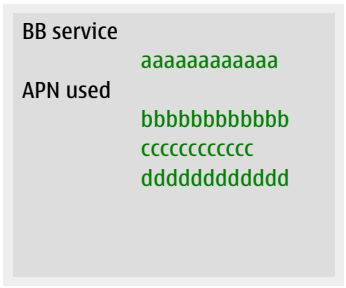


Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(8)	BLACKBERRY_EMAIL	FTD_SB_BB_REGISTRATION_ROUTING_HOST	S	R,O	IP address of the registration host, 4 bytes expressed as 8 ASCII hex characters.
b(5)	BLACKBERRY_EMAIL	FTD_SB_BB_REGISTRATION_REMOTE_ROUTING_PORTS	S	R,O	Remote registration port, 2 bytes expressed as 4 ASCII hex characters.
c(5)	BLACKBERRY_EMAIL	FTD_SB_BB_REGISTRATION_LOCAL_ROUTING_PORTS	S	R,O	Local registration port, 2 bytes expressed as 4 ASCII hex characters.

15.4 Display 78.03: BlackBerry - Service APN information

S60 Data display



Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(12)	BLACKBERRY_EMAIL	FTD_SB_BB_SERVICE_ROUTING_PART1	S	R,O	First 12 characters of the APN used for the service server.
b(12)	BLACKBERRY_EMAIL	FTD_SB_BB_SERVICE_ROUTING_PART2	S	R,O	Second set of 12 characters of the APN used for the service server.
c(12)	BLACKBERRY_EMAIL	FTD_SB_BB_SERVICE_ROUTING_PART3	S	R,O	Third set of 12 characters of the APN used for the service server.
d(12)	BLACKBERRY_EMAIL	FTD_SB_BB_SERVICE_ROUTING_PART4	S	R,O	Fourth set of 12 characters of the APN used for the service server.

15.5 Display 78.04: BlackBerry - Service information

S60 Data display
BB Service: IP address aaaaaaaa Remote prt bbbbb local prt ccccc

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(8)	BLACKBERRY_EMAIL	FTD_SB_BB_SERVICE_ROUTING_HOST	S	R,0	IP address of the service host, 4 bytes expressed as 8 ASCII hex characters.
b(5)	BLACKBERRY_EMAIL	FTD_SB_BB_SERVICE_REMOTE_ROUTING_PORTS	S	R,0	Remote service port, 2 bytes expressed as 4 ASCII hex characters.
c(5)	BLACKBERRY_EMAIL	FTD_SB_BB_SERVICE_LOCAL_ROUTING_PORTS	S	R,0	Local service port, 2 bytes expressed as 4 ASCII hex characters.

15.6 Display 78.05: BlackBerry - Last 4 events log

S60 Data display
Last 4 events log (code)(time) aaaaaaaaaaaa bbbbbbbbbbbb cccccccccccc dddddddddddd

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(12)	BLACKBERRY_EMAIL	FTD_SB_BB_EVENTLOG_1	S	R,0	Event code and time of last event
b(12)	BLACKBERRY_EMAIL	FTD_SB_BB_EVENTLOG_2	S	R,0	Event code and time of last but one event
c(12)	BLACKBERRY_EMAIL	FTD_SB_BB_EVENTLOG_3	S	R,0	Event code and time of last but two events
d(12)	BLACKBERRY_EMAIL	FTD_SB_BB_EVENTLOG_4	S	R,0	Event code and time of last but three events

15.7 Display 78.06: BlackBerry - UDP traffic

S60 Data display
UDP traffic send and receive info snd aaaaaaaa bbbbbbbbbbbb rcv cccccccc dddddddddddd

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(8)	BLACKBERRY_EMAIL	FTD_SB_BB_UDP_TRAFFIC_LASTSEND	S	R,O	Time of last sent packet. Blank if data has not been sent.
b(12)	BLACKBERRY_EMAIL	FTD_SB_BB_UDP_TRAFFIC_SENT	S	R,O	Number of datagrams sent and total length. The 2 fields separated by a comma.
c(8)	BLACKBERRY_EMAIL	FTD_SB_BB_UDP_TRAFFIC_LASTRECEIVE	S	R,O	Time of last received packet. Blank if data has not been received.
d(12)	BLACKBERRY_EMAIL	FTD_SB_BB_UDP_TRAFFIC_RECEIVED	S	R,O	Number of datagrams received and total length. The 2 fields separated by a comma.

15.8 Display 78.07: BlackBerry - Mail traffic

S60 Data display
Mail traffic send and receive info snd aaaaaaaa bbbbbbbbbbbb rcv cccccccc dddddddddddd

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(8)	BLACKBERRY_EMAIL	FTD_SB_BB_MAIL_TRAFFIC_LASTSEND	S	R,O	Time of last sent mail.
b(12)	BLACKBERRY_EMAIL	FTD_SB_BB_MAIL_TRAFFIC_SENT	S	R,O	Number of mail sent and total length. The 2 fields separated by a comma.
c(8)	BLACKBERRY_EMAIL	FTD_SB_BB_MAIL_TRAFFIC_LASTRECEIVE	S	R,O	Time of last received mail.

Abbr	Server	Sub-block id	Format	Mode	Description
d(12)	BLACKBERRY_EMAIL	FTD_SB_BB_MAIL_TRAFFIC_RECEIVED	S	R,O	Number of mail received and total length. The 2 fields separated by a comma.

15.9 Display 78.08: BlackBerry - NOC selection

When display is selected via the menu (not using the arrow buttons), the NOC selection field can be edited. Keyboard is in "text" mode, so hex numbers 0-F can be written. After editing is completed, the new selected NOC is activated.

S60 Data display

Use menu to select NOC

NOC SELECTION: a

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a	BLACKBERRY_EMAIL	FTD_SB_BB_NOC_SELECTION	B:H	R,O	Show NOC selection
INPUT	BLACKBERRY_EMAIL	FTD_SB_BB_NOC_SET	DW:H	R,O	Allow the tester to select a NOC. The value 0 is reserved to the production NOC

15.10 Display 78.09: BlackBerry - Reset UDP traffic counters

S60 Data display

Use menu to reset
UDP traffic counters

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
EXE	BLACKBERRY_EMAIL	FTD_SB_BB_UDP_ACTION_RESET	B:D	R,O	Reset UDP counters.

15.11 Display 78.10: BlackBerry - Reset mail traffic counters

S60 Data display
Use menu to reset Mail traffic counters

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
EXE	BLACKBERRY_EMAIL	FTD_SB_BB_MAIL_ACTION_RESET	B:D	R,O	Reset mail counters.

16 Group 81: Multimode protocol displays

16.1 Display 81.01: Force protocol between GSM and WCDMA

To change Force Protocol status, perform following steps:

7. Press the Menu button.
8. Scroll in the main menu loop to field test display item.
9. Press the Select button.
10. Select this display in input mode by entering 8101 (Multimode protocol displays; Force protocol) to the query prompt.
11. Test input prompt will activate, enter the Force Protocol status code (see the table below) in display.
12. Confirm with the Ok button.

S60 Data display
Force protocol between GSM and WCDMA 0-dual 1-GSM 2-WCDMA a

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a	GSS	FTD_SB_SELECTED_RAT_READ	B:D	R,I,O	Forced protocol: 0 = dual mode 1 = GSM 2 = WCDMA 255 = unknown
INPUT	GSS	FTD_SB_SELECTED_RAT_SET	DW:D	R,I,O	Force protocol 0 = dual mode 1 = GSM 2 = WCDMA

16.2 Display 81.02: Toggle Integrity Protection Mode

To change integrity protection mode, perform following steps:

1. Press the Menu button.
2. Scroll in the main menu loop to field test display item.
3. Press the Select button.
4. Select this display in executive mode by entering 8102 (Multimode protocol displays;toggle integrity protection mode) to the query prompt.
5. Confirm with the Ok button.

S60 Data display
Toggle intergrity protection mode on/off aaa

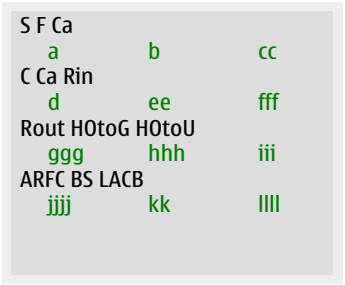
Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(3)	GSS	FTD_SB_INT_PRO_MODE	S	R,I,O	Current integrity protection mode: **ON** : Enabled **OFF** : Disabled
EXE	GSS	FTD_SB_INT_PRO_MODE_TOGGLE	S	R,I,O	Toggle integrity protection mode.

17 Group 85: UMA

17.1 Display 85.01: (UMA) URR and URLC parameters

S60 Data display



Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a	GPDS	FTD_SB_URR_STATE	B:D	R,I,O	1=URR Degistered, 2=URR Registered, 3=URR Idle, 4=URR Dedicated
b	GPDS	FTD_SB_URR_SCAN_FREQUENCY	S	R,I,O	WLAN scan frequence. H=High, M=Medium, L=Low. 0=Off
c(2)	GPDS	FTD_SB_URR_CAUSE	B:D	R,I,O	Last URR Discovery / Registration reject cause. See values from UMA Stage 3 specification, Chapters 11.2.12 and 11.2.21. Range 0-11. xx if not valid
d	GPDS	FTD_SB_URR_REGISTER_REATT	B:D	R,I,O	UMA registration reattempt counter. Range 0-3.
e(2)	GPDS	FTD_SB_URLC_CAUSE	B:D	R,I,O	Last URLC cause. See values from UMA Stage 3 specification, Chapter 11.2.39. Range 0-13. xx if not valid
f(3)	GPDS	FTD_SB_URR_ROVE_IN_CTR	B:D	R,I,O	Counter for rove-in procedures. Range 0-255
g(3)	GPDS	FTD_SB_URR_ROVE_OUT_CTR	B:D	R,I,O	Counter for rove-out procedures. Range 0-255
h(3)	GPDS	FTD_SB_URR_HO_TO_UMAN_CTR	B:D	R,I,O	Counter for handover to UMAN procedures. Range 0-255
i(3)	GPDS	FTD_SB_URR_HO_TO_GERAN_CTR	B:D	R,I,O	Counter for handover to GERAN procedures. Range 0-255
j(4)	GPDS	FTD_SB_URR_ARFCN	W:H	R,I,O	ARFCN value for UMAN cell. Range 0-FFFF
k(2)	GPDS	FTD_SB_URR_BSIC	B:H	R,I,O	BSIC value for UMAN cell. Range 0-FF
l(4)	GPDS	FTD_SB_URR_LAC_BLACKLIST	W:H	R,I,O	LAC (Location Area Code) which is blacklisted. Range 0-FFFF

17.2 Display 85.02: (UMA) UNC and SGW IP addresses

S60 Data display

```
T UNC-IPaddr
   a          bbb        ccc
IPaddr cont
   ddd        eee
SGW-IPaddr
   fff        ggg        hhh
IPaddr cont
   iii
```

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a	GPDS	FTD_SB_URR_ADDR_TYPE	B:D	R,I,O	4=IPv4, 6=IPv6
b(3)	GPDS	FTD_SB_URR_UNC_ADDRESS_1	B:D	R,I,O	The UNC IP address, part 1. Currently only IPv4 is supported.
c(3)	GPDS	FTD_SB_URR_UNC_ADDRESS_2	B:D	R,I,O	The UNC IP address, part 2. Currently only IPv4 is supported.
d(3)	GPDS	FTD_SB_URR_UNC_ADDRESS_3	B:D	R,I,O	The UNC IP address, part 3. Currently only IPv4 is supported.
e(3)	GPDS	FTD_SB_URR_UNC_ADDRESS_4	B:D	R,I,O	The UNC IP address, part 4. Currently only IPv4 is supported.
f(3)	GPDS	FTD_SB_URR_SGW_ADDRESS_1	B:D	R,I,O	The SGW IP address, part 1. Currently only IPv4 is supported.
g(3)	GPDS	FTD_SB_URR_SGW_ADDRESS_2	B:D	R,I,O	The SGW IP address, part 2. Currently only IPv4 is supported.
h(3)	GPDS	FTD_SB_URR_SGW_ADDRESS_3	B:D	R,I,O	The SGW IP address, part 3. Currently only IPv4 is supported.
i(3)	GPDS	FTD_SB_URR_SGW_ADDRESS_4	B:D	R,I,O	The SGW IP address, part 4. Currently only IPv4 is supported.

18 Group 86: WLAN displays

18.1 Display 86.01: WLAN Device Info

This display contains static WLAN information.

S60 Data display
Mac address aaaaaaaaaaaa HW version bbbbb FW version ccccccccccc

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(12)	WLAN	FTD_SB_WLAN_OWN_MAC_ADDR	S	R,I,O	Phone's WLAN MAC address
b(5)	WLAN	FTD_SB_WLAN_HW_ERSION	S	R,I,O	WLAN chip HW version
c(11)	WLAN	FTD_SB_WLAN_FW_VERSION	S	R,I,O	WLAN chip FW version

18.2 Display 86.02: WLAN Connection Info 1

This display contains information about the current connection. xx shown on all fields when there is not connection.

S60 Data display
SSID aaaaaaaaaaaa MAC address bbbbbbbbbbbb ch rssi cc ddd

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(12)	WLAN	FTD_SB_WLAN_SSID	S	R,I,O	SSID (=access point's name)
b(12)	WLAN	FTD_SB_WLAN_AP_MAC_ADDR	S	R,I,O	AP's WLAN MAC address
c(2)	WLAN	FTD_SB_WLAN_CHANNEL	B:D	R,I,O	Channel number (e.g. 802.11b/g 1-13)
d(3)	WLAN	FTD_SB_WLAN_RSSI	B:D	R,I,O	Signal strength (in dB)

18.3 Display 86.03: WLAN Connection Info 2

This display contains information about the current connection. xx shown on all fields when there is not connection.

S60 Data display
rates 11b aaaa rates 11g bbbbbbbbb capabilitLSB cccccccc capabilitMSB dddddddd

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(4)	WLAN	FTD_SB_WLAN_RATES_11B	S	R,I,O	Access point's supported 802.11b rates (1-11 Mbit/s). Each character corresponds to a rate as follows:1 2 5.5 11 Mbps- = not supported rateB = basic rate (=mandatory for all stations) S = supported rateE.g., BBS- means that 1 and 2 are the basic rates for the access point, 5.5 is an optional rate, and 11 is a not supported rate.
b(9)	WLAN	FTD_SB_WLAN_RATES_11G	S	R,I,O	Access point's supported 802.11g rates (6-54 Mbit/s). Each character corresponds to a rate as follows:6 9 12 18 22 24 36 48 54 Mbps - = not supported rateB = basic rate (=mandatory for all stations) S = supported rate
c(8)	WLAN	FTD_SB_WLAN_CAPABILITY_LSB	S	R,I,O	Access point capabilitites bit-map (LSB). 1 means that the AP supports the feature, and 0 means that the AP does not support the feature. The meaning of the bits are as follows (bit 1 is the leftmost bit, and bit 8 is the rightmost bit:Bit 1 ESSBit 2 IBSSBit 3 CF PollableBit 4 CF Poll RequestBit 5 PrivacyBit 6 Short PreambleBit 7 PBCCBit 8 Channel Agility
d(8)	WLAN	FTD_SB_WLAN_CAPABILITY_MSB	S	R,I,O	Access point capabilitites bit-map (MSB).1 means that the AP supports the feature, and 0 means that the AP does not support the feature. The meaning of the bits are as follows (bit 1 is the leftmost bit, and bit 8 is the rightmost bit:Bit 1 Spectrum managementBit 2 QoSBit 3 Short Slot TimeBit 4 APSDBit 5 -Bit 6 DSSS-OFDMBit 7 Delayed Block AckBit 8 Immediate Block Ack

18.4 Display 86.04: WLAN Statistics

Statistics for the current WLAN connection. The counters are reset when a new connection is made. xx shown on all fields when there is not connection.

Calculation of average values is currently OPEN.

Resetting of the counters is OPEN.

S60 Data display
TxRate aa RXRate bb ULTP ccccc DLTP ddddd ULByte eeeee DLByte fffff

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(2)	WLAN	FTD_SB_WLAN_AV_TX_RATE	B:D	R,I,O	Average WLAN data frame tx rate
b(2)	WLAN	FTD_SB_WLAN_AV_RX_RATE	B:D	R,I,O	Average WLAN data frame rx rate
c(5)	WLAN	FTD_SB_WLAN_UL_THROUGHPUT	W:D	R,I,O	Average uplink (user data) throughput
d(5)	WLAN	FTD_SB_WLAN_DL_THROUGHPUT	W:D	R,I,O	Average downlink (user data) throughput
e(5)	WLAN	FTD_SB_WLAN_UL_BYTES	W:D	R,I,O	Amount of transmitted user data (in kilobytes)
f(5)	WLAN	FTD_SB_WLAN_DL_BYTES	W:D	R,I,O	Amount of received user data (in kilobytes)

18.5 Display 86.05: Blacklisted APs 1

List of blacklisted access points. Reset when power is switched off. If there are more than four black listed APs, only the first four are shown. If there are less than four blacklisted APs, xx is shown for the empty places.

S60 Data display
Mac addr AP1 aaaaaaaaaaaa Mac addr AP2 bbbbbbbbbbbb Mac addr AP3 cccccccccccc Mac addr AP4 dddddddddddd

Fields

Abbr	Server	Sub-block id	Format	Mode	Description
a(12)	WLAN	FTD_ SB_WLAN_BLACKLIST_ADDR_1	S	R,I,O	MAC address of a blacklisted AP 1
b(12)	WLAN	FTD_ SB_WLAN_BLACKLIST_ADDR_2	S	R,I,O	MAC address of a blacklisted AP 2
c(12)	WLAN	FTD_ SB_WLAN_BLACKLIST_ADDR_3	S	R,I,O	MAC address of a blacklisted AP 3
d(12)	WLAN	FTD_ SB_WLAN_BLACKLIST_ADDR_4	S	R,I,O	MAC address of a blacklisted AP 4