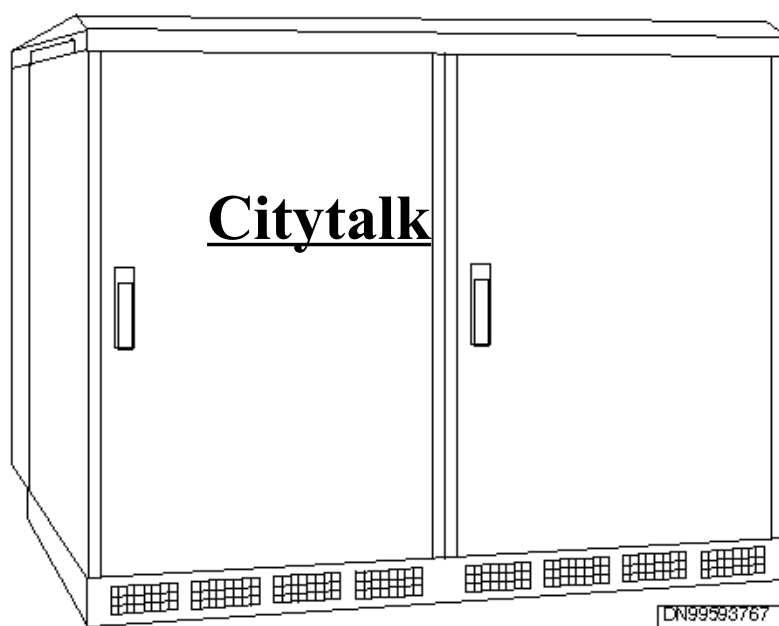
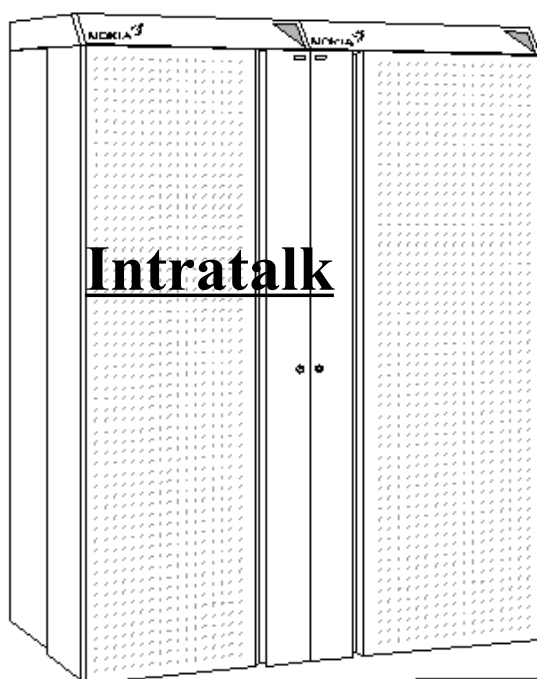
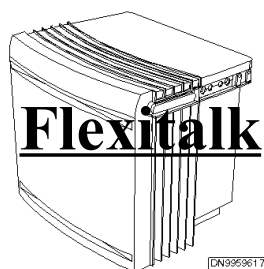


Nokia Talk-family GSM BTS



Inleiding

Dit document is bedoeld als een soort handleiding voor het onderhouden van een Nokia Talk-family GSM 900 / 1800, indoor of outdoor BTS.

In dit document is gebruik gemaakt van de documentatie in NED 3.1 en NED 5.5 van Nokia Talk-family GSM BTS Product Documentation build 2005-03-23.

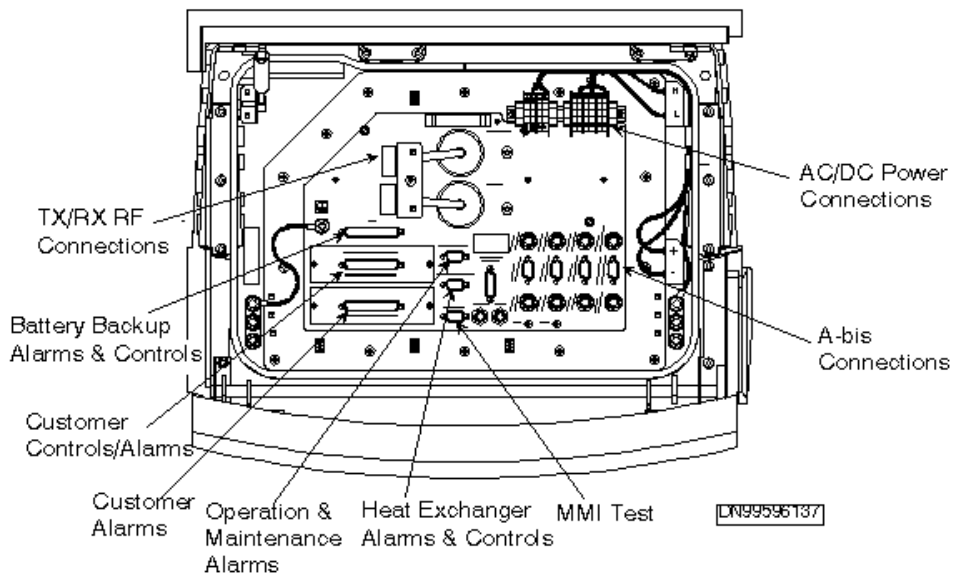
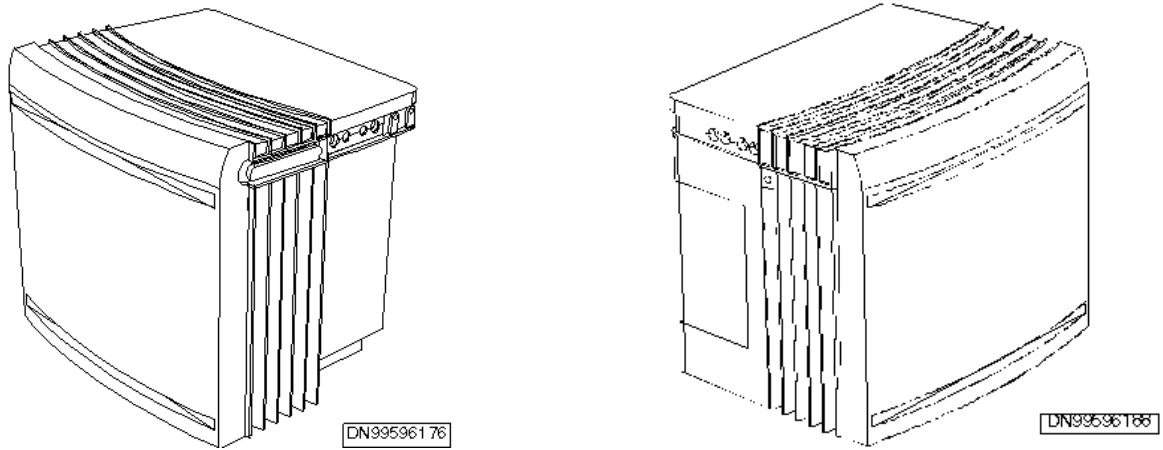
Inhoud

1. Cabinet Description Manual
2. Unit Description Manual
3. Unit Installation Description Manual
4. Unit Cables and Combining Description Manual

1 Cabinet Description Manual

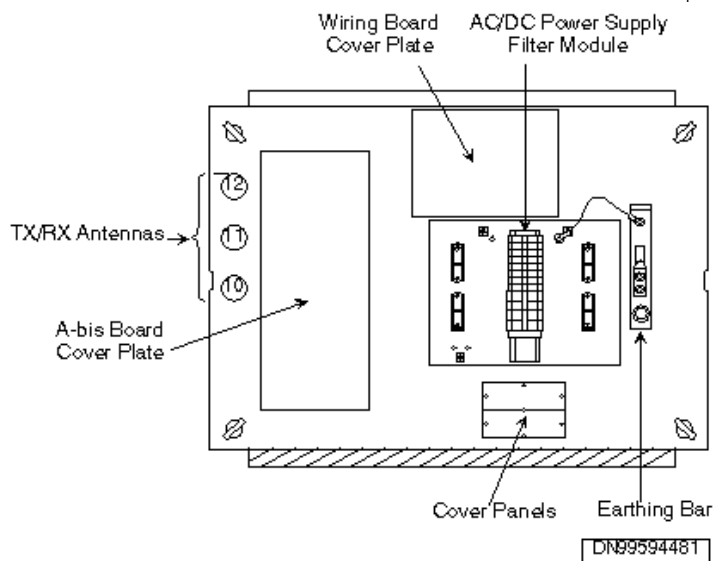
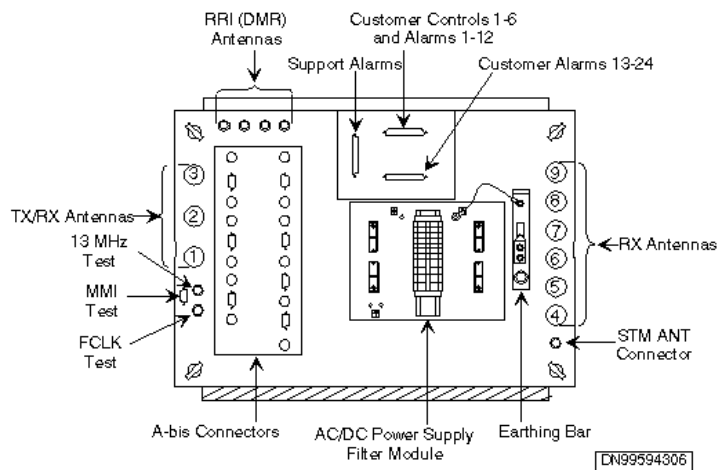
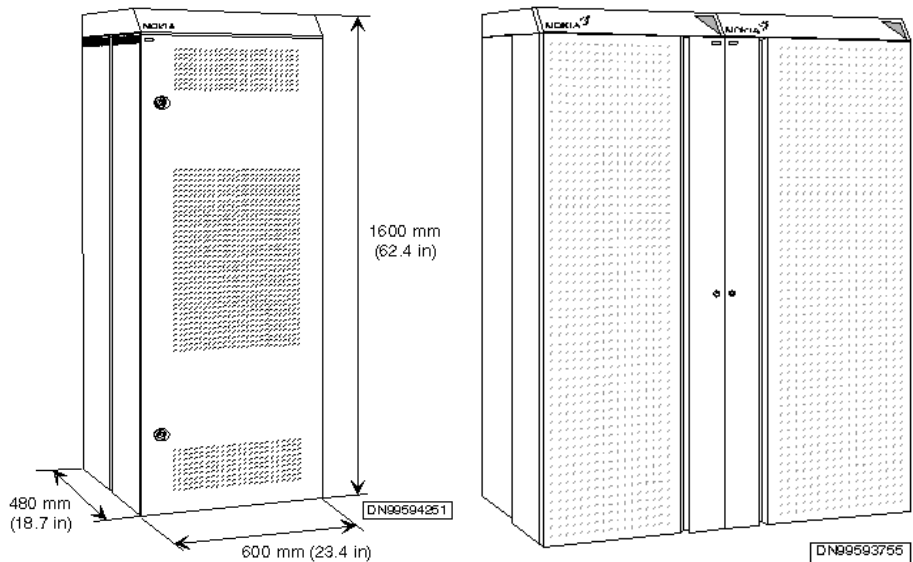
Flexitalk

Dit type BTS kan worden gebruikt voor het 900 / 1800 netwerk en als indoor / outdoor kast.



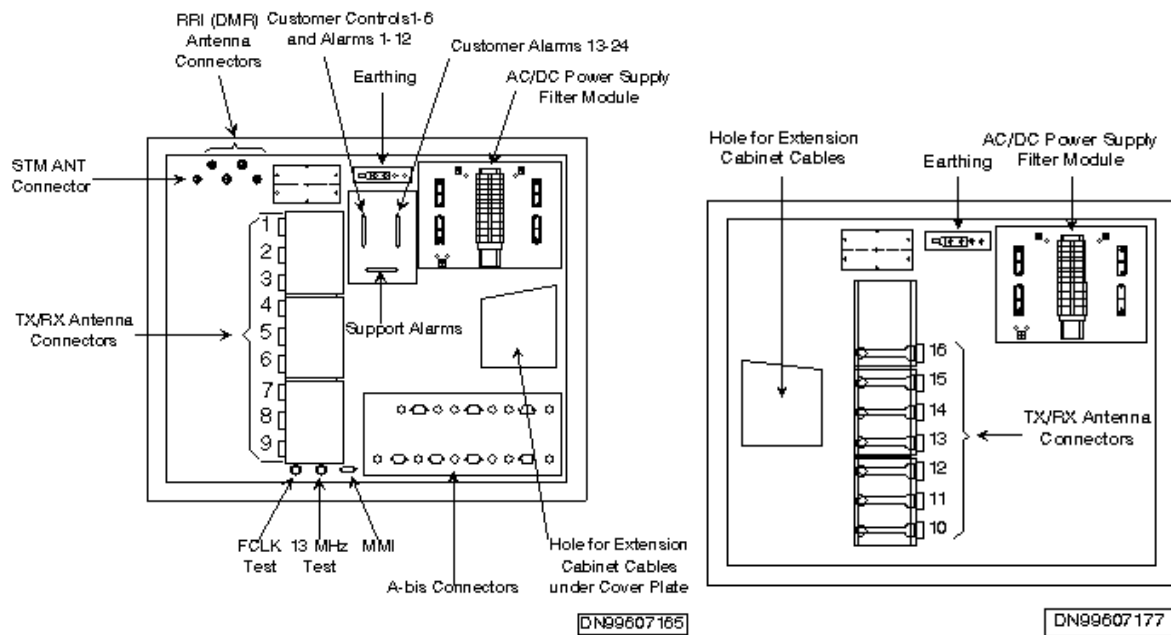
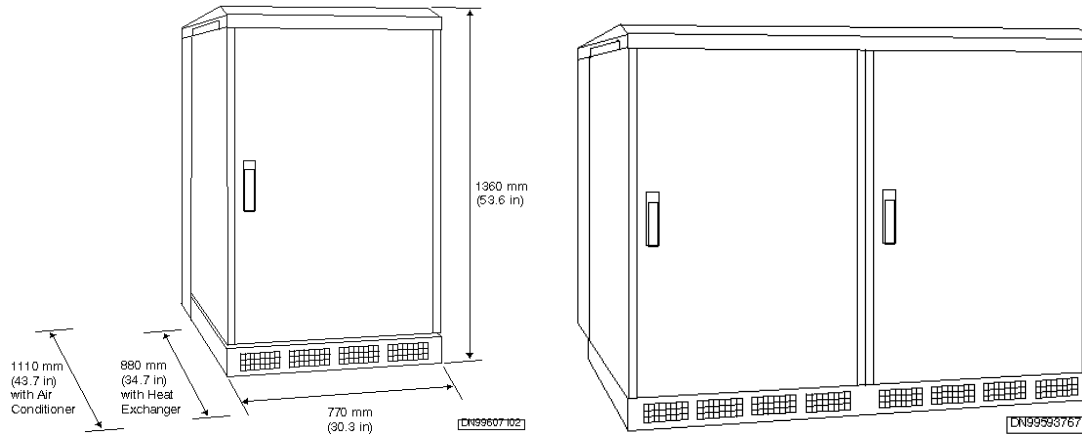
Intrataalk

Dit type BTS is een indoor kast en kan worden gebruikt voor het 900 / 1800 netwerk.



Citytalk

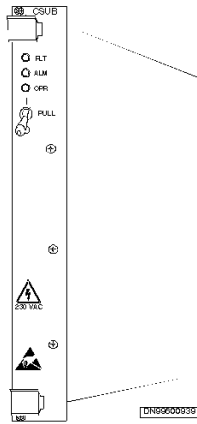
Dit type BTS is een outdoor kast en kan worden gebruikt voor het 900 / 1800 netwerk.



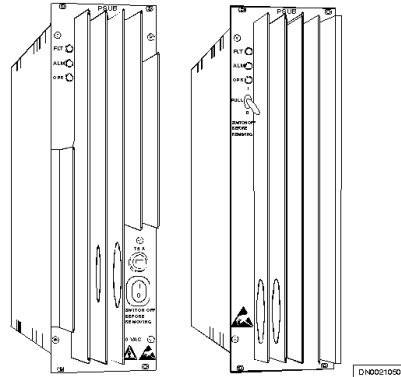
2 Unit Description Manual

Power supply units

CSUB

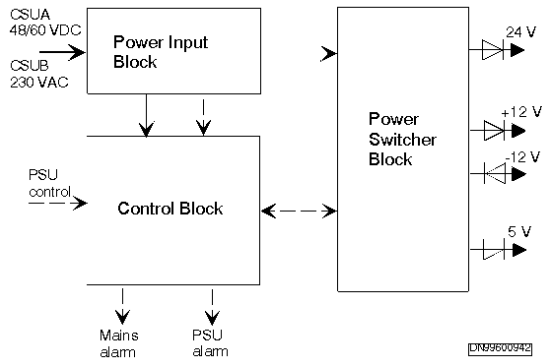


PSUB

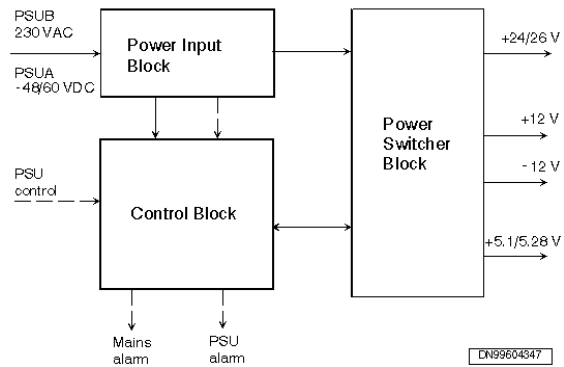


UP TO PSUB 13 (465286A.306) FROM PSUB 14 (465286A.407)

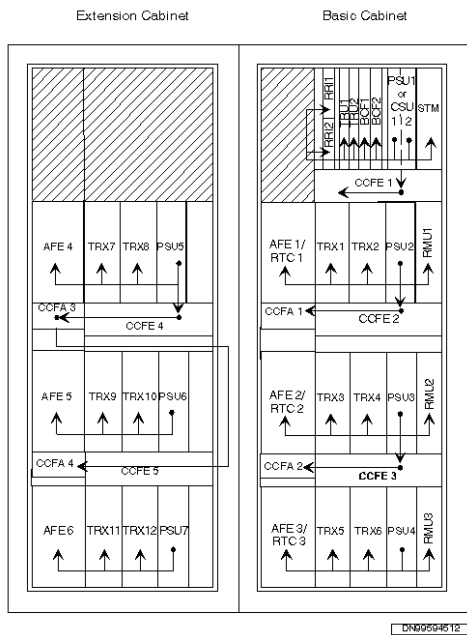
Main blocks CSUB



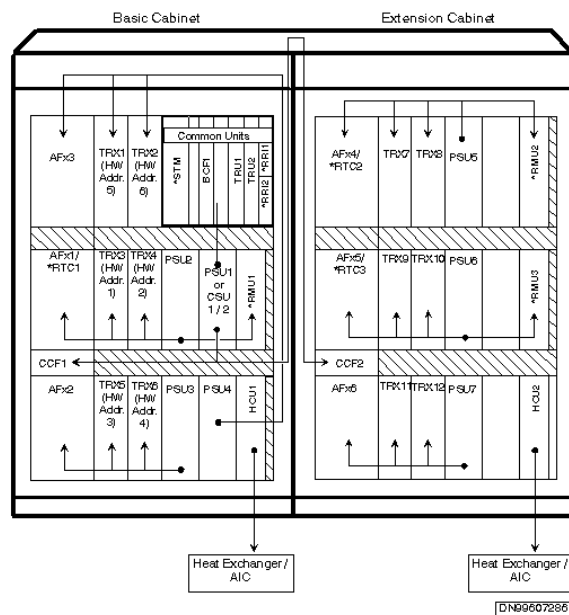
Main blocks PSUB



Power unit connections Intratalk

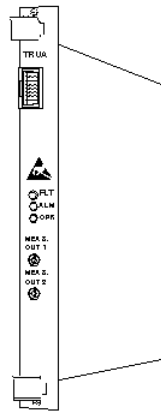


Power unit connections Citytalk

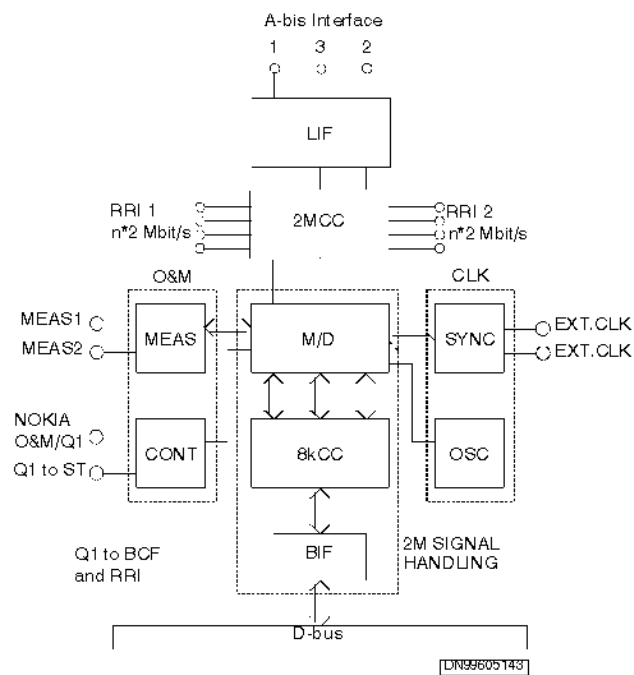


Transmissie unit

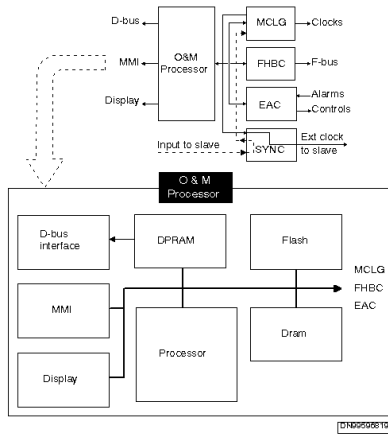
TRUA



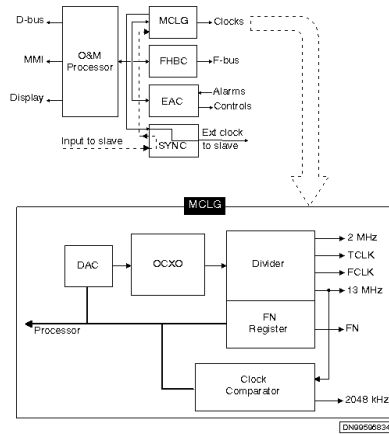
Main blocks TRUA



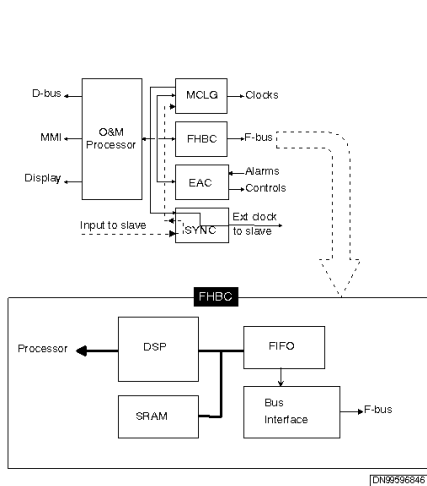
Functional blocks of O&M processor



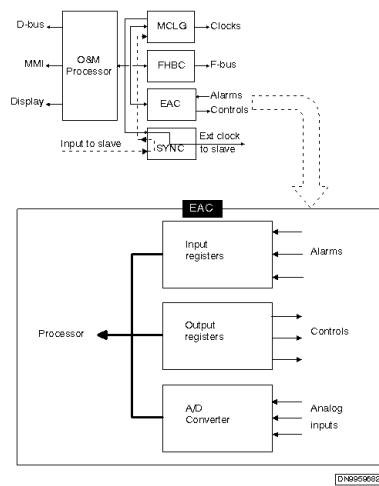
Functional blocks of MCLG



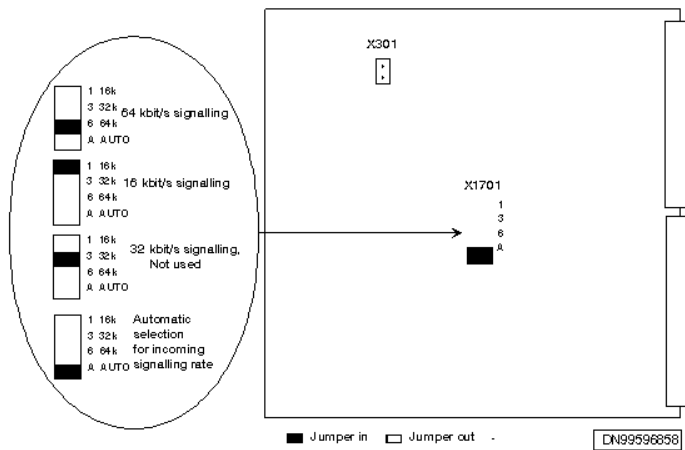
Functional blocks of FHBC



Functional blocks of EAC

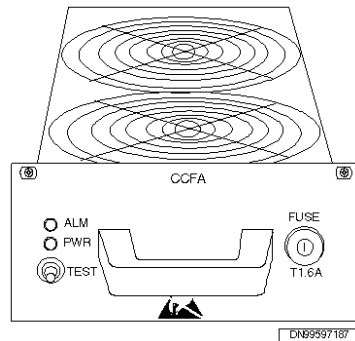


Jumper speed settings

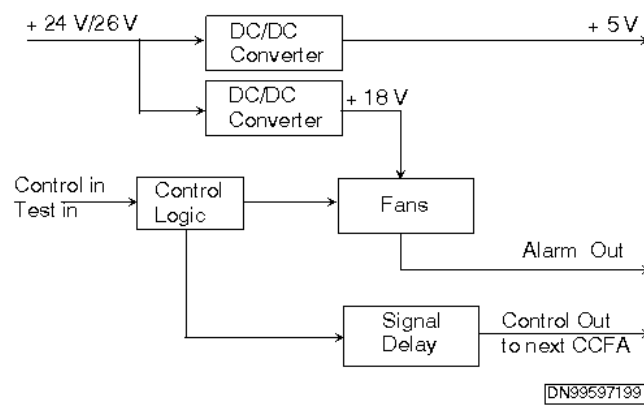


Cabinet cooling fan units

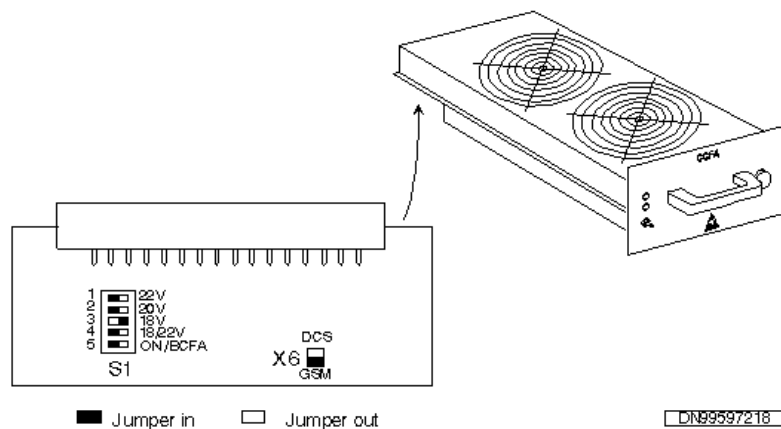
CCFA



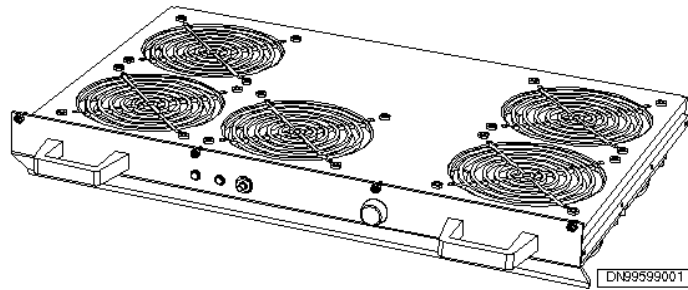
Mainbloks CCFA



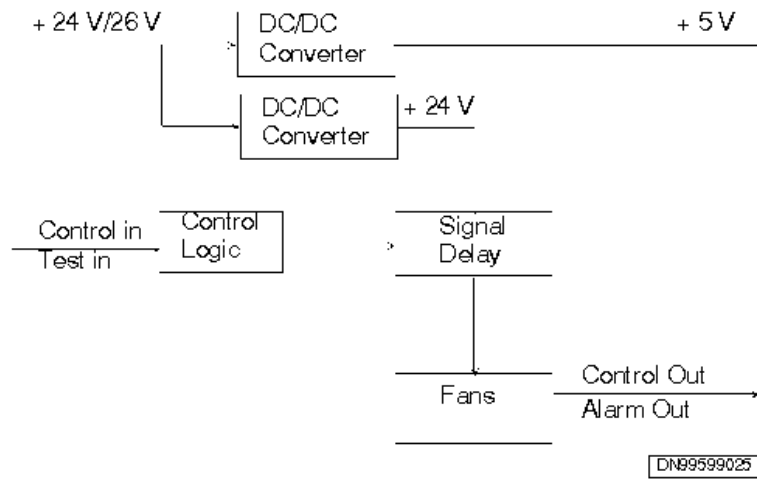
Jumpers CCFA



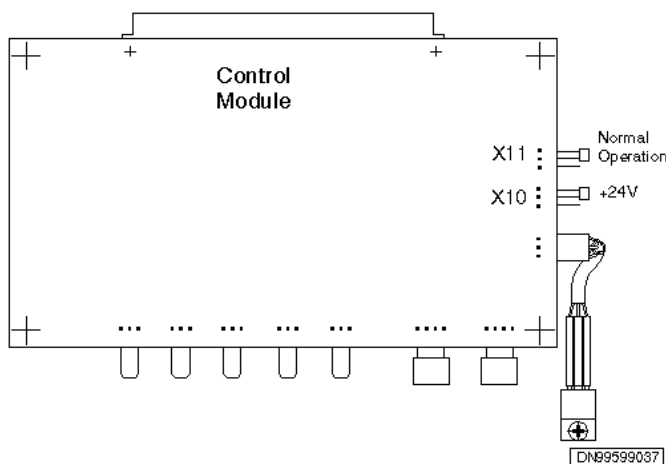
CCFC



Main blocks CCFC

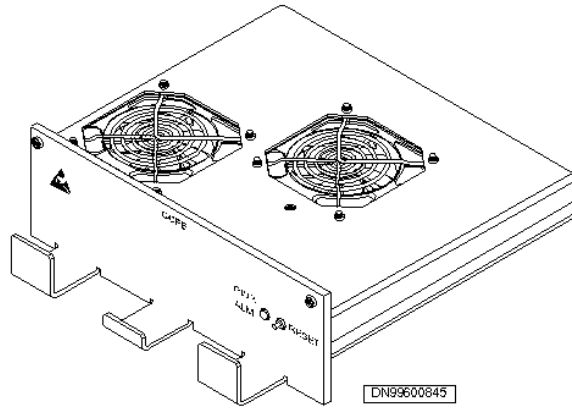


Jumpers CCFC

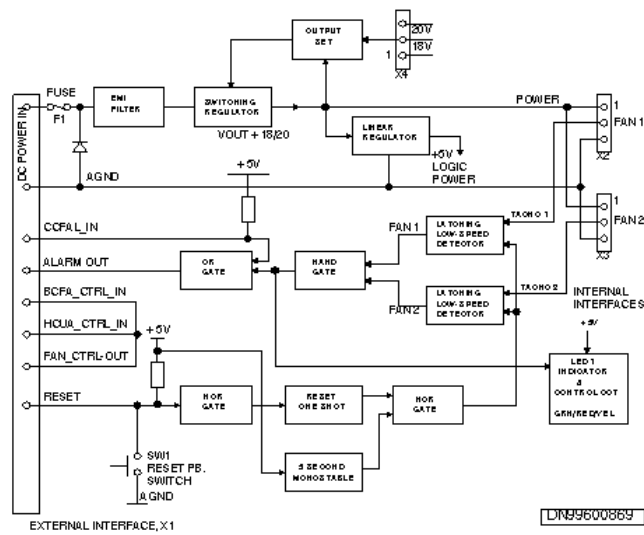


Jumper	Setting	Function
X10	1,2	26V operation (GSM 900)
	2,3	24V operation (GSM 1800)
X11	1,2	Fans on continuously
	2,3	Normal fan operation

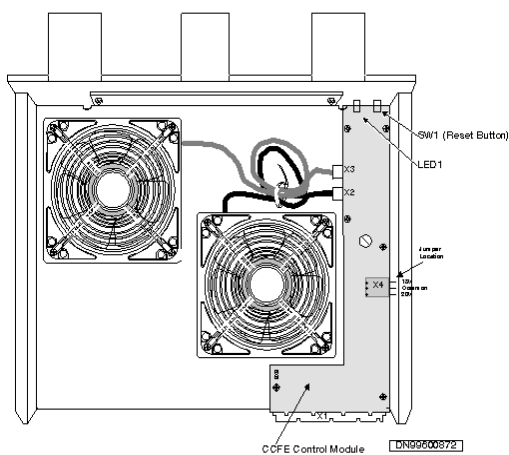
CCFE



Main blocks CCFE



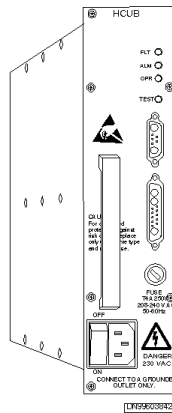
Jumpers CCFE



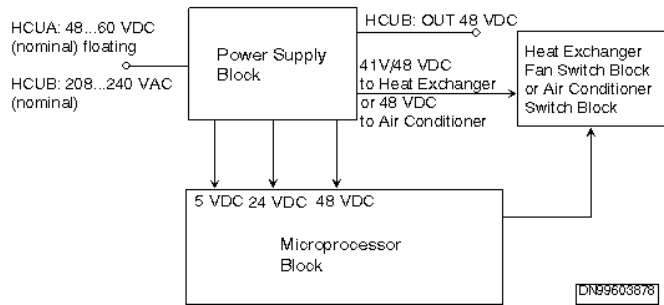
Pin number	Setting
Pin 1	18 VDC
Pin 2	Common
Pin 3	20 VDC

Heat control unit

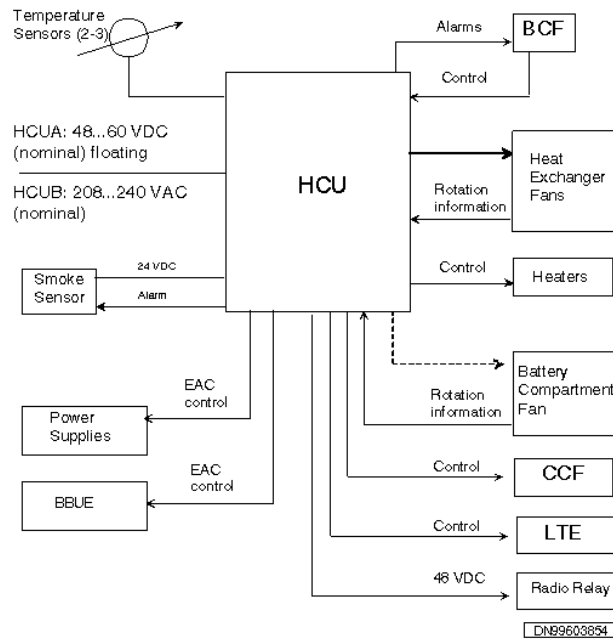
HCUB



Main blocks HCUB

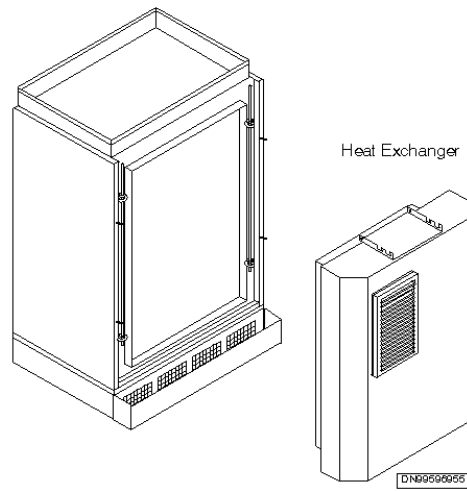


Functional blocks of HCUB

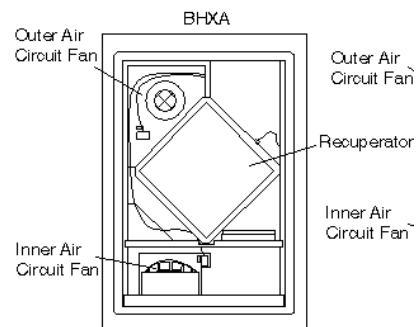


Heat exchanger unit

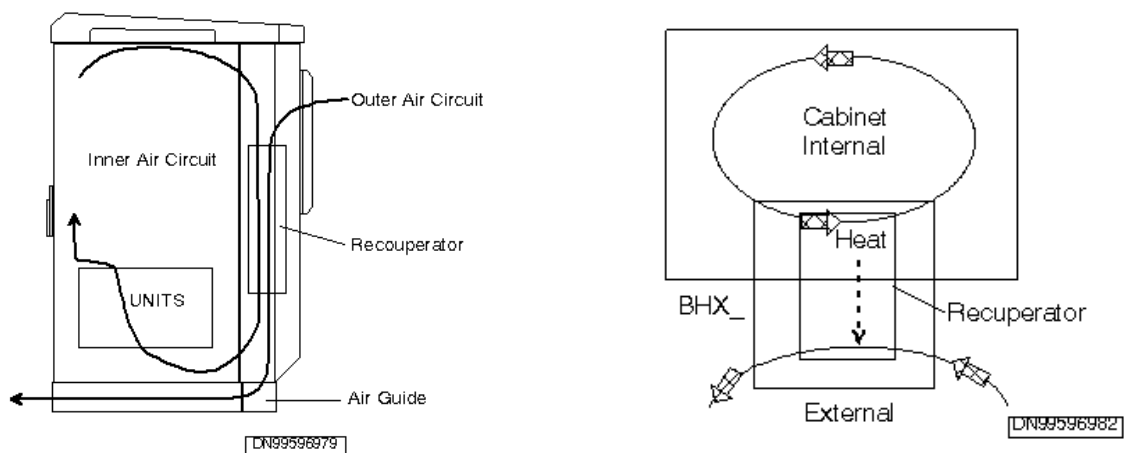
BHXA



Main blocks BHXA

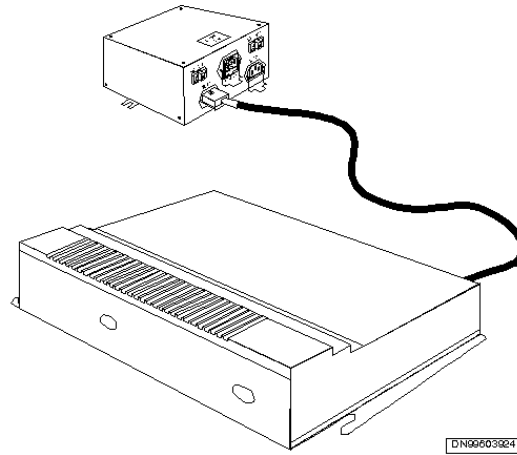


Functional blocks of BHXA

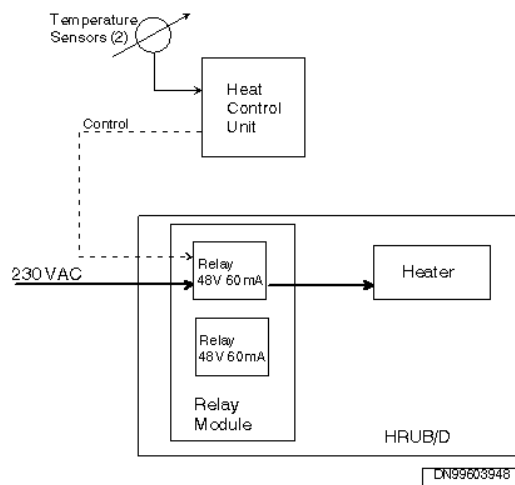


Heater kit

HRUB



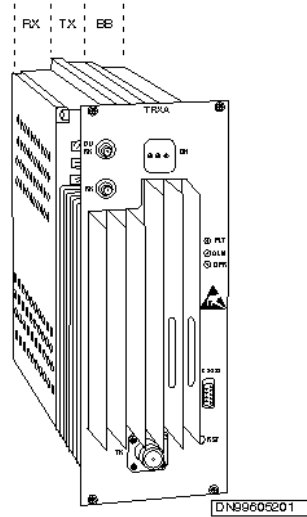
Main blocks HRUB



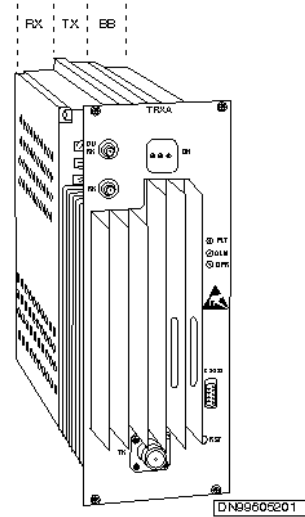
Transceiver units

TRXA unit voor GSM900 , TRXD unit voor GSM1800

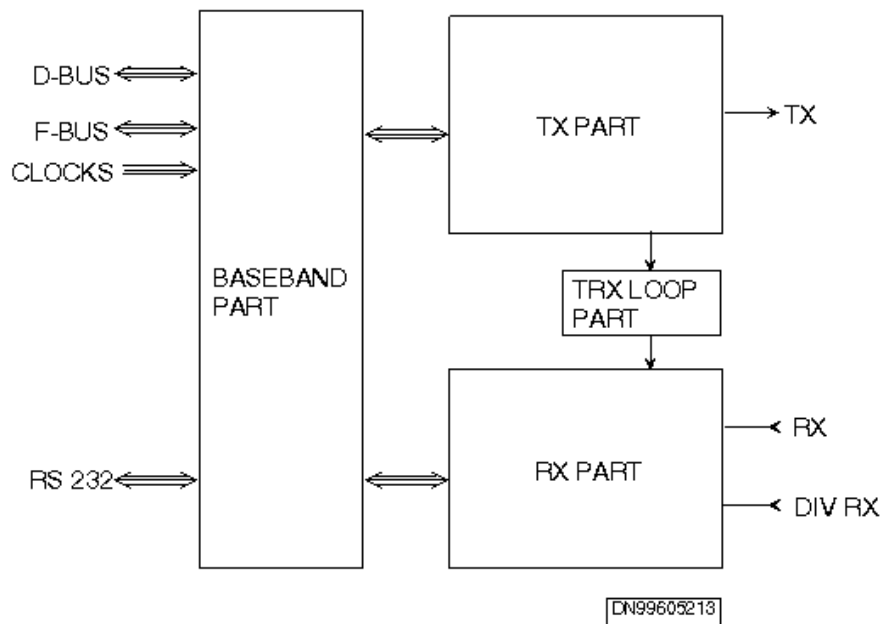
TRXA



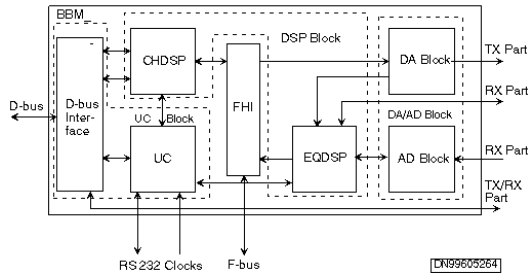
TRXD



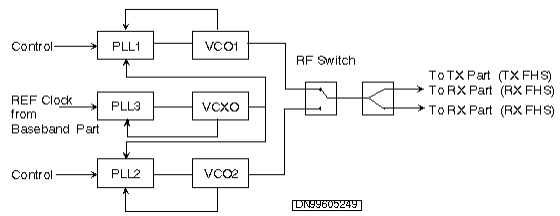
Main blocks TRXx



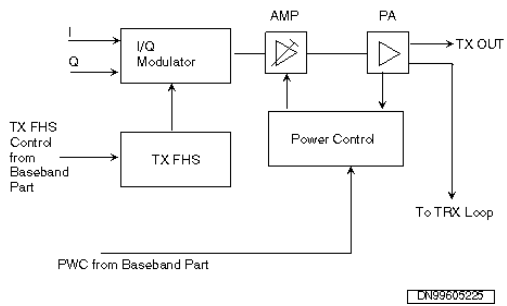
Functional blocks of baseband



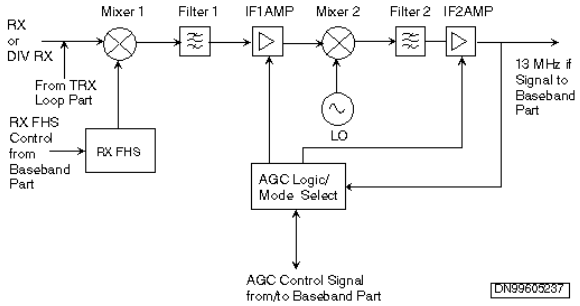
Functional blocks of FHS



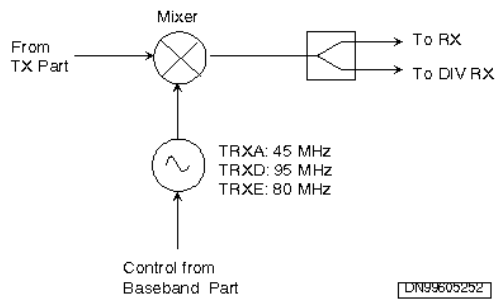
Functional blocks of TX



Functional blocks of RX



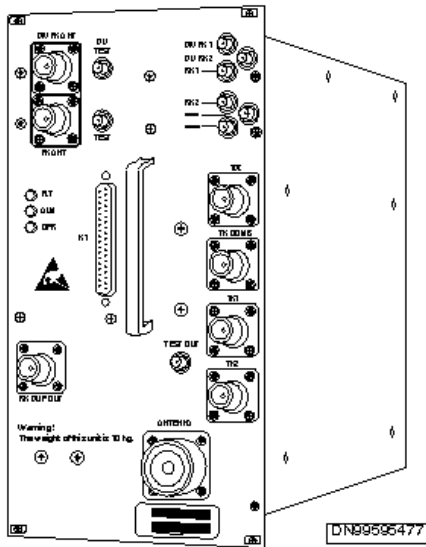
Functional blocks of TRX loop



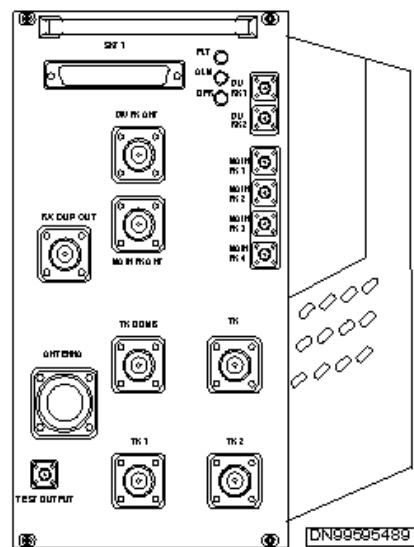
Antenna filter extension units

AFEA unit voor GSM900, AFEB unit voor GSM1800

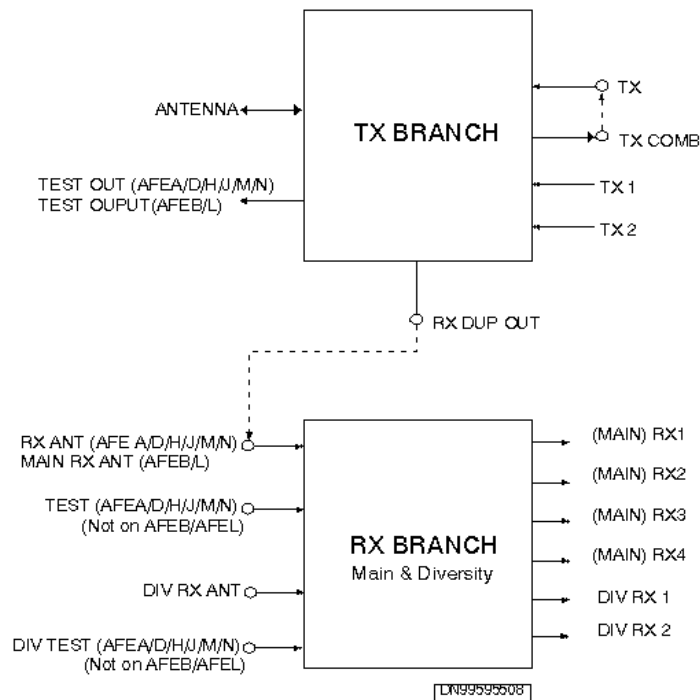
AFEA



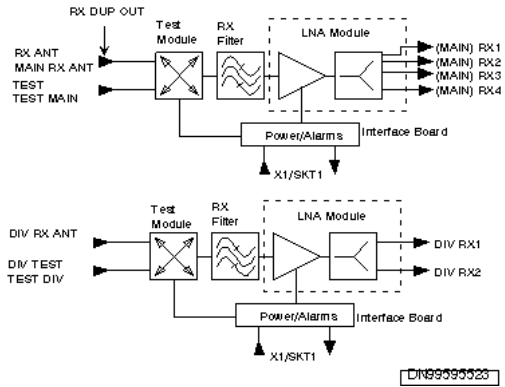
AFEB



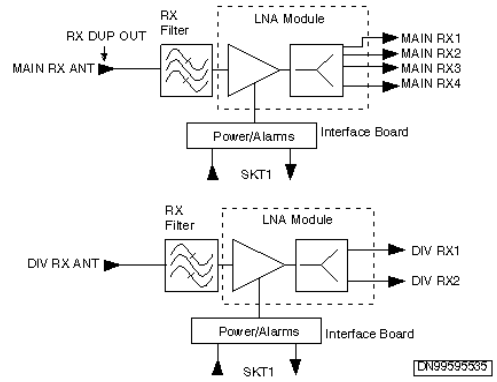
Main blocks AFEx



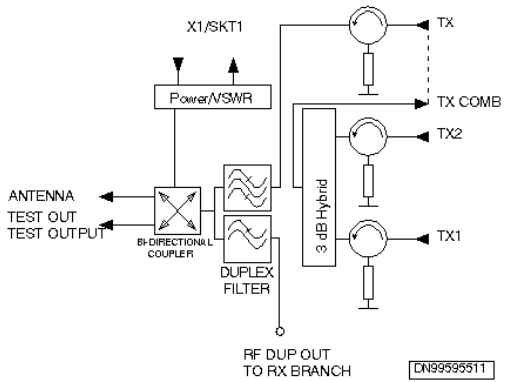
Functional blocks of RX900



Functional blocks of RX1800



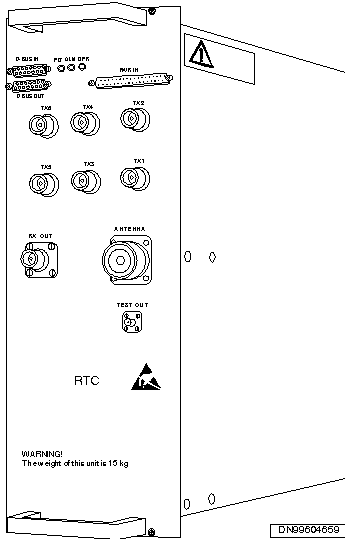
Functional blocks of TX



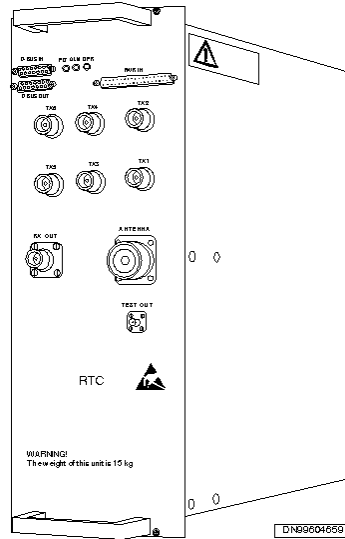
Remote tune combiner units

RTCC unit voor GSM900, RTCF unit voor GSM1800

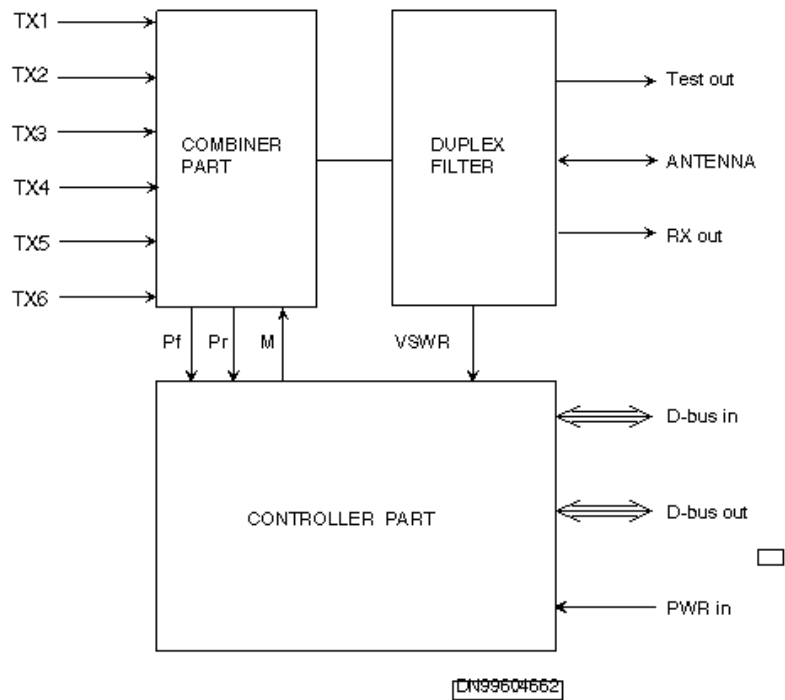
RTCC



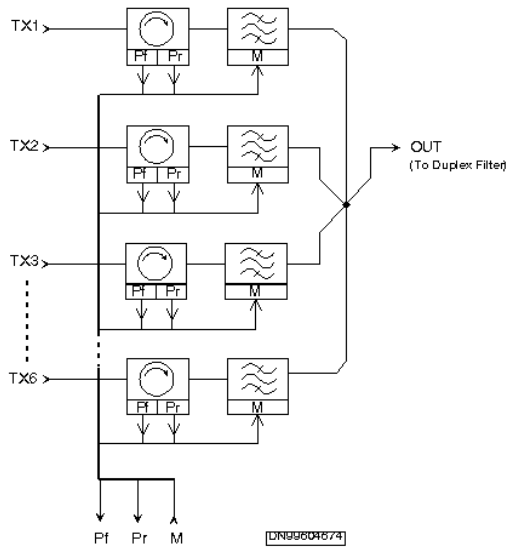
RTCF



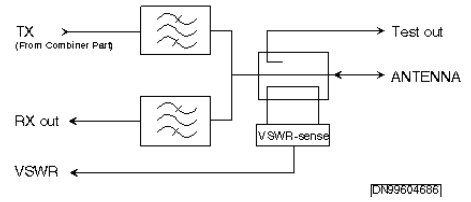
Main blocks RTCx



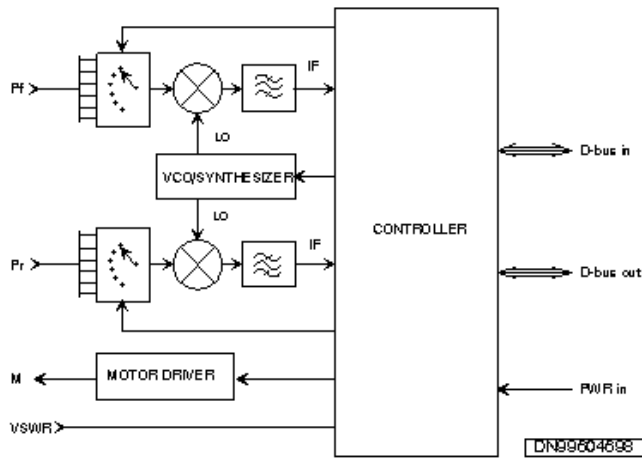
Functional blocks of combiner



Functional blocks of duplex filter



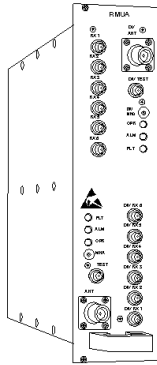
Functional blocks of controller



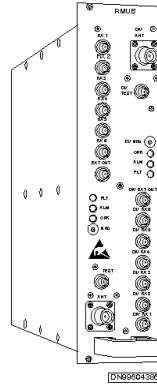
Receiver multicoupler units

RMUA unit voor GSM900, RMUB unit voor GSM1800

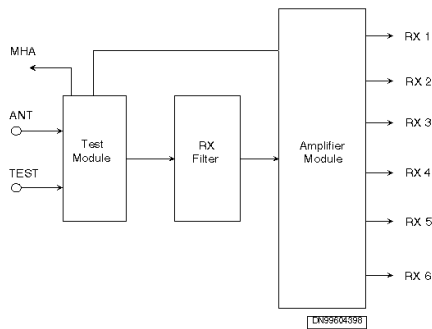
RMUA



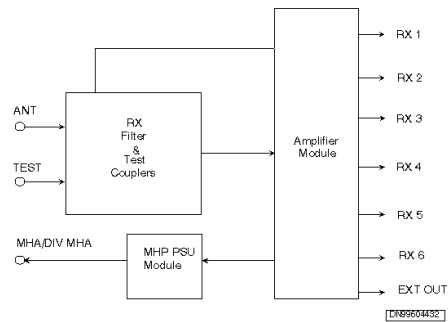
RMUB



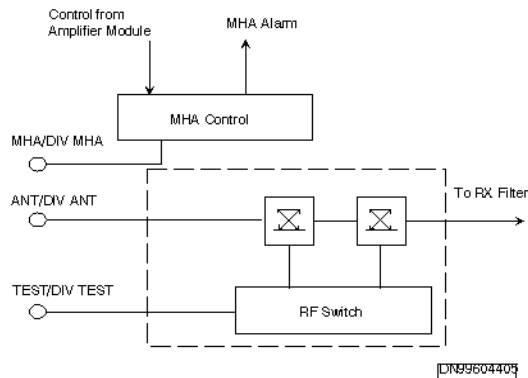
Main blocks RMUA



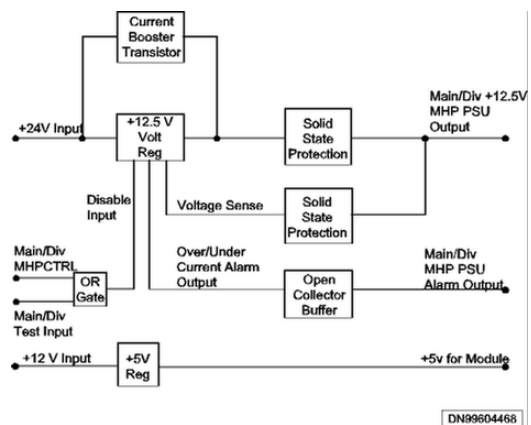
Main blocks RMUB



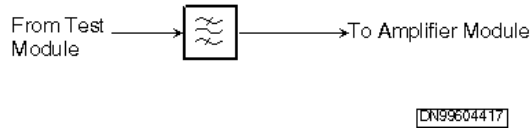
Functional blocks of RMUA test module



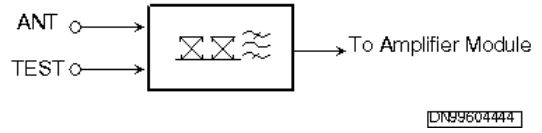
Functional blocks of RMUB MHA



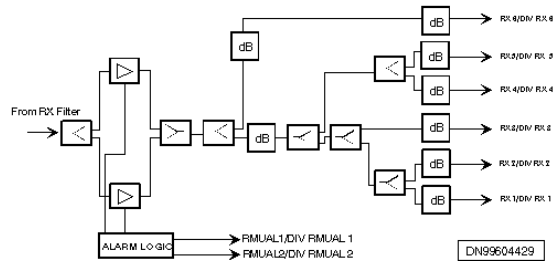
Functional blocks of RMUA RX filter



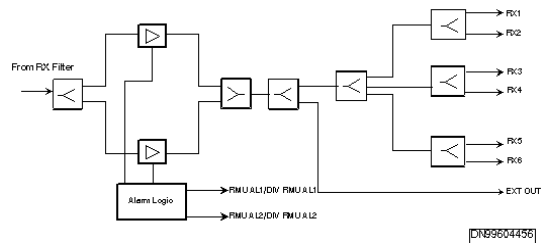
Functional blocks of RMUB RX filter



Functional blocks of RMUA amplifier



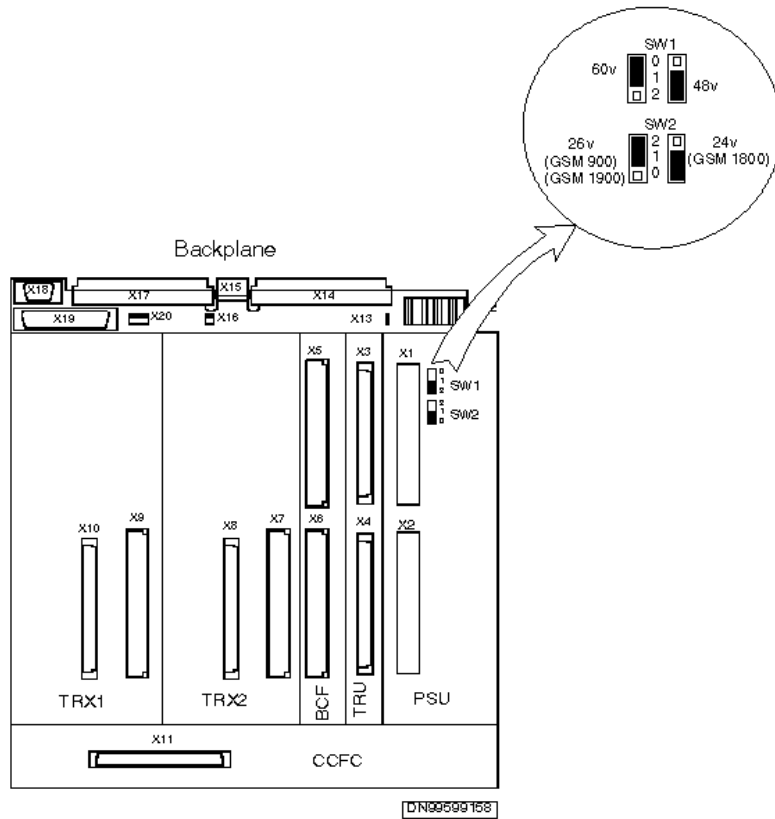
Functional blocks of RMUB amplifier



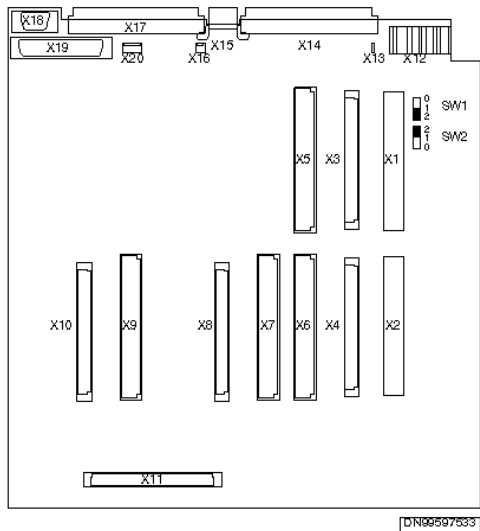
3 Unit Installation Description Manual

Flexitalk

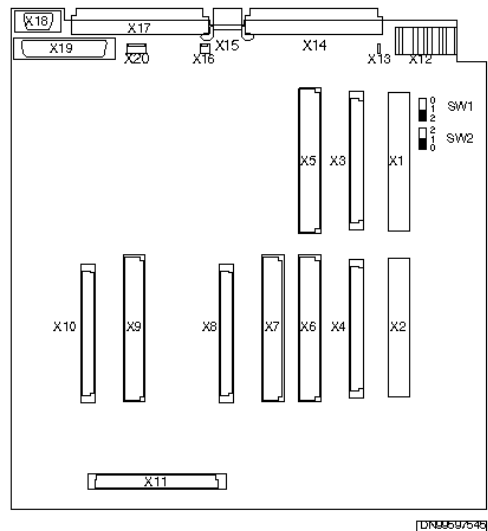
Backplane settings voor GSM900 en GSM1800



Backplane settings GSM900

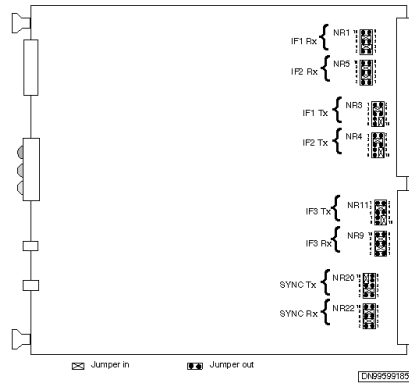


Backplane settings GSM1800



Unit settings voor GSM900 en GSM1800

TRUA



Jumper settings

TRANSMIT

Alternative	IF1	IF2	IF3	Impedance	Cable ground wire
	NR3	NR4	NR11		
A				120 ohms	In double TRUA mode this alternative must be used
B				75 ohms	

RECEIVE

Alternative	IF1	IF2	IF3	Impedance	Cable ground wire
	NR1	NR5	NR9		
A				120 ohms	Can be used only if the Rx connector is connected to cabinet ground. In double TRUA mode this alternative must be used
B				75 ohms	
C				75 ohms	

TRANSMIT

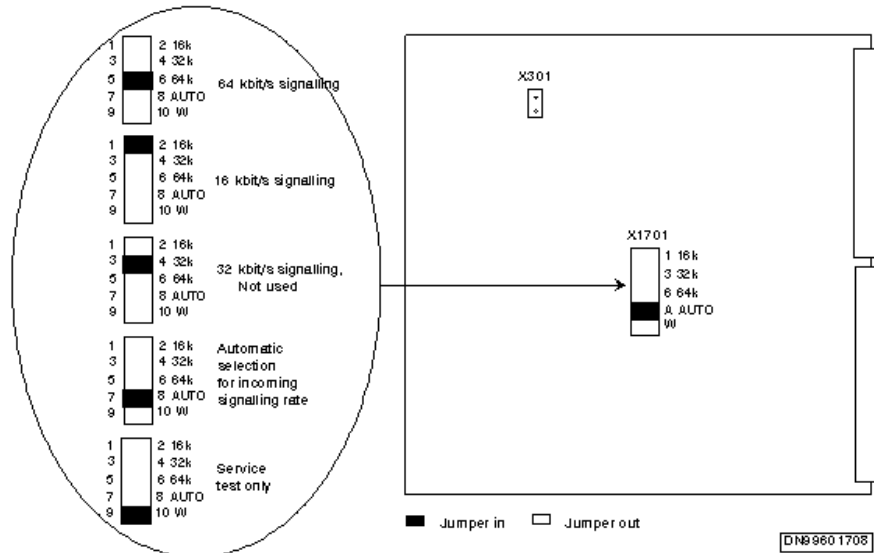
Alternative	SYNC IF	Impedance	Cable ground wire
	NR20		
A		120 ohms	
B		75 ohms	

RECEIVE

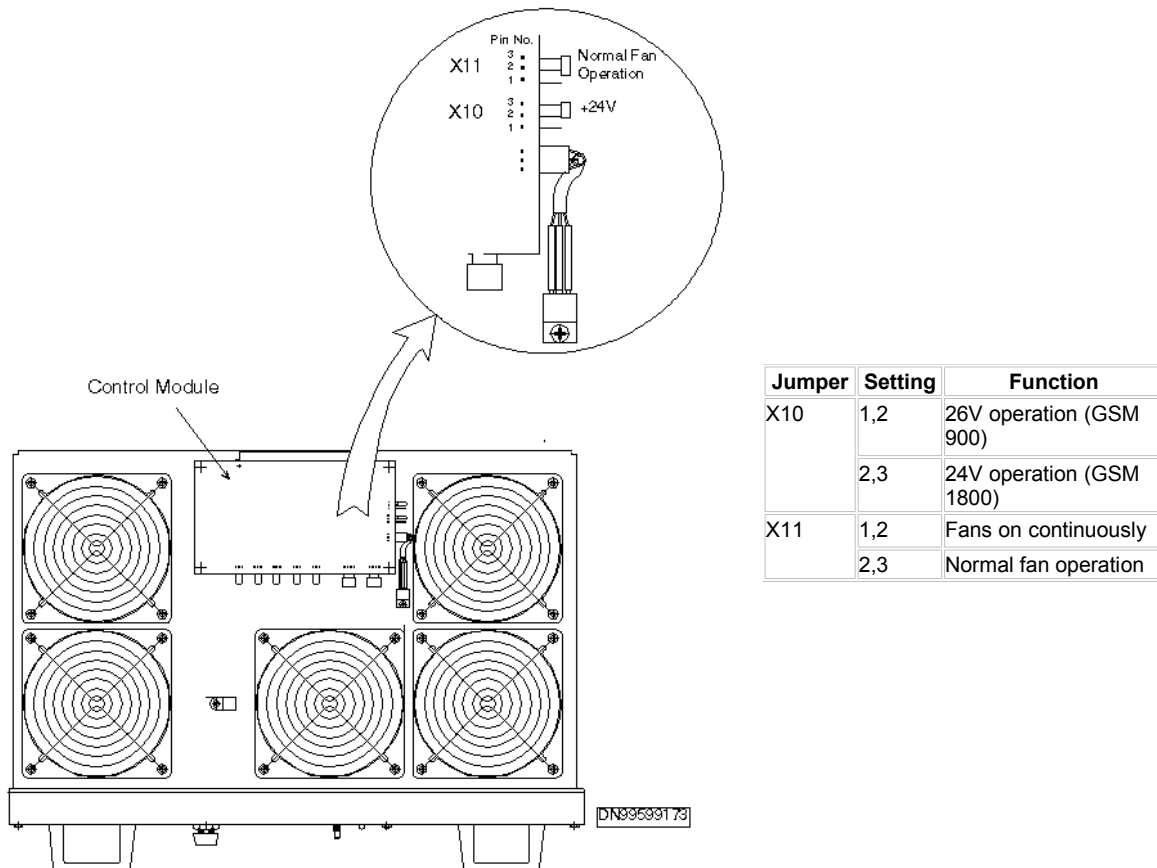
Alternative	SYNC IF	Impedance	Cable ground wire
	NR22		
A		120 ohms	Can be used only if the Rx connector is connected to cabinet ground.
B		75 ohms	
C		75 ohms	

DN9999197

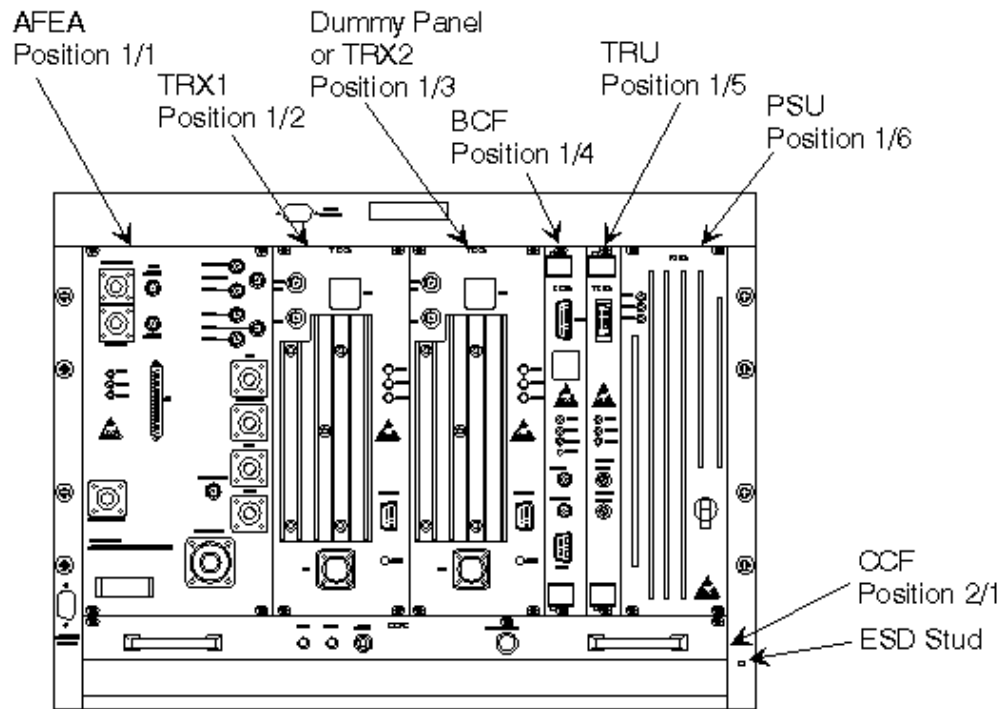
BCFA



CCFC

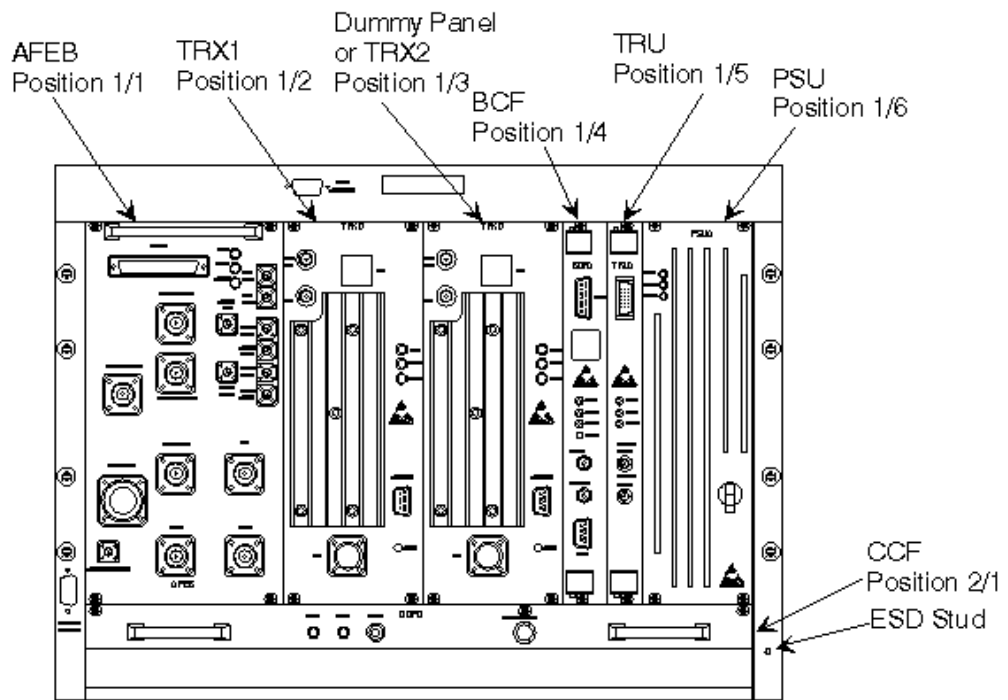


GSM900 AFEA position units



DN99599407

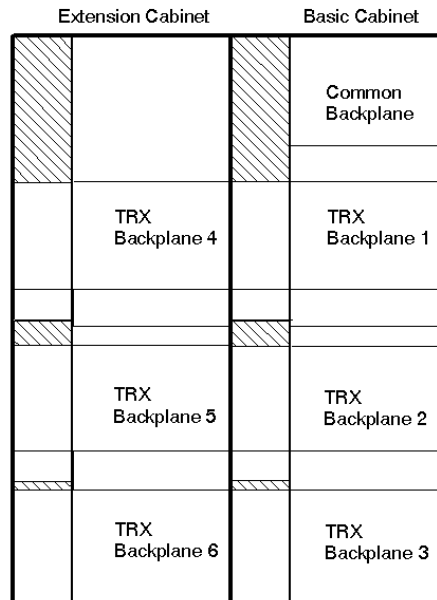
GSM1800 AFEB position units



DN99599419

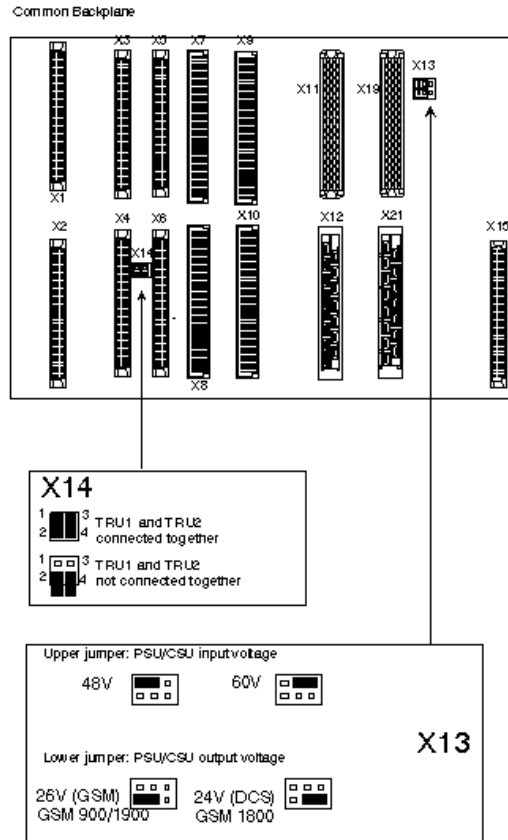
Intrataalk

Backplane settings voor GSM900 en GSM1800



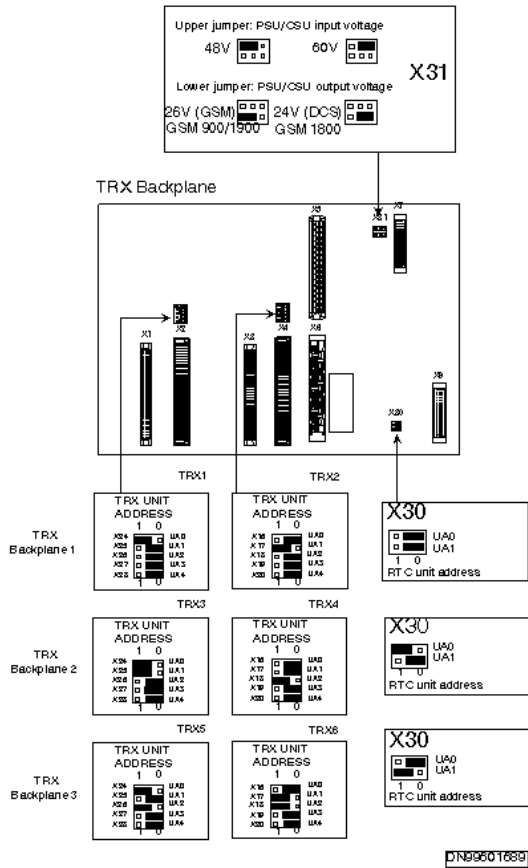
DN99601669

Backplane settings common units

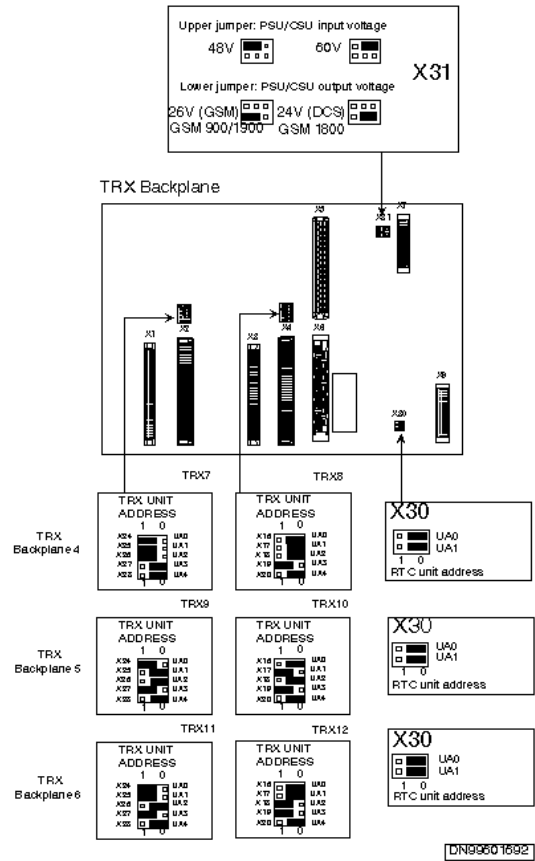


DN99601677

Backplane settings basic trx units

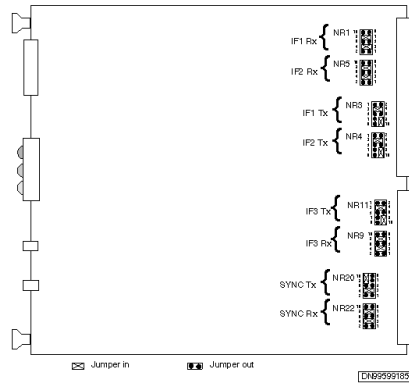


Backplane settings extention trx units



Unit settings voor GSM900 en GSM1800

TRUA



Note: For NR1, NR5, NR9 and NR22
8-10 and 9-4 should be strapped
together if the Rx channel is
grounded at the Abis card

Jumper settings

TRANSMIT

Alternative	IF1	IF2	IF3	Impedance	Cable ground wire
	NR3	NR4	NR11		
A		120 ohms	In double TRUA mode this alternative must be used		
B		75 ohms			

RECEIVE

Alternative	IF1	IF2	IF3	Impedance	Cable ground wire
	NR1	NR5	NR9		
A		120 ohms	Can be used only if the Rx connector is connected to cabinet ground. In double TRUA mode this alternative must be used		
B		75 ohms			
C		75 ohms			

TRANSMIT

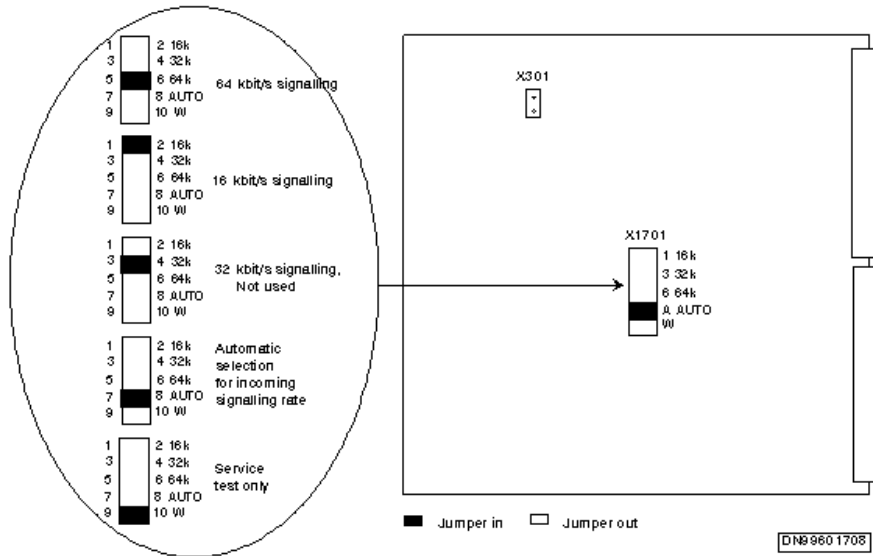
Alternative	SYNC IF	Impedance	Cable ground wire
	NR20		
A		120 ohms	
B		75 ohms	

RECEIVE

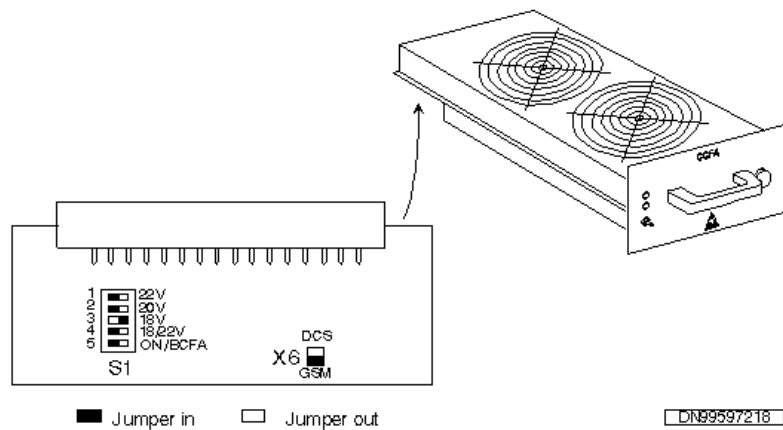
Alternative	SYNC IF	Impedance	Cable ground wire
	NR22		
A		120 ohms	Can be used only if the Rx connector is connected to cabinet ground.
B		75 ohms	
C		75 ohms	

DN9999197

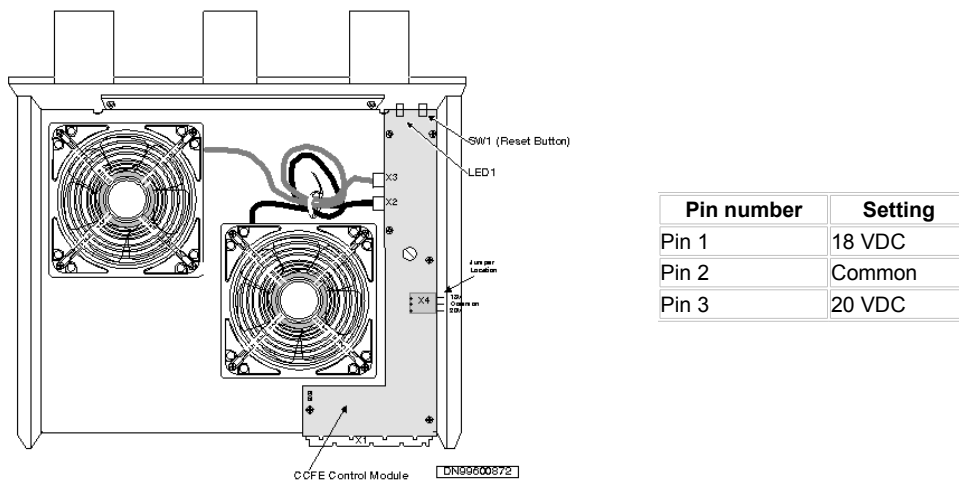
BCFA



CCFA

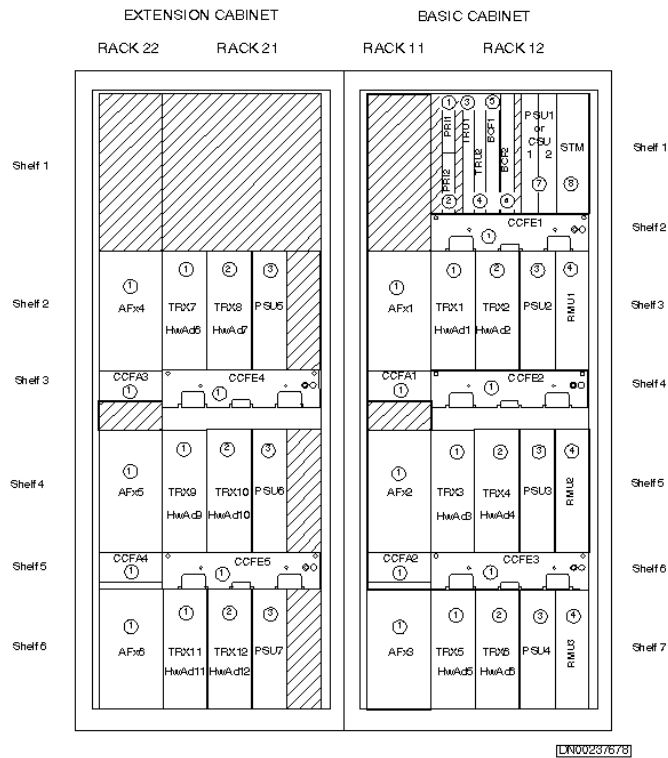


CCFE

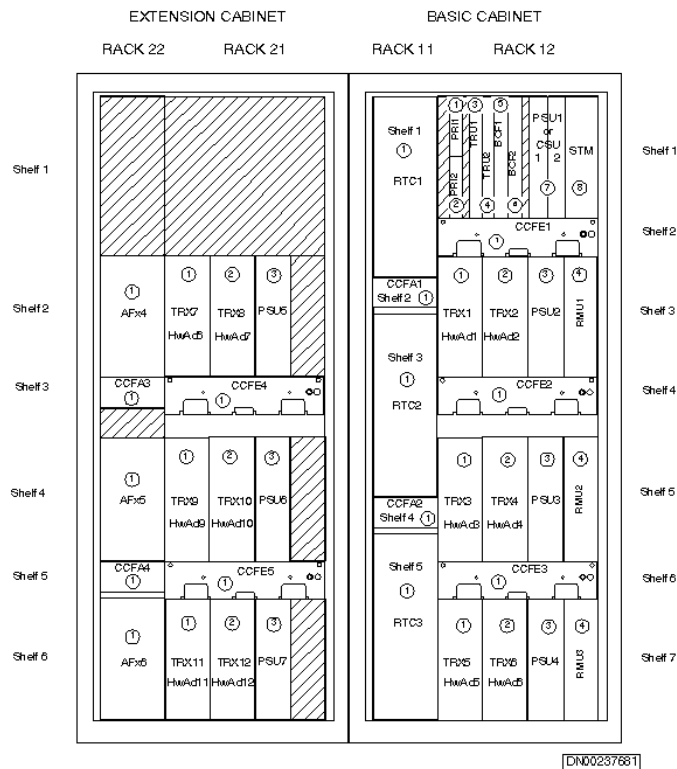


Unit positions GSM900 en GSM1800

GSM900 AFEA en GSM1800 AFEB

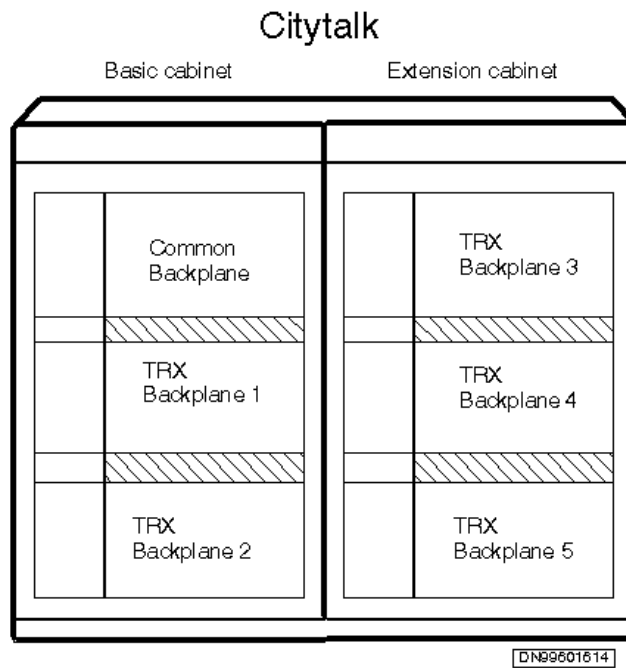


GSM900 RTCC en GSM1800 RTCF



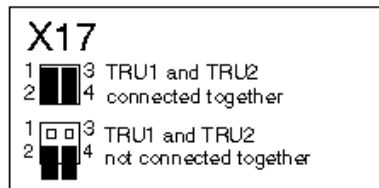
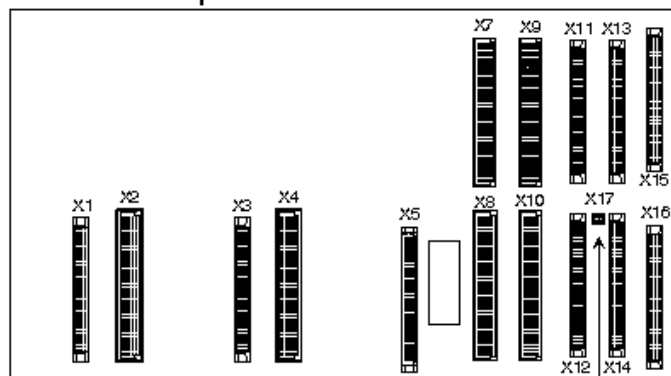
Citytalk

Backplane settings voor GSM900 en GSM1800



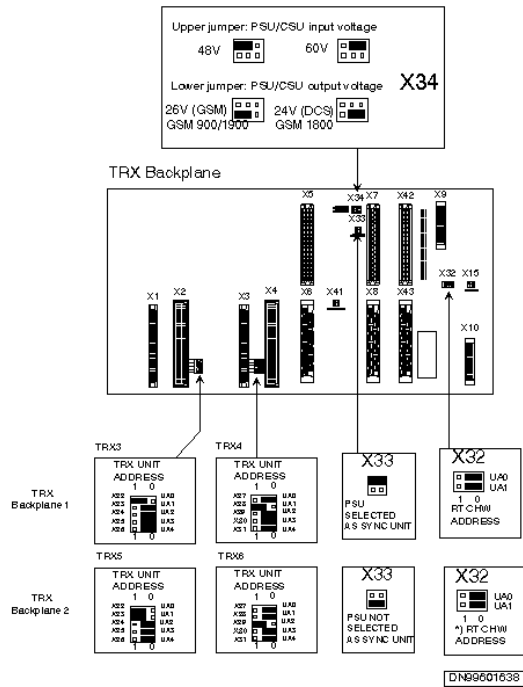
Backplane settings common units

Common Backplane

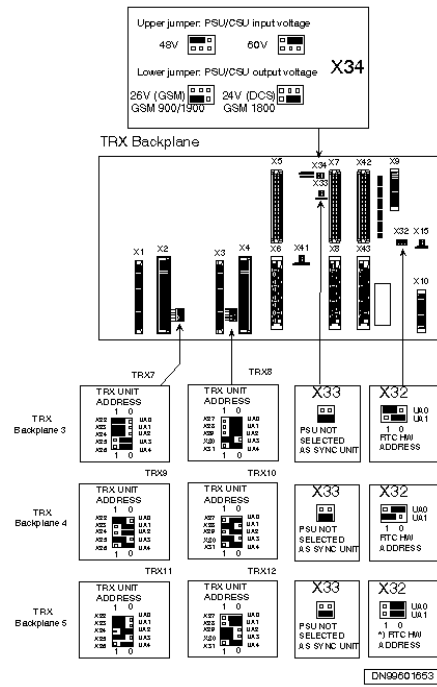


DN99601626

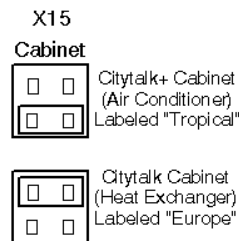
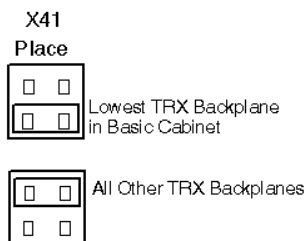
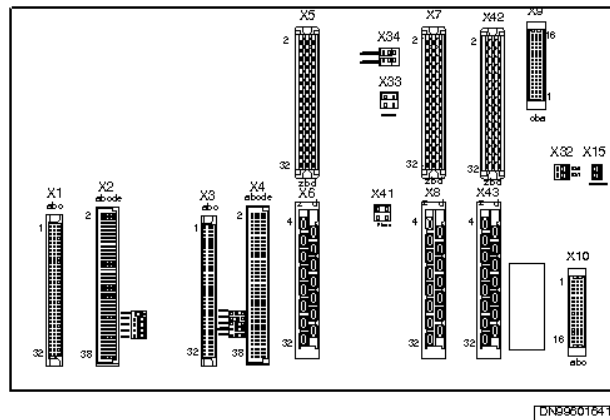
Backplane settings basic trx units



Backplane settings extension trx units

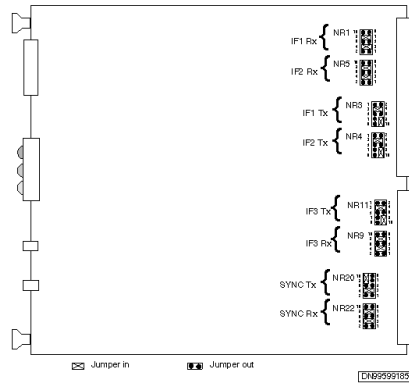


Backplane settings basic en extension hit exchanger units



Unit settings voor GSM900 en GSM1800

TRUA



Note: For NR1, NR5, NR9 and NR22
8-10 and 9-4 should be strapped
together if the Rx channel is
grounded at the Abis card

Jumper settings

TRANSMIT

Alternative	IF1	IF2	IF3	Impedance	Cable ground wire
	NR3	NR4	NR11		
A		120 ohms			
B		75 ohms	In double TRUA mode this alternative must be used		

RECEIVE

Alternative	IF1	IF2	IF3	Impedance	Cable ground wire
	NR1	NR5	NR9		
A		120 ohms			
B		75 ohms	Can be used only if the Rx connector is connected to cabinet ground. In double TRUA mode this alternative must be used		
C		75 ohms			

TRANSMIT

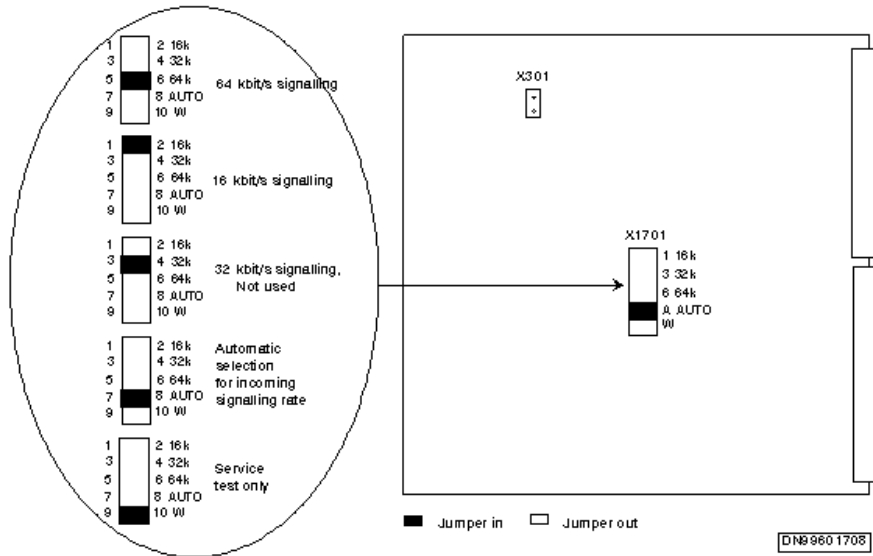
Alternative	SYNC IF	Impedance	Cable ground wire
	NR20		
A		120 ohms	
B		75 ohms	

RECEIVE

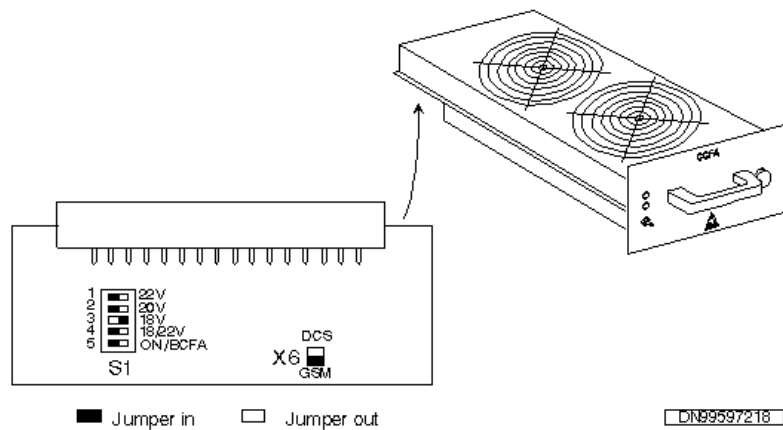
Alternative	SYNC IF	Impedance	Cable ground wire
	NR22		
A		120 ohms	Can be used only if the Rx connector is connected to cabinet ground.
B		75 ohms	
C		75 ohms	

DN9999197

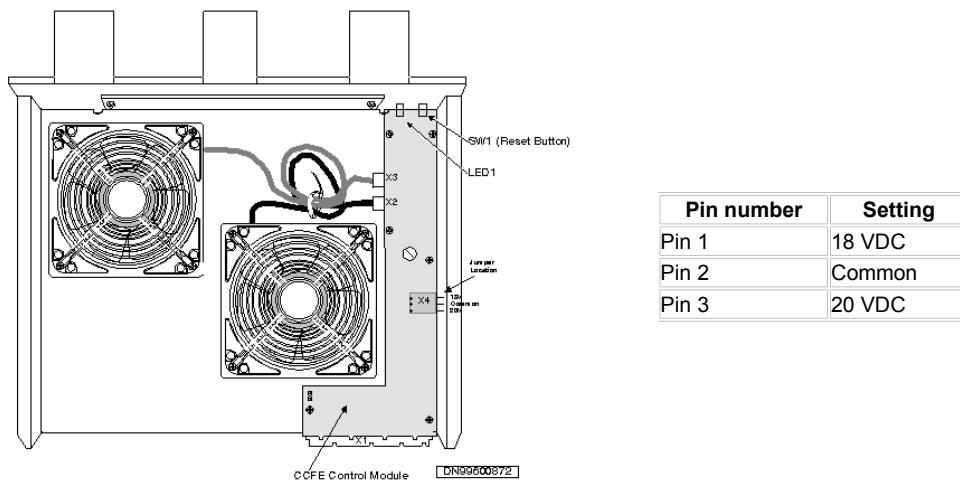
BCFA



CCFA

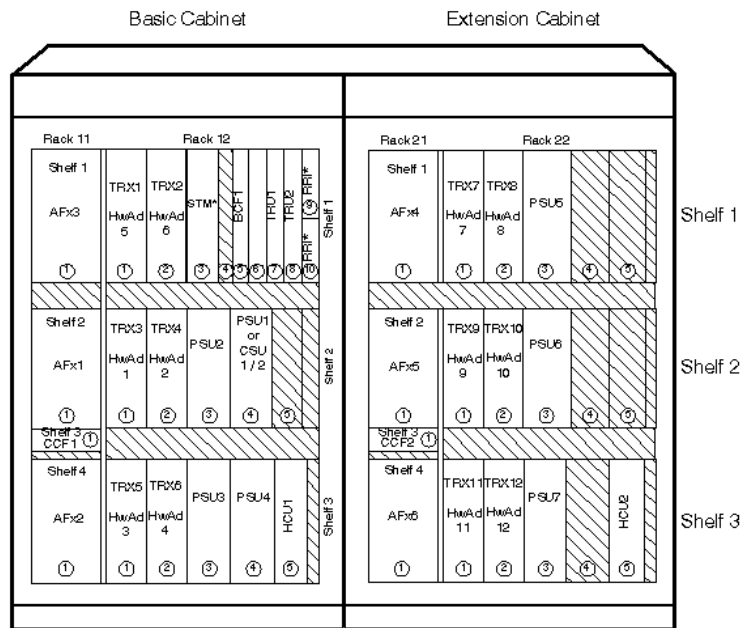


CCFE



Unit positions GSM900 en GSM1800

GSM900 AFEA en GSM1800 AFEB

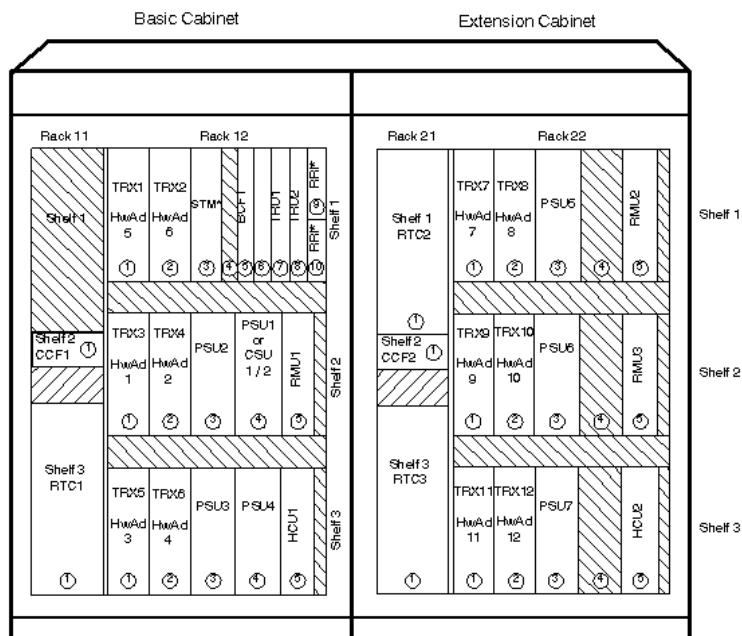


NOTE: The RRI and STM units marked with an asterisk (*) are available for GSM 900/1800 only

Key:
① n=slot number

DN00237642

GSM900 RTCC en GSM1800 RTCF



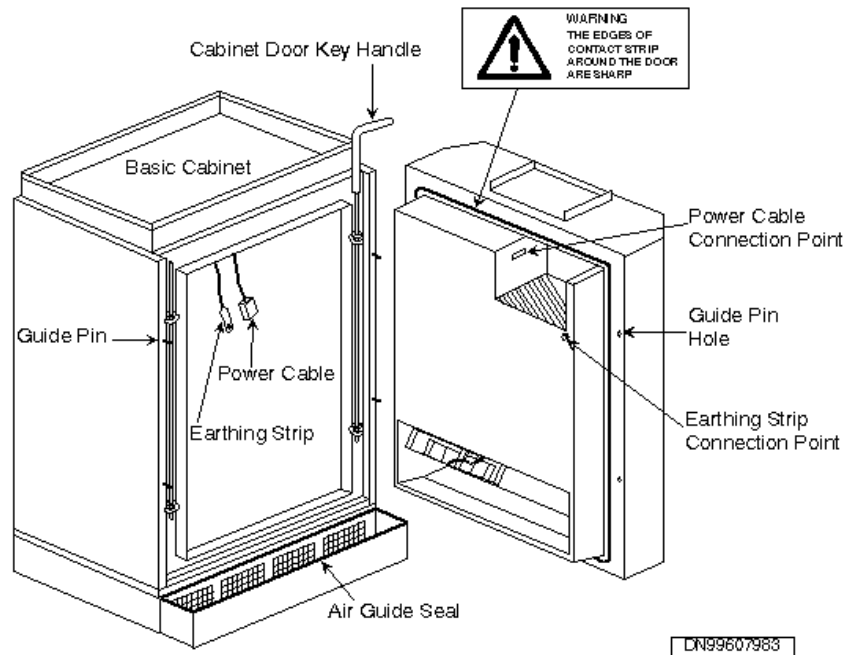
NOTE: The RRI and STM units marked with an asterisk (*) are available for GSM 900/1800 only

Key:
① n=slot number

DN00237654

Unit position heat exchanger GSM900 en GSM1800

Basic en extention cabinet



4 Unit Cables and Combining Description Manual

Flexitalk

2+2+2 Wideband combining AFEA met duplex en diversity GSM900

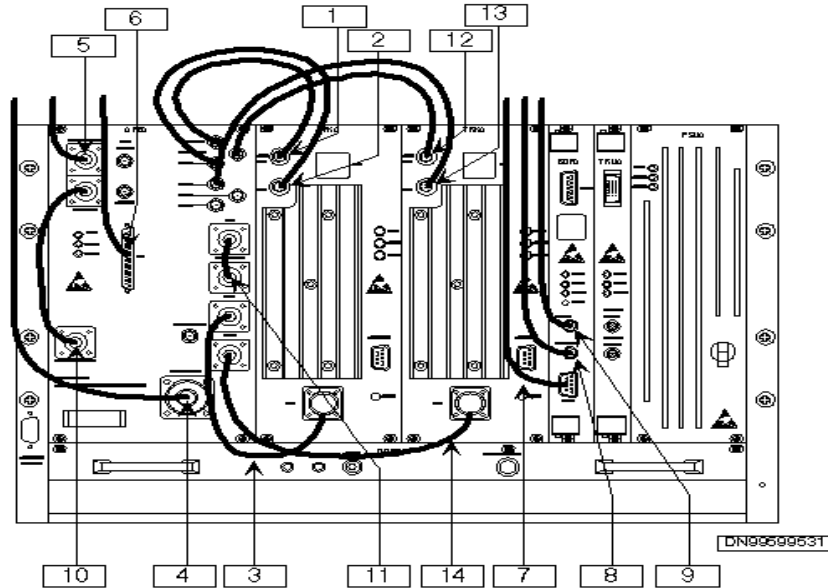


Figure Cable Ref. No.	Cable Code	From Unit/ Connector	To Unit/ Connector
1	990603	AFx/ DIV RX 1	TRX1/DIV RX
2	990626	AFx/MAIN RX 1	TRX1/ RX
3	990600	AFx/TX	TRX1/TX
4	990702	ANTENNA	AFx/ANTENNA
5	990703	ANTENNA	AFx/DIV RX ANT
6	990707	POWER	(GSM 900) AFEA/X1 (GSM 1800/1900) AFEB/SKT1
7	990711	ROOF/MMI TEST	BCF/MMI
8	990705	ROOF/13MHz TEST	BCF/13 MHz
9	990704	ROOF/FCLK TEST	BCF/FCLK
10	Pre-installed	AFx/RX DUP OUT	AFx/RX ANT
11	Pre-installed	AFx/TX COMB	AFx/TX

Figure Cable Ref. No.	Cable Code	From Unit/ Connector	To Unit/ Connector
11	Pre-installed	TX COMB	AFx/TX
12	990602	AFx DIV RX2	TRX2/DIV RX
13	990604	AFx/MAIN RX2	TRX2/RX
14	990601	AFx/TRX2	TRX2/TX

2+2+2 Wideband combining AFEB met duplex en diversity GSM1800

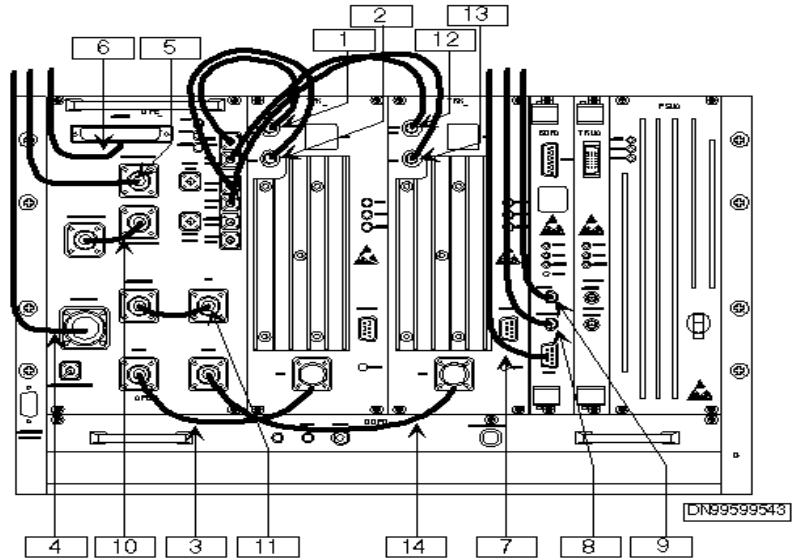
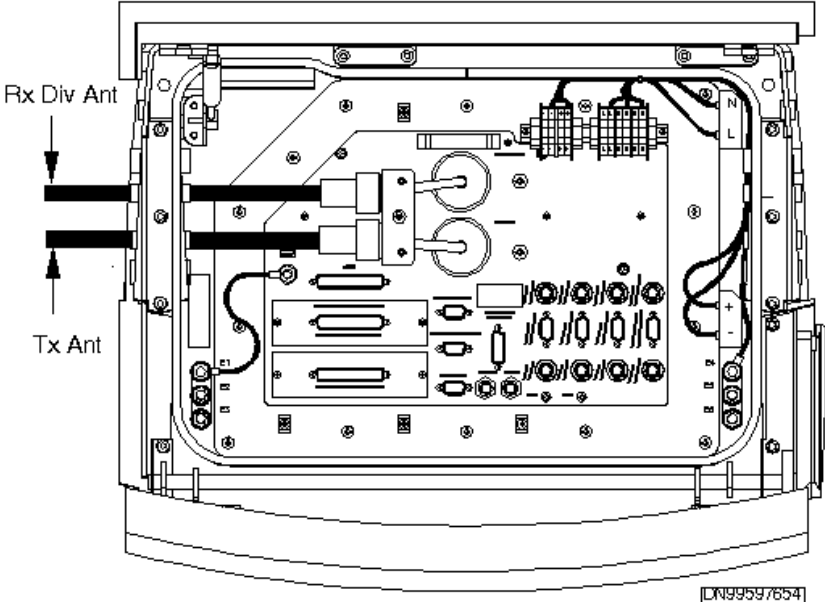


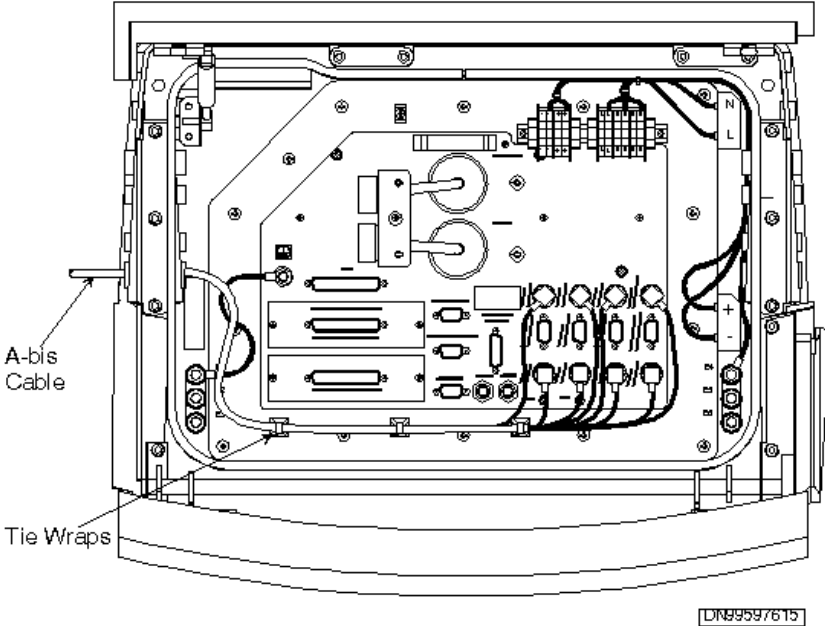
Figure Cable Ref. No.	Cable Code	From Unit/ Connector	To Unit/ Connector
1	990603	AFx/ DIV RX 1	TRX1/DIV RX
2	990626	AFx/MAIN RX 1	TRX1/ RX
3	990600	AFx/TX	TRX1/TX
4	990702	ANTENNA	AFx/ANTENNA
5	990703	ANTENNA	AFx/DIV RX ANT
6	990707	POWER	(GSM 900) AFEA/X1 (GSM 1800/1900) AFEB/ SKT1
7	990711	ROOF/MMI TEST	BCF/MMI
8	990705	ROOF/13MHz TEST	BCF/13 MHz
9	990704	ROOF/FCLK TEST	BCF/FCLK
10	Pre-installed	AFx/RX DUP OUT	AFx/RX ANT
11	Pre-installed	AFx/TX COMB	AFx/TX

Figure Cable Ref. No.	Cable Code	From Unit/ Connector	To Unit/ Connector
11	Pre-installed	TX COMB	AFx/TX
12	990602	AFx DIV RX2	TRX2/DIV RX
13	990604	AFx/MAIN RX2	TRX2/RX
14	990601	AFx/TRX2	TRX2/TX

Antenna connections GSM900 en GSM1800

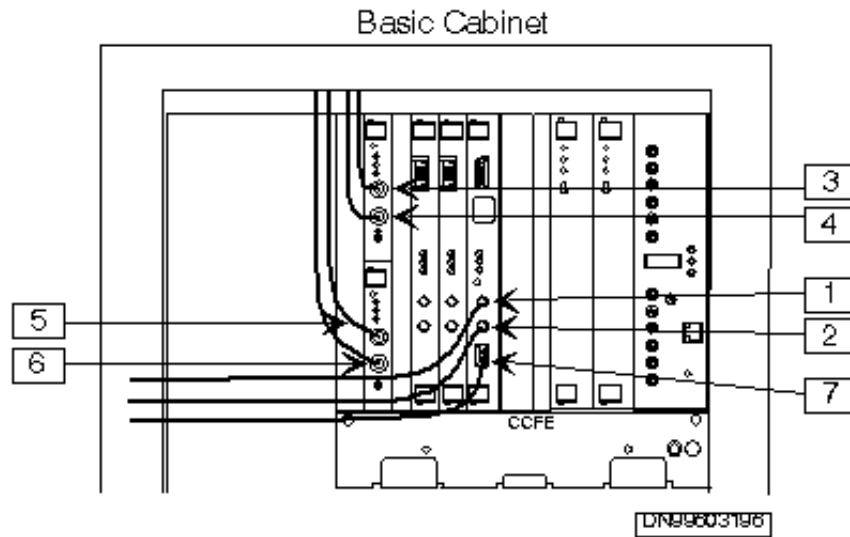


A-bis connections GSM900 en GSM1800



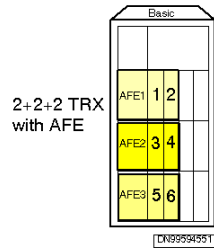
Intrataalk

Cabling of common units GSM900 en GSM1800

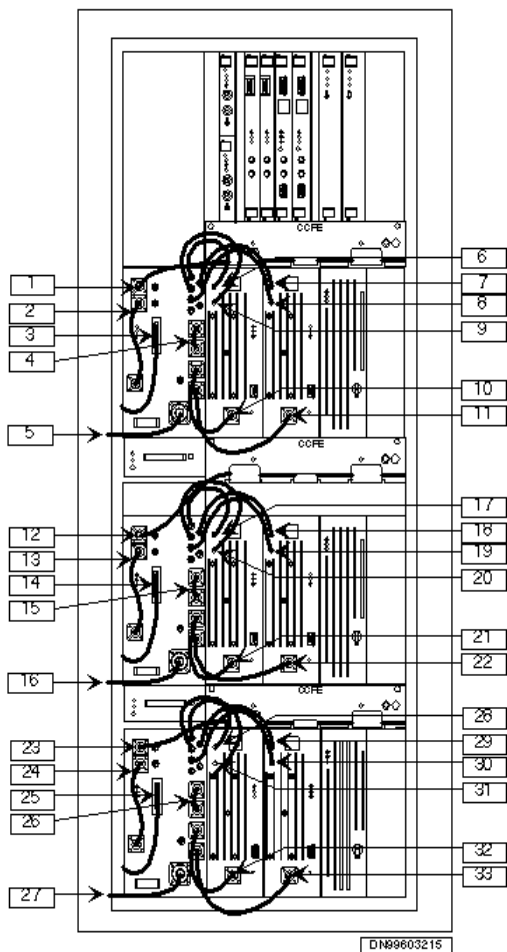


Cable No. in Figure	Cable Code	Cable Label	From Unit/ Connector	To Unit/ Connector
1	990599	017/018 462	Roof/FCLK Test	BCFA/FCLK
2	990599	012/015 461	Roof/13 MHz Test	BCFA/13 MHz
3	990582	001/403	Roof/DMR1 IN+	RR1/upper connector
4	990582	002/404	Roof/DMR1 OUT-	RR1/lower connector
5	990660	003/405	Roof/DMR2 IN+	RR2/upper connector
6	990660	004/406	Roof/DMR2 OUT-	RR2/lower connector
7	990650	013/016 460	Roof/MMI Test	BCFA/MMI conn.

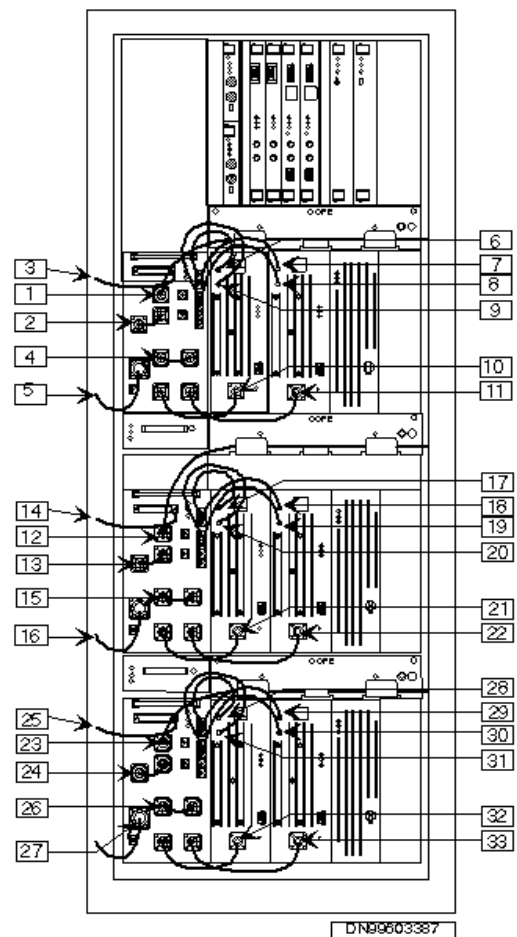
2+2+2 AFEx combining met duplex en diversity GSM900 en GSM1800



Cabling of AFEA

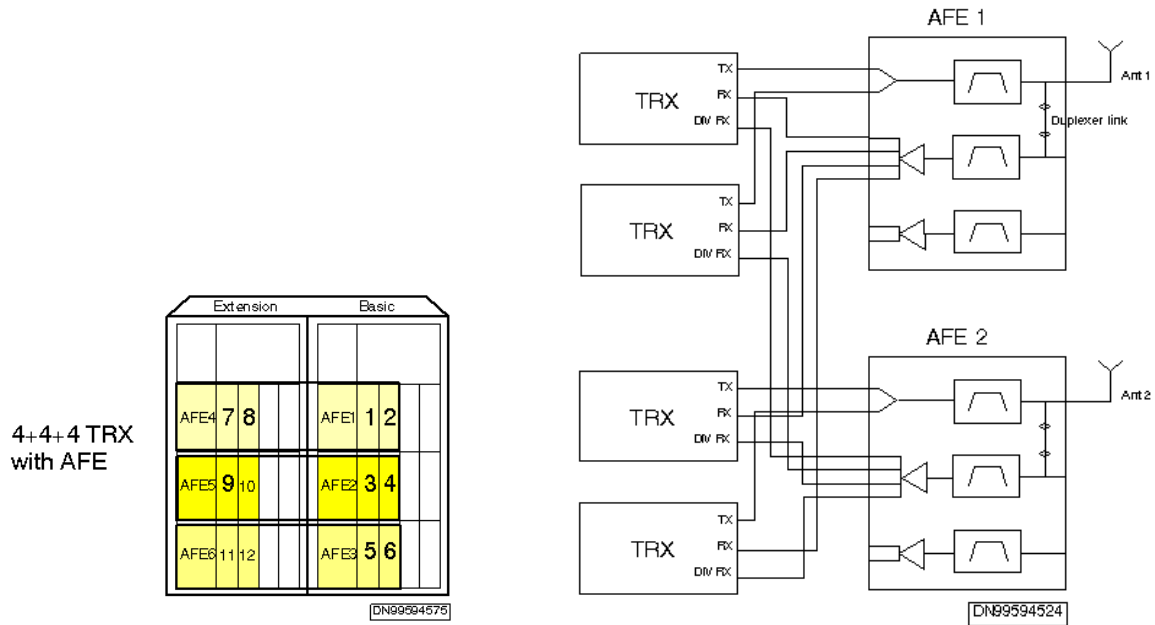


Cabling of AFEB

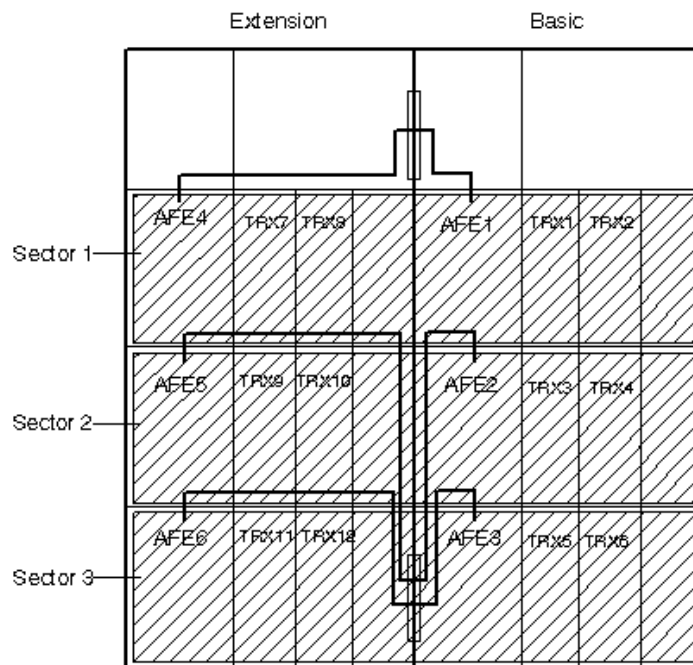


Cable No. in Figure	Cable Code	Cable Label	From Unit/ Connector	To Unit/ Connector
1	991715	112/152 408	Roof/ANT 5	AFE1/DIV RX ANT
2		Preinstalled		
3	990643	165/139 172	TRX backplane 1	AFE1/X1
4		Preinstalled		
5	991718	131/163 400	Roof/ANT 1	AFE1/ANTENNA
6	990603	No label	AFE1/DIV RX 1	TRX1/DIV RX
7	990602	No label	AFE1/DIV RX 2	TRX2/DIV RX
8	990604	No label	AFE1/RX 2	TRX2/RX
9	990626	No label	AFE1/RX 1	TRX1/RX
10	990600	No label	AFE1/TX1	TRX1/TX
11	990601	No label	AFE1/TX2	TRX2/TX
12	991716	212/252 410	Roof/ANT 7	AFE2/DIV RX ANT
13		Preinstalled		
14	990643	265/239 272	TRX backplane 2	AFE2/X1
15		Preinstalled		
16	991719	231/263/ 401	Roof/ANT 2	AFE2/ANTENNA
17	990603	No label	AFE2/DIV RX 1	TRX3/DIV RX
18	990602	No label	AFE2/DIV RX 2	TRX4/DIV RX
19	990604	No label	AFE2/RX 2	TRX4/RX
20	990626	No label	AFE2/RX 1	TRX3/RX
21	990600	No label	AFE2/TX1	TRX3/TX
22	990601	No label	AFE2/TX2	TRX4/TX
23	991717	312/352 412	Roof/ANT 9	AFE3/DIV RX ANT
24		Preinstalled		
25	990644	365/339 372	TRX backplane 3	AFE3/X1
26		Preinstalled		
27	991720	331/363 402	Roof/ANT 3	AFE3/ANTENNA
28	990603	No label	AFE3/DIV RX 1	TRX5/DIV RX
29	990602	No label	AFE3/DIV RX 2	TRX6/DIV RX
30	990604	No label	AFE3/RX 2	TRX6/RX
31	990626	No label	AFE3/RX 1	TRX5/RX
32	990600	No label	AFE3/TX1	TRX5/TX
33	990601	No label	AFE3/TX2	TRX6/TX

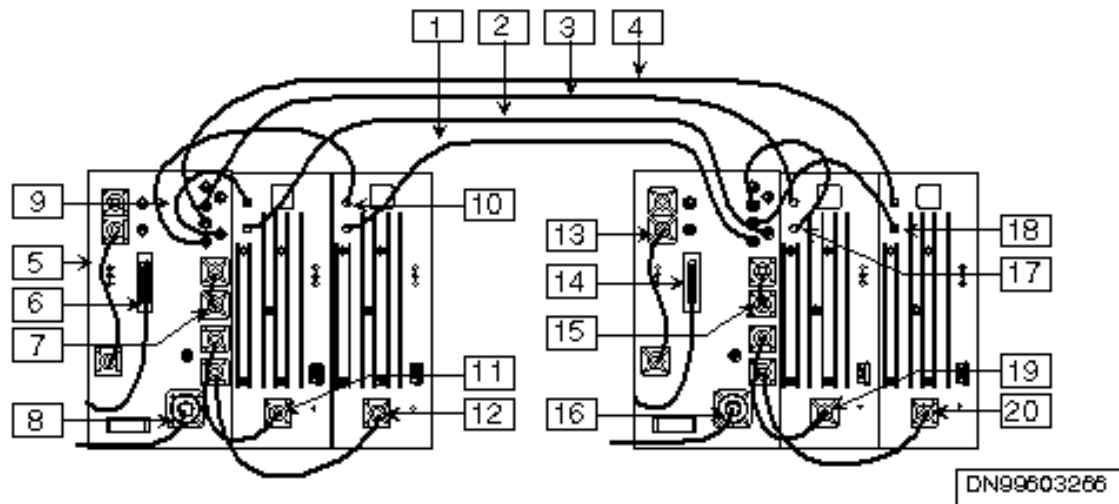
4+4+4 AFEx combining met dual duplex en diversity GSM900 en GSM1800



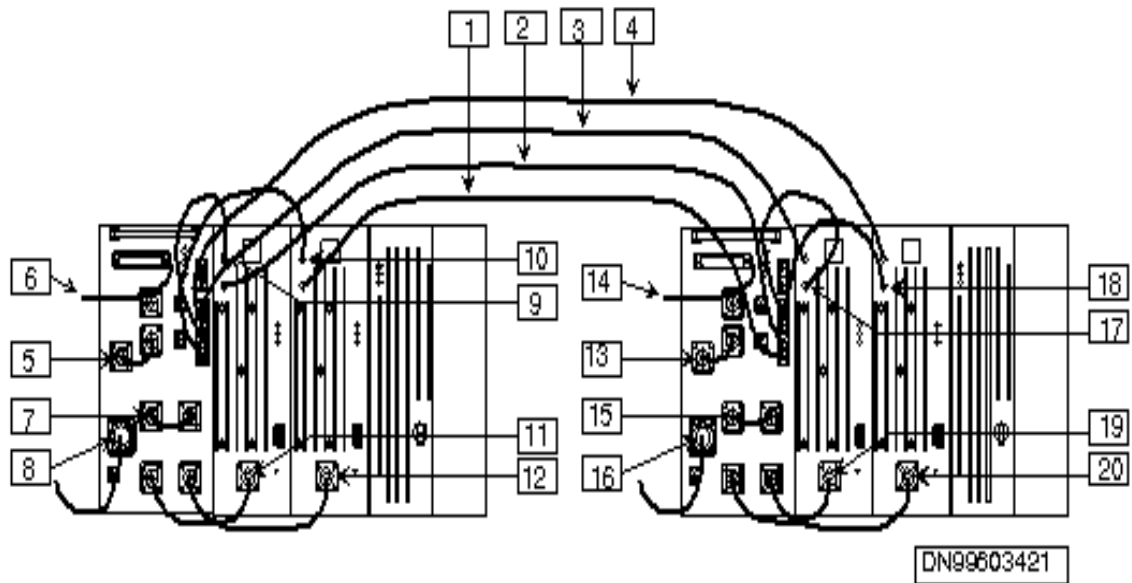
Cabling of AFEx



Cabling of sector 1,2 en 3 with AFEA

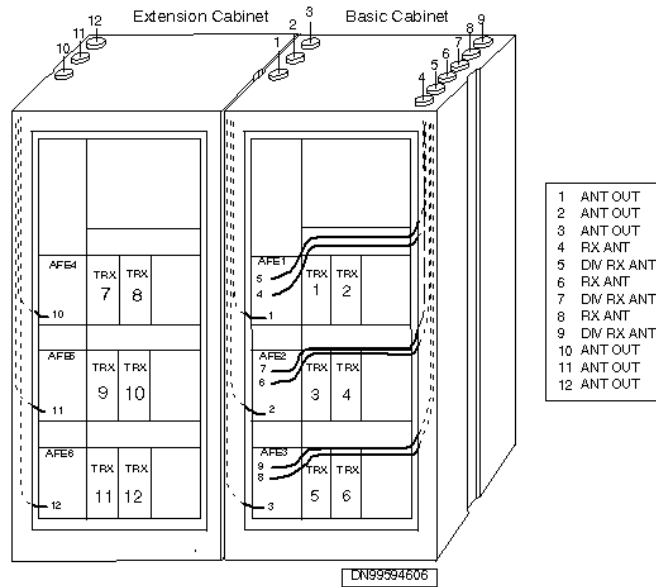


Cabling of sector 1,2 en 3 with AFEB



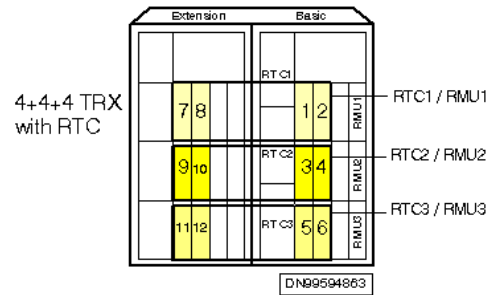
Cable No. in Figure	Cable Code	Cable Label	From Unit/ Connector	To Unit/ Connector
1	990589	605 118/168	TRX8/RX (in Extension cabinet)	AFE1/RX 4 (in Basic cabinet)
2	990591	602 117/167	TRX7/RX (in Extension cabinet)	AFE1/RX 3 (in Basic cabinet)
3	992662	601/655 123/101	AFE4/RX 1 (in Extension cabinet)	TRX1/DIV RX (in Basic cabinet)
4	990591	604/657 124/104	AFE4/RX 2 (in Extension cabinet)	TRX2/DIV RX (in Basic cabinet)
5	Preinstalled			
6	990643	653/665	TRX backplane 4	AFE4/X1
7	Preinstalled			
8	991718	900/663	Roof/ANT 10	AFE4/ANTENNA
9	990603	No label	AFE4/RX3	TRX7/DIV RX
10	990602	No label	AFE4/RX4	TRX8/DIV RX
11	990600	No label	AFE4/TX1	TRX7/TX
12	990601	No label	AFE4/TX2	TRX8/TX
13	Preinstalled			
14	990643	165/139 172	TRX backplane 1	AFE1/X1
15	Preinstalled			
16	991718	131/163 400	Roof/ANT1	AFE/ANTENNA
17	990604	No label	AFE1/RX1	TRX1/RX
18	990626	No label	AFE1/RX2	TRX2/RX
19	990600	No label	AFE1/TX1	TRX1/TX
20	990601	No label	AFE1/TX2	TRX2/TX

Antenna connections AFEx basic en extention cabinet GSM900 en GSM1800

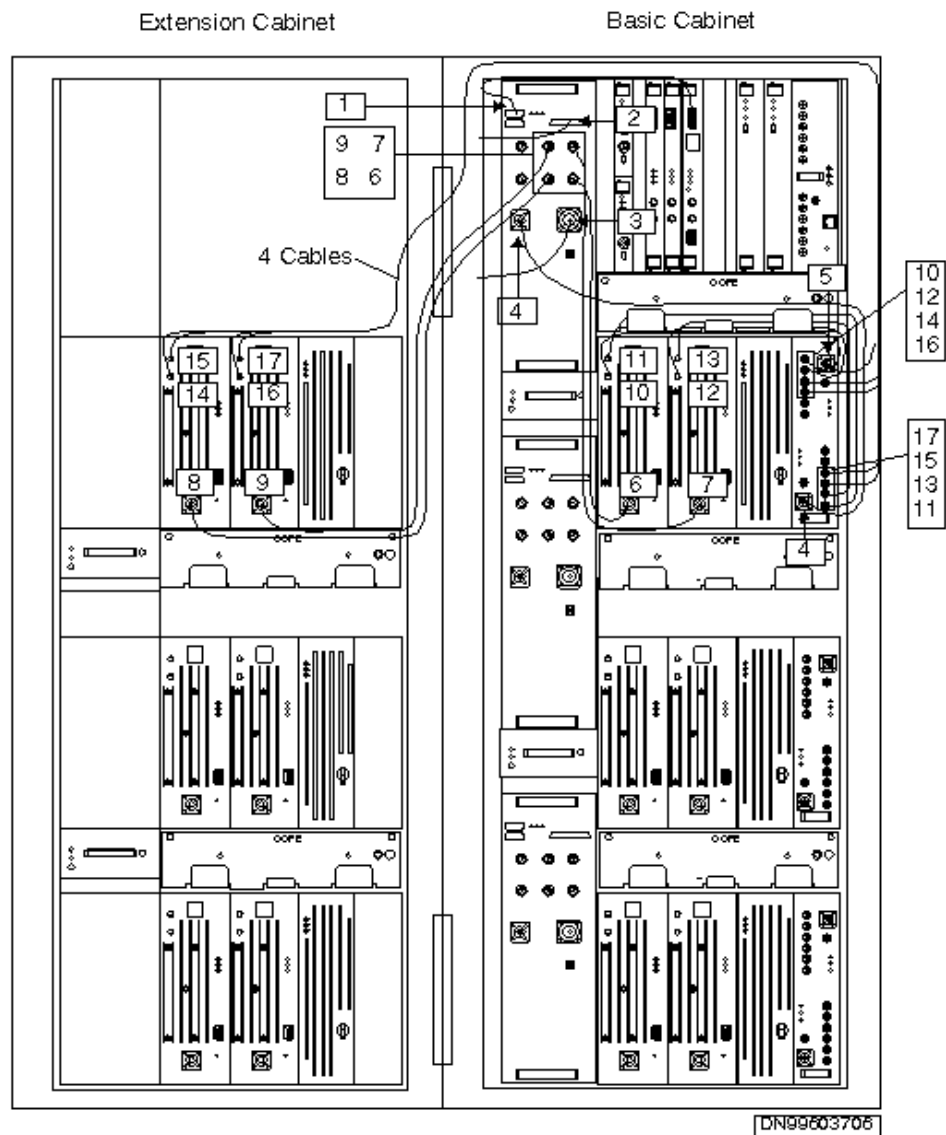


1. TX / RX 1 sector Antenne
2. TX / RX 2 sector Antenne
3. TX / RX 3 sector Antenne
4. RX 1 sector Antenne
5. RX Div. 1 sector Antenne
6. RX 2 sector Antenne
7. RX Div. 2 sector Antenne
8. RX 3 sector Antenne
9. RX Div. 3 sector Antenne
10. TX / RX, RX Div. 1 sector Antenne
11. TX / RX, RX Div. 2 sector Antenne
12. TX / RX, RX Div. 3 sector Antenne

4+4+4 RTCx combining met duplex en diversiteit GSM900 en GSM1800

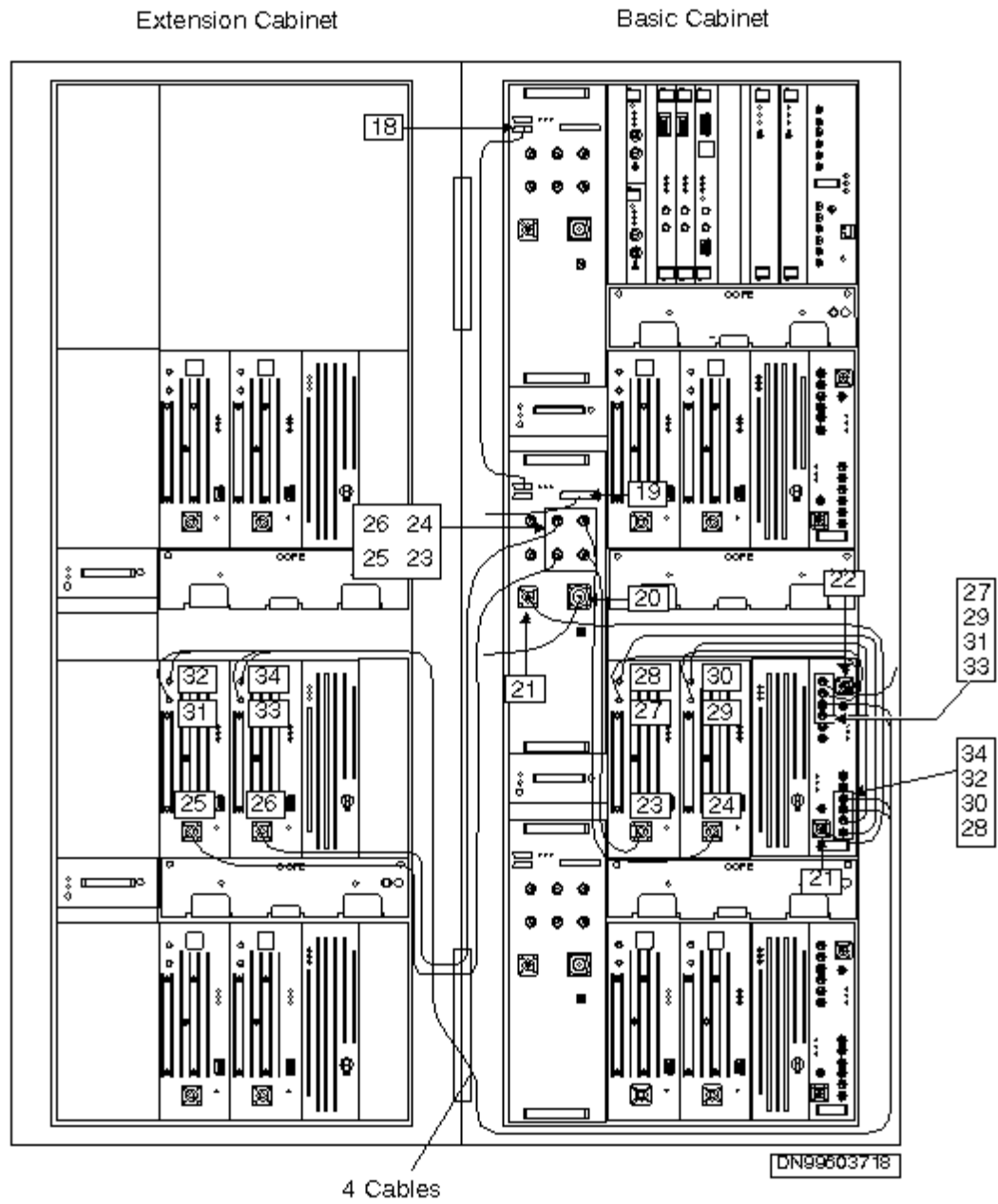


Cabling of RTCx 1 sector



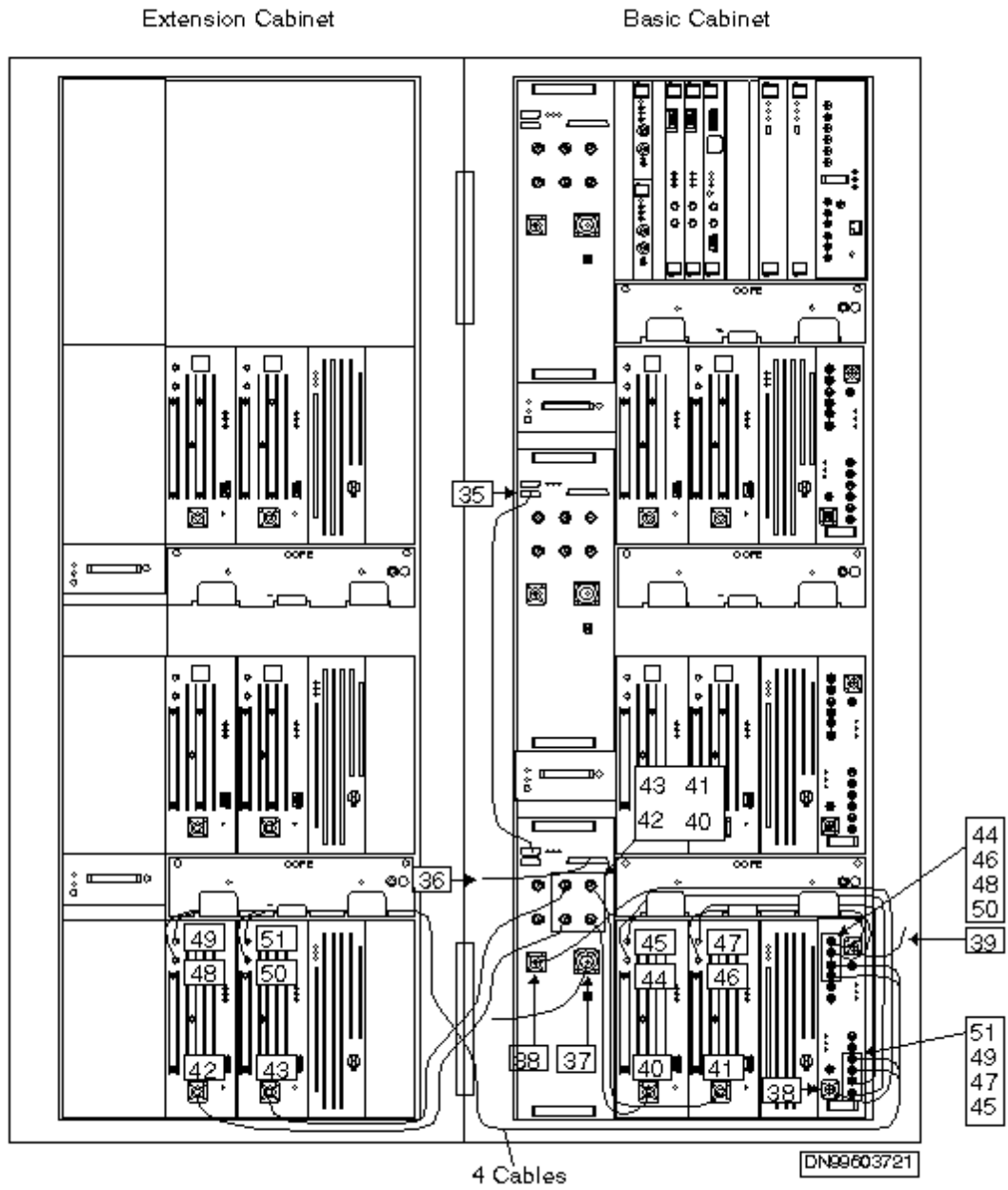
Cable No	Cable code	Cable label	From unit/connector	To unit/connector
1	991132	141/241/341 011/142/242	BCF1/RTC	RTC1/D-bus IN
2	990643	165/139 172	TRX backplane A	RTC1/PWR IN
3	991718	131/163 400	Roof/ANT1	RTC1/ANTENNA
4	990606	111/211/311 138/238/338	RTC1/RX OUT	RMU1/ANT
5	991715	112/152 408	Roof/ANT5	RMU1/DIV ANT
6	991702	103/203/303 132/232/332	RTC1/TX1	TRX1/TX
7	990605	106/206/306 133/233/333	RTC1/TX2	TRX2/TX
8	990628	134/603	TRX7/TX	RTC1/TX3
9	990630	135/606	TRX8/TX	RTC1/TX4
10	990594	115/102	TRX1/RX	RMU1/RX1
11	990593	121/101	TRX1/DIV RX	RMU1/DIV RX1
12	990594	116/105	TRX2/RX	RMU1/RX2
13	990594	122/104	TRX2/DIV RX	RMU1/DIV RX2
14	990591	117/167 602	TRX7/RX	RMU1/RX3
15	992662	123/101 601/655	TRX7/DIV RX	RMU1/DIV RX3
16	990589	118/168 605	TRX8/RX	RMU1/RX4
17	990591	124/104 604/657	TRX8/DIV RX	RMU1/DIV RX4

Cabling of RTCx 2 sector



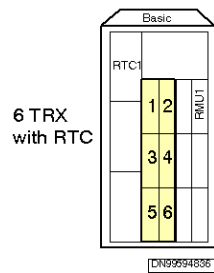
Cable No	Cable code	Cable label	From unit/connector	To unit/connector
18	991132	141/241/341 011/142/242	RTC1/D-bus OUT	RTC2/D-bus IN
19	990643	265/239 272	TRX backplane B	RTC2/PWR IN
20	991719	231/263 401	Roof/ANT2	RTC2/ANTENNA
21	990606	111/211/311 138/238/338	RTC2/RX OUT	RMU2/ANT
22	991716	212/252 410	Roof/ANT7	RMU2/DIV ANT
23	991702	103/203/303 132/232/332	RTC2/TX1	TRX3/TX
24	990605	106/206/306 133/233/333	RTC2/TX2	TRX4/TX
25	991632	234/136 703	TRX9/TX	RTC2/TX3
26	991632	235/137 706	TRX10/TX	RTC2/TX4
27	990595	215/117 202	TRX3/TX	RMU2/RX1
28	990595	221/123 201	TRX3/DIV RX	RMU2/DIV RX1
29	990596	216/118 205	TRX4/RX	RMU2/RX2
30	990596	222/124 204	TRX4/DIV RX	RMU2/DIV RX2
31	990624	217/119 702	TRX9/RX	RMU2/RX3
32	990621	125/223 701	TRX9/DIV RX	RMU2/DIV RX3
33	990624	218/120 705	TRX10/RX	RMU2/RX4
34	990621	224/126 704	TRX10/DIV RX	RMU2/DIV RX4

Cabling of RTCx 3 sector

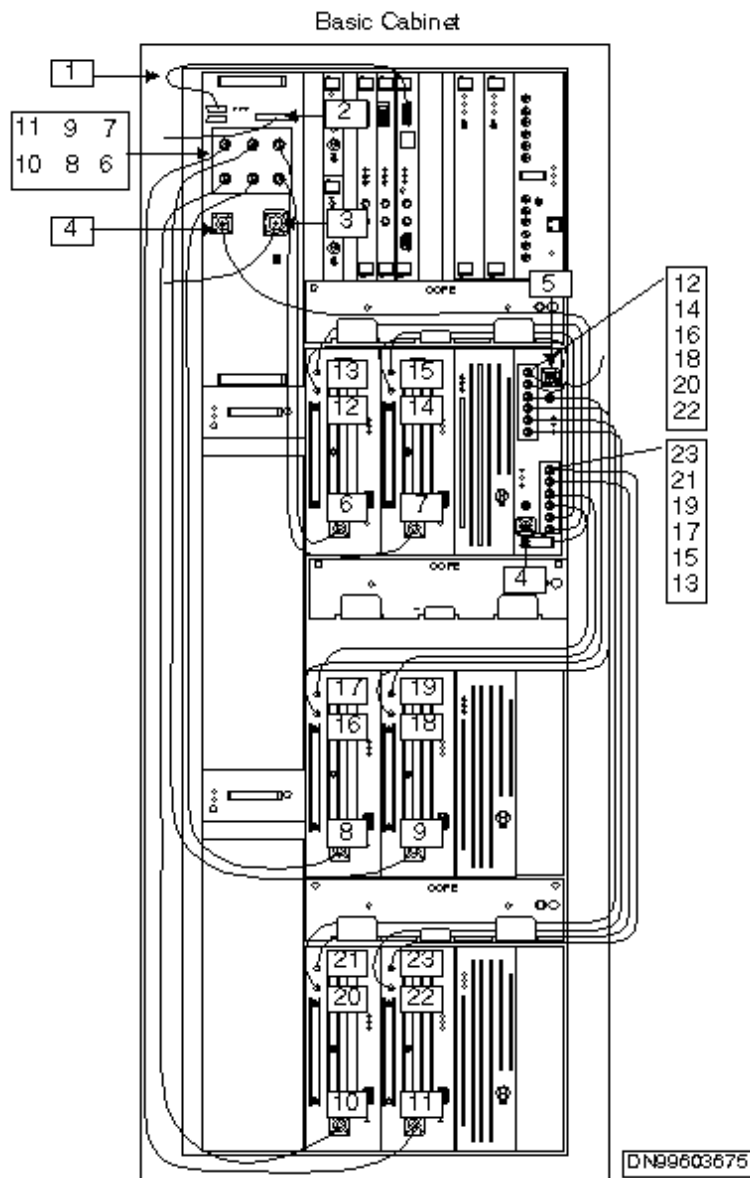


Cable No	Cable code	Cable label	From unit/connector	To unit/connector
35	991132	141/241/341 011/142/242	RTX2/D-bus OUT	RTC3/D-bus IN
36	990644	365/339 372	TRX backplane C	RTC3/PWR IN
37	991720	331/363 402	Roof/ANT3	RTC3/ANTENNA
38	990606	111/211/311 138/238/338	RTC3/RX OUT	RMU3/ANT
39	991717	312/352 412	Roof/ANT9	RMU3/DIV ANT
40	991702	103/203/303 132/232/332	RTC3/TX1	TRX5/TX
41	990605	106/206/306 133/233/333	RTC3/TX2	TRX6/TX
42	990628	236/334 803	RTC3/TX3	TRX11/TX
43	990628	237/335 806	RTC3/TX4	TRX12/TX
44	990594	115/102	TRX5/RX	RMU3/RX1
45	990593	121/101	TRX5/DIV RX	RMU3/DIV RX1
46	990594	116/105	TRX6/RX	RMU3/RX2
47	990594	122/104	TRX6/DIV RX	RMU3/DIV RX2
48	992662	317/219 802	TRX11/RX	RMU3/RX3
49	990591	323/225 801	TRX11/DIV RX	RMU3/DIV RX3
50	992662	318/220 805	TRX12/RX	RMU3/RX4
51	990591	324/226 804	TRX12/DIV RX	RMU3/DIV RX4

6 RTCx combining met duplex en diversity GSM900 en GSM1800

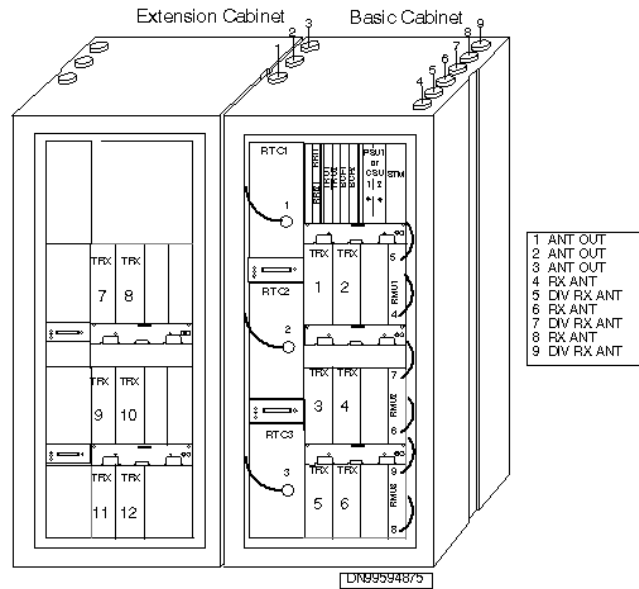


Cabling of RTCx 1 sector verticaal



Cable No	Cable code	Cable label	From unit/connector	To unit/connector
1	991132	141/241/341 011/142/242	BCF1/RTC	RTC1/D-bus IN
2	990643	165/139 172	TRX backplane A	RTC1/PWR IN
3	991718	131/163 400	Roof/ANT1	RTC1/ANTENNA
4	990606	111/211/311 138/238/338	RTC1/RX OUT	RMU1/ANT
5	991715	112/152 408	Roof/ANT5	RMU1/DIV ANT
6	991702	103/203/303 132/232/332	RTC1/TX1	TRX1/TX
7	990605	106/206/306 133/233/333	RTC1/TX2	TRX2/TX
8	990627	203/303 134/234	RTC1/TX3	TRX3/TX
9	991632	206/306 135/235	RTC1/TX4	TRX4/TX
10	990755	303/136	RTC1/TX5	TRX5/TX
11	990629	306/137	RTC1/TX6	TRX6/TX
12	990594	115/102	TRX1/RX	RMU1/RX1
13	990593	121/101	TRX1/DIV RX	RMU1/DIV RX1
14	990594	116/105	TRX2/RX	RMU1/RX2
15	990594	122/104	TRX2/DIV RX	RMU1/DIV RX2
16	990595	215/117 202	TRX3/RX	RMU1/RX3
17	990595	221/123 201	990595	RMU1/DIV RX3
18	990596	216/118 205	TRX4/RX	RMU1/RX4
19	990596	222/124 204	TRX4/DIV RX	RMU1/DIV RX4
20	990587	119 302	TRX5/RX	RMU1/RX5
21	990597	125/301	TRX5/DIV RX	RMU1/DIV RX5
22	990597	120/305	TRX6/RX	RMU1/RX6
23	990597	126/304	TRX6/DIV RX	RMU1/DIV RX6

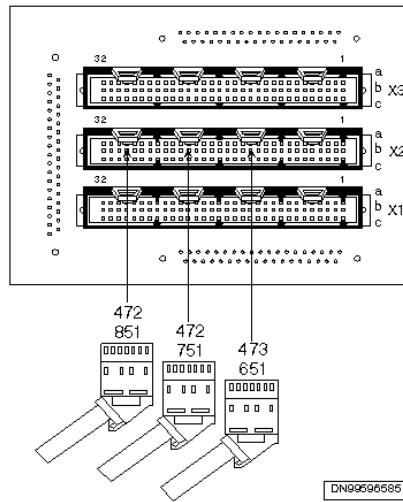
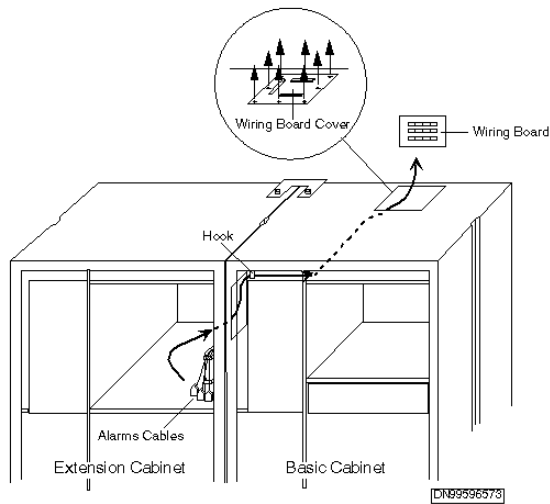
Antenna connections RTCx basic en extension cabinet GSM900 en GSM1800



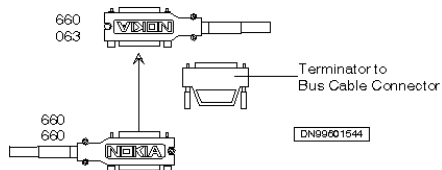
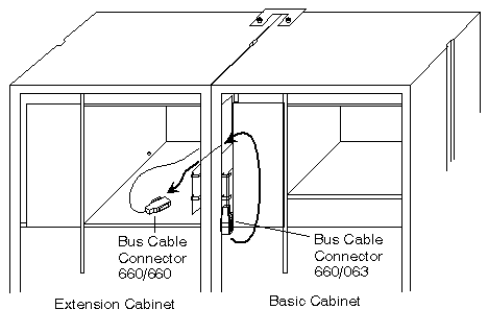
1. TX / RX 1 sector Antenne
2. TX / RX 2 sector Antenne
3. TX / RX 3 sector Antenne
4. RX 1 sector Antenne
5. RX Div. 1 sector Antenne
6. RX 2 sector Antenne
7. RX Div. 2 sector Antenne
8. RX 3 sector Antenne
9. RX Div. 3 sector Antenne

Extension cabinet cables connections to the basic cabinet

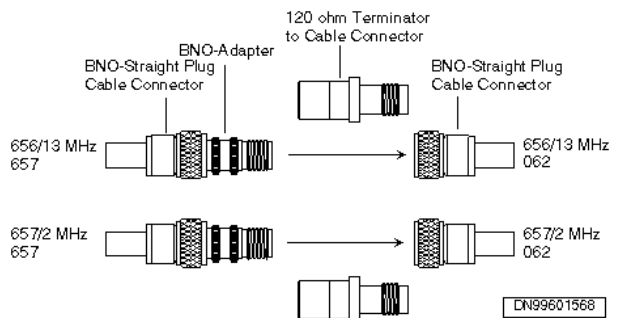
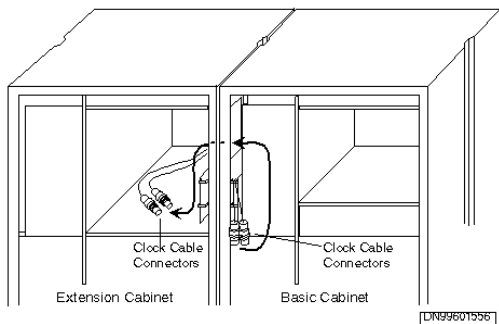
Alarm cables



Bus cables

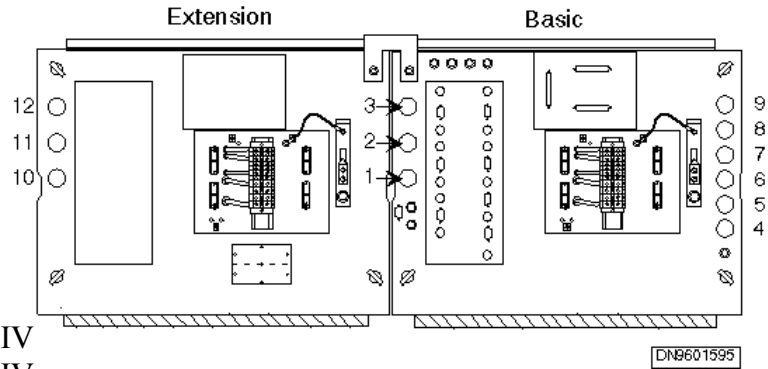


Clock cables

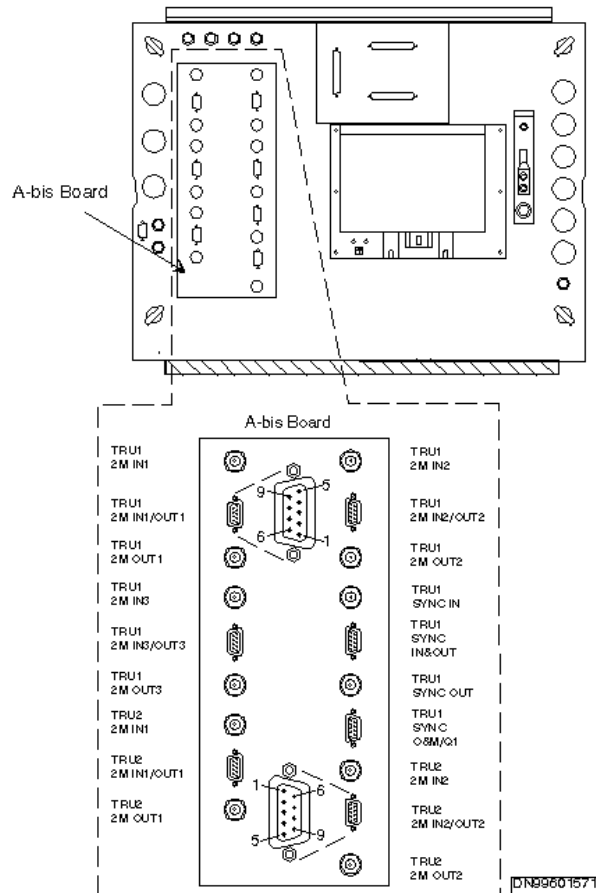


Antenna connections GSM900 en GSM1800

1. 1 sector TX / RX
2. 2 sector TX / RX
3. 3 sector TX / RX
4. 1 sector RX
5. 1 sector RX DIV
6. 2 sector RX
7. 2 sector RX DIV
8. 3 sector RX
9. 3 sector RX DIV
10. 1 sector TX / RX, RX DIV
11. 2 sector TX / RX, RX DIV
12. 3 sector TX / RX, RX DIV

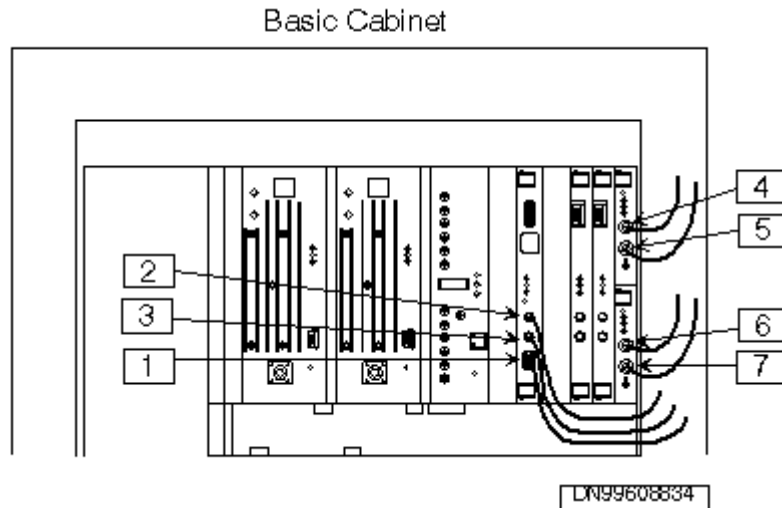


A-bis connections GSM900 en GSM1800



Citytalk

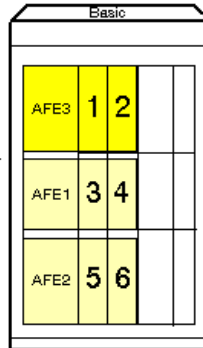
Cabling of common units GSM900 e GSM1800



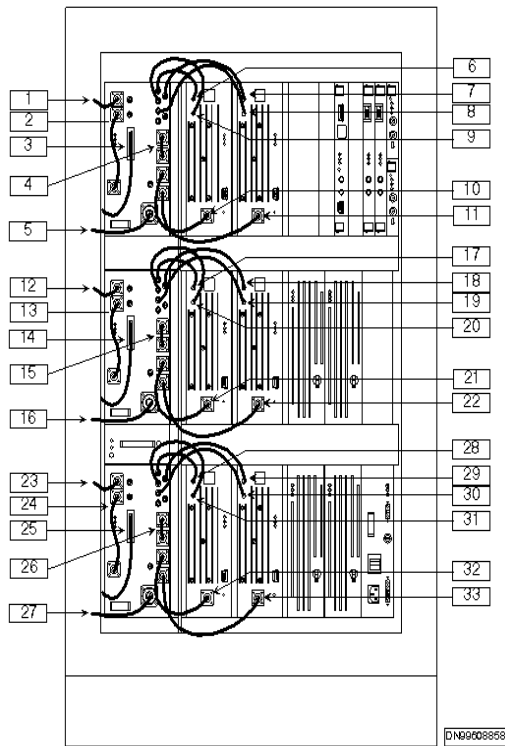
Cable No.	Cable Code	Cable Label	From Unit / Connector	To Unit / Connector
1	990650	460	Roof / MMI Interface conn.	BCFA / MMI conn.
		013		
2	990599	017	Roof / FCLK Test	BCFA / FCLK
		462		
3	990599	012	Roof / 13 MHz Test	BCFA / 13 MHz
		461		
4	991185	001	Roof / DMR1 IN+	RR11 / IN+
		403		
5	991185	002	Roof / DMR1 OUT-	RR11 / OUT-
		404		
6	991186	003	Roof / DMR2 IN+	RR12 / IN+
		405		
7	991186	0	Roof / DMR2 OUT-	RR12 / OUT-
		04		
		406		

2+2+2 AFEx combining met duplex en diversity GSM900 en GSM1800

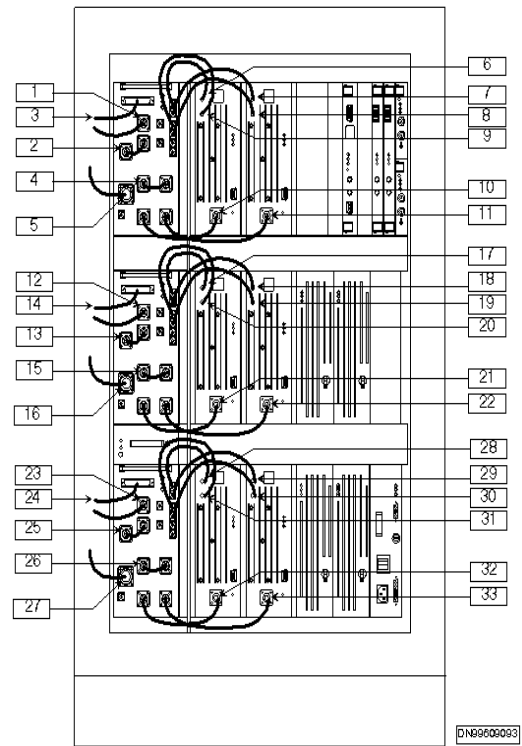
2+2+2 TRX
with AFE



Cabling of AFEA

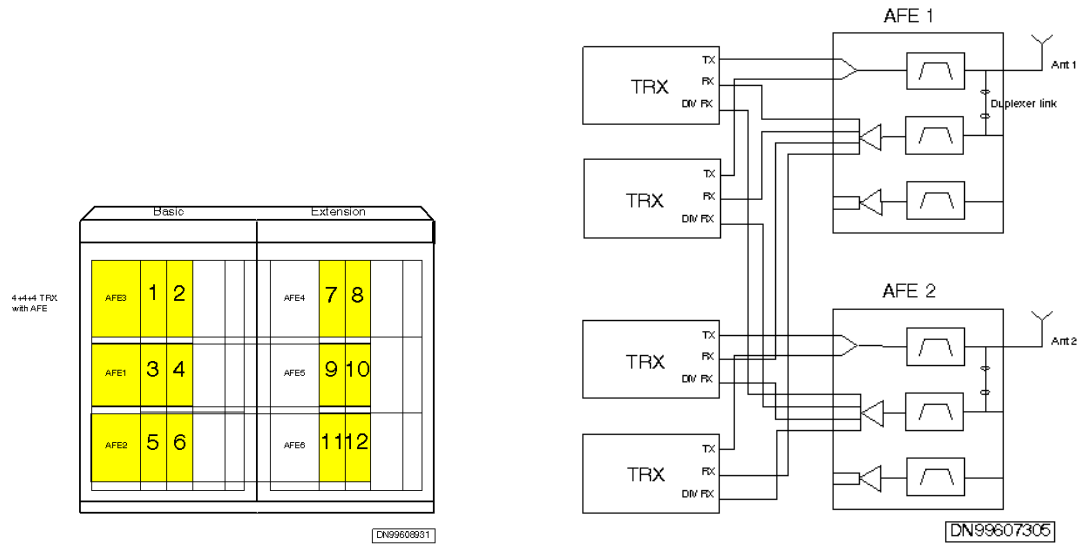


Cabling of AFEB

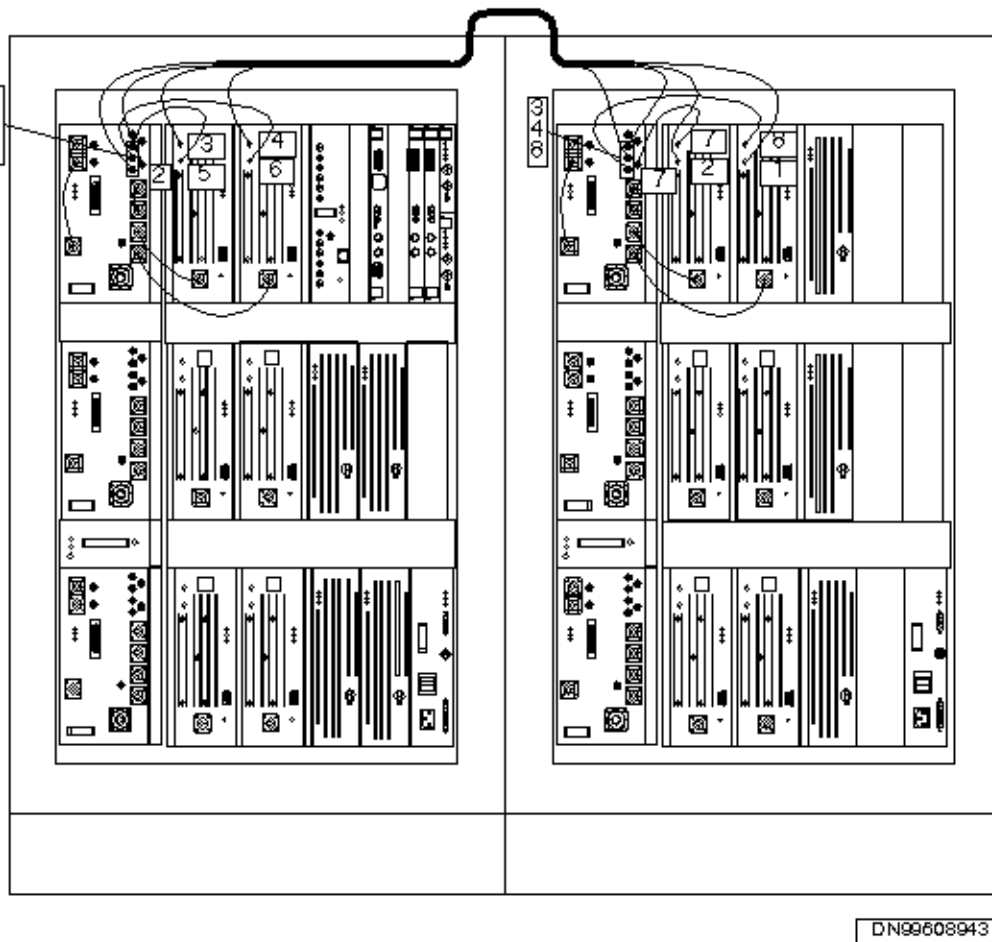


Cable No. in Figure	Cable Code	Cable Label	From Unit / Connector	To Unit / Connector
1	991801	352 408	Roof / ANT 2	AFE3 / DIV RX ANT
2			Preinstalled	
3	991175	365 R312	Common backplane	AFE3 / X1
4			Preinstalled	
5	991795	363 400	Roof / ANT 1	AFE3 / ANTENNA
6	990603	No label	AFE3 / DIV RX 1	TRX1 / DIV RX
7	990602	No label	AFE3 / DIV RX 2	TRX2 / DIV RX
8	990604	No label	AFE3 / RX 2	TRX2 / RX
9	990626	No label	AFE3 / RX 1	TRX1 / RX
10	990600	No label	AFE3 / TX1	TRX1 / TX
11	990601	No label	AFE3 / TX2	TRX2 / TX
12	991799	112/152 410	Roof / ANT 4	AFE1 / DIV RX ANT
13			Preinstalled	
14	990643	139/165 R270	TRX backplane 1	AFE1 / X1
15			Preinstalled	
16	991794	163 401	Roof / ANT 3	AFE1 / ANTENNA
17	990603	No label	AFE1 / DIV RX 1	TRX3 / DIV RX
18	990602	No label	AFE1 / DIV RX 2	TRX4 / DIV RX
19	990604	No label	AFE1 / RX 2	TRX4 / RX
20	990626	No label	AFE1 / RX 1	TRX3 / RX
21	990600	No label	AFE1 / TX1	TRX3 / TX
22	990601	No label	AFE1 / TX2	TRX4 / TX
23	991797	252 412	Roof / ANT 6	AFE2 / DIV RX ANT
24			Preinstalled	
25	990644	265 R170	TRX backplane 2	AFE2 / X1
26			Preinstalled	
27	991793	131 / 263 402	Roof / ANT 5	AFE2 / ANTENNA
28	990603	No label	AFE2 / DIV RX 1	TRX5 / DIV RX
29	990602	No label	AFE2 / DIV RX 2	TRX6 / DIV RX
30	990604	No label	AFE2 / RX 2	TRX6 / RX
31	990626	No label	AFE2 / RX 1	TRX5 / RX
32	990600	No label	AFE2 / TX1	TRX5 / TX
33	990601	No label	AFE2 / TX2	TRX6 / TX

4+4+4 AFEx combining met dual duplex en diversity GSM900 en GSM1800

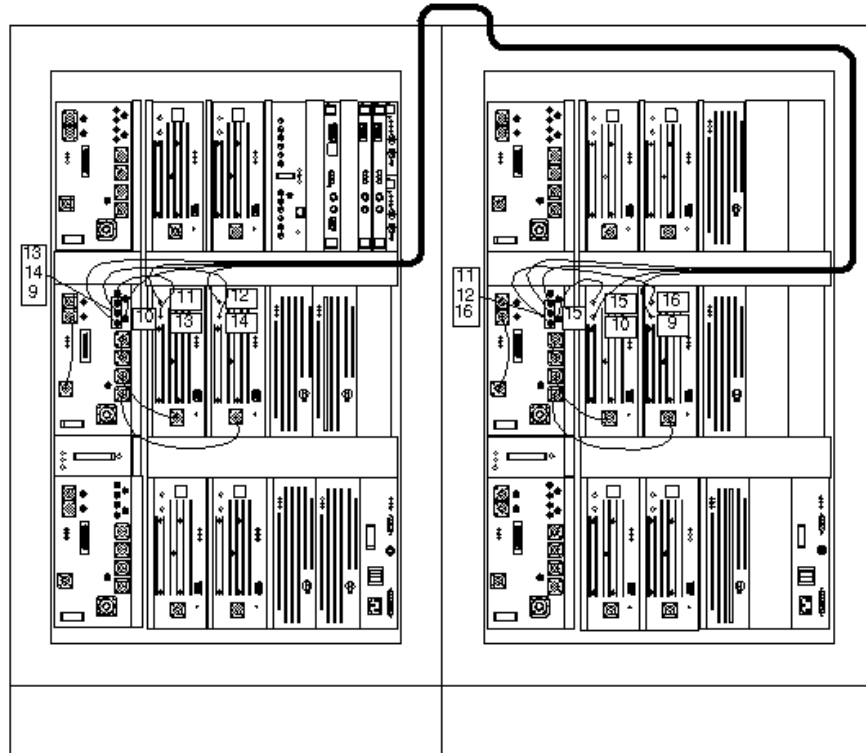


Cabling of AFEA 1 sector



Cable No.	Cable Code	Cable Label	From Unit / Connector	To Unit / Connector
1	991571	368 / 302 605 / 215	AFE3 / RX 4	TRX8 / RX
2	990591	367 / 305 602 / 216	AFE3 / RX 3	TRX7 / RX
3	990589	301 658 / 221	TRX1 / DIV RX	AFE4 / RX 1
4	991571	304 656 / 222	TRX2 / DIV RX	AFE4 / RX 2
5	990626	No label	AFE3 / RX 1	TRX1 / RX
6	990604	No label	AFE3 / RX 2	TRX2 / RX
7	990603	No label	AFE4 / RX 3	TRX7 / DIV RX
8	990602	No label	AFE4 / RX 4	TRX8 / DIV RX

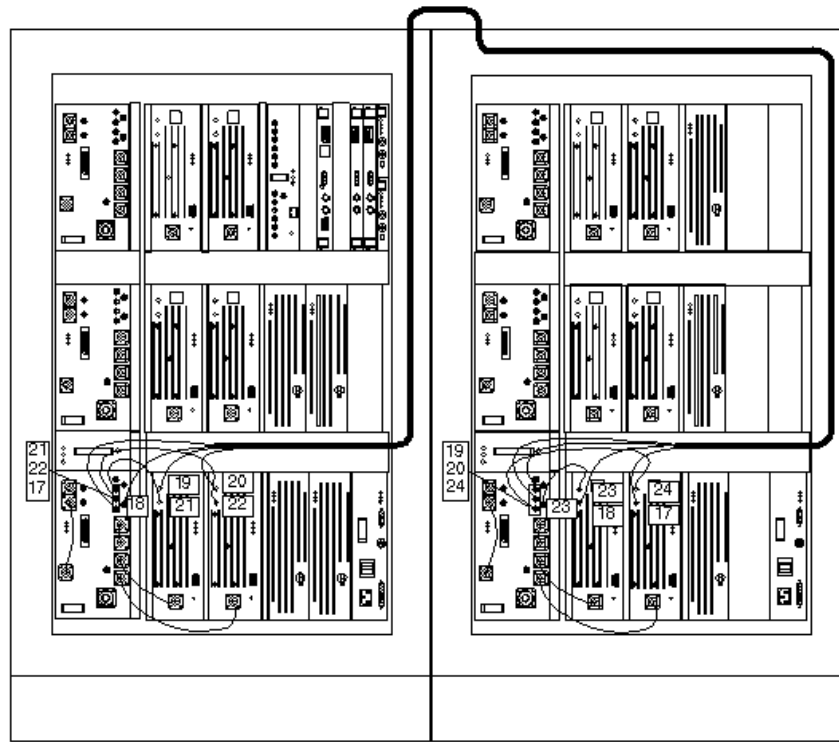
Cabling of AFEA 2 sector



DN99608953

Cable No.	Cable Code	Cable Label	From Unit / Connector	To Unit / Connector
9	993435_*	118 / 167 705	AFE1 / RX 4	TRX10 / RX
10	993435_*	117 / 168 702	AFE1 / RX 3	TRX9 / RX
11	993435_*	123 / 101 701 / 757	TRX3 / DIV RX	AFE5 / RX 1
12	993435_*	124 / 104 704 / 755	TRX4 / DIV RX	AFE5 / RX 2
13	990626	No label	AFE1 / RX 1	TRX3 / RX
14	990604	No label	AFE1 / RX 2	TRX 4 / RX
15	990603	No label	AFE5 / RX 3	TRX9 / DIV RX
16	990602	No label	AFE5 / RX 4	TRX10 / DIV RX

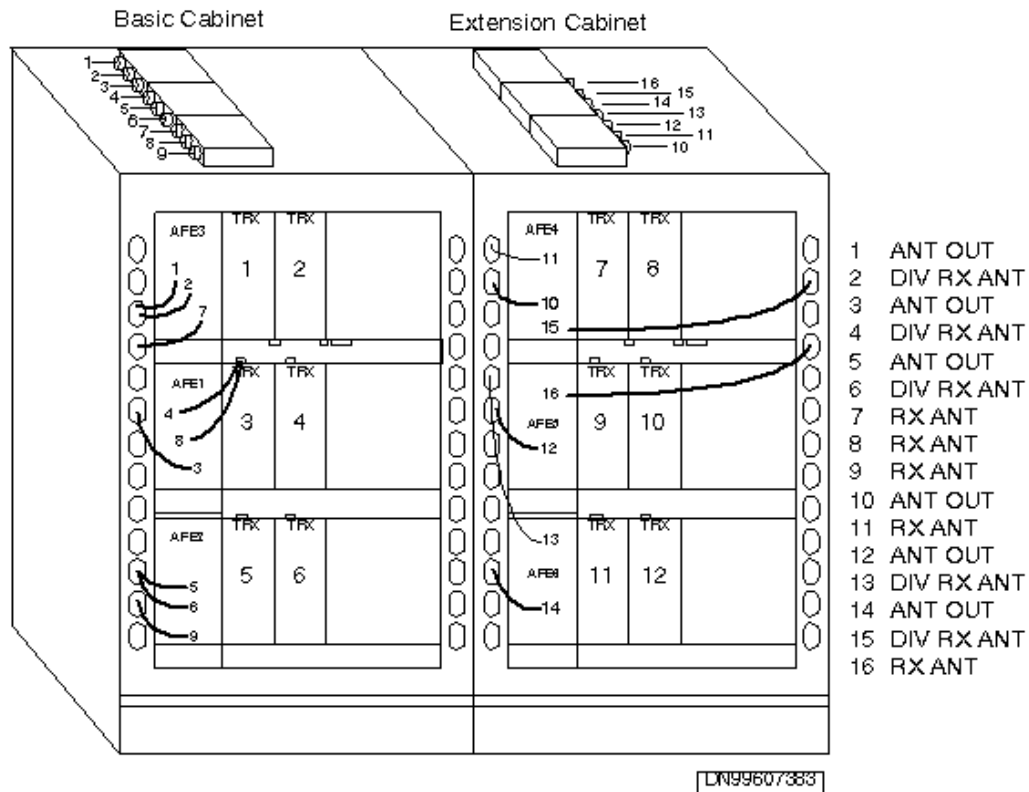
Cabling of AFEA 3 sector



DN9960367

Cable No.	Cable Code	Cable Label	From Unit / Connector	To Unit / Connector
17	993436_*	202 / 267 315 / 805	AFE2 / RX 4	TRX12 / RX
18	993436_*	201 / 268 321 / 802	AFE2 / RX 3	TRX11 / RX
19	993436_*	204 / 201 322 / 857	TRX5 / DIV RX	AFE6 / RX 1
20	993436_*	205 / 204 316 / 855	TRX6 / DIV RX	AFE6 / RX 2
21	990626	No label	AFE2 / RX 1	TRX5 / RX
22	990604	No label	AFE2 / RX 4	TRX6 / RX
23	990603	No label	AFE6 / RX 3	TRX11 / DIV RX
24	990602	No label	AFE6 / RX 4	TRX12 / DIV RX

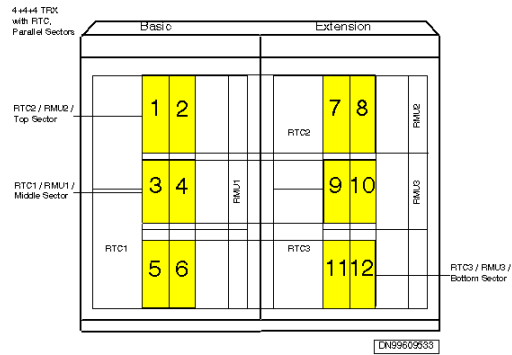
Antenna connections AFEx basic en extention cabinet GSM900 en GSM1800



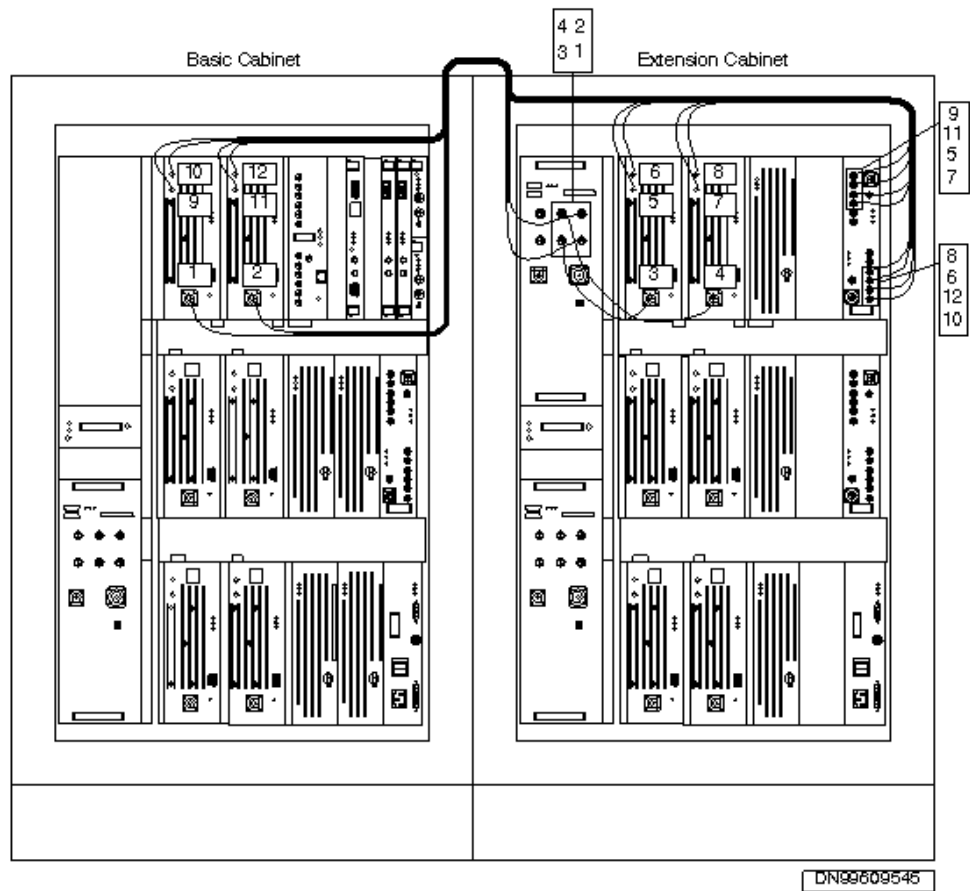
Basic cabinet antenne aansluitingen

1. TX / RX 1 sector Antenne
2. RX Div. 1 sector Antenne
3. TX / RX 2 sector Antenne
4. RX Div. 2 sector Antenne
5. TX / RX 3 sector Antenne
6. RX Div. 3 sector Antenne

4+4+4 RTCx combining met duplex en diversity GSM900 en GSM1800

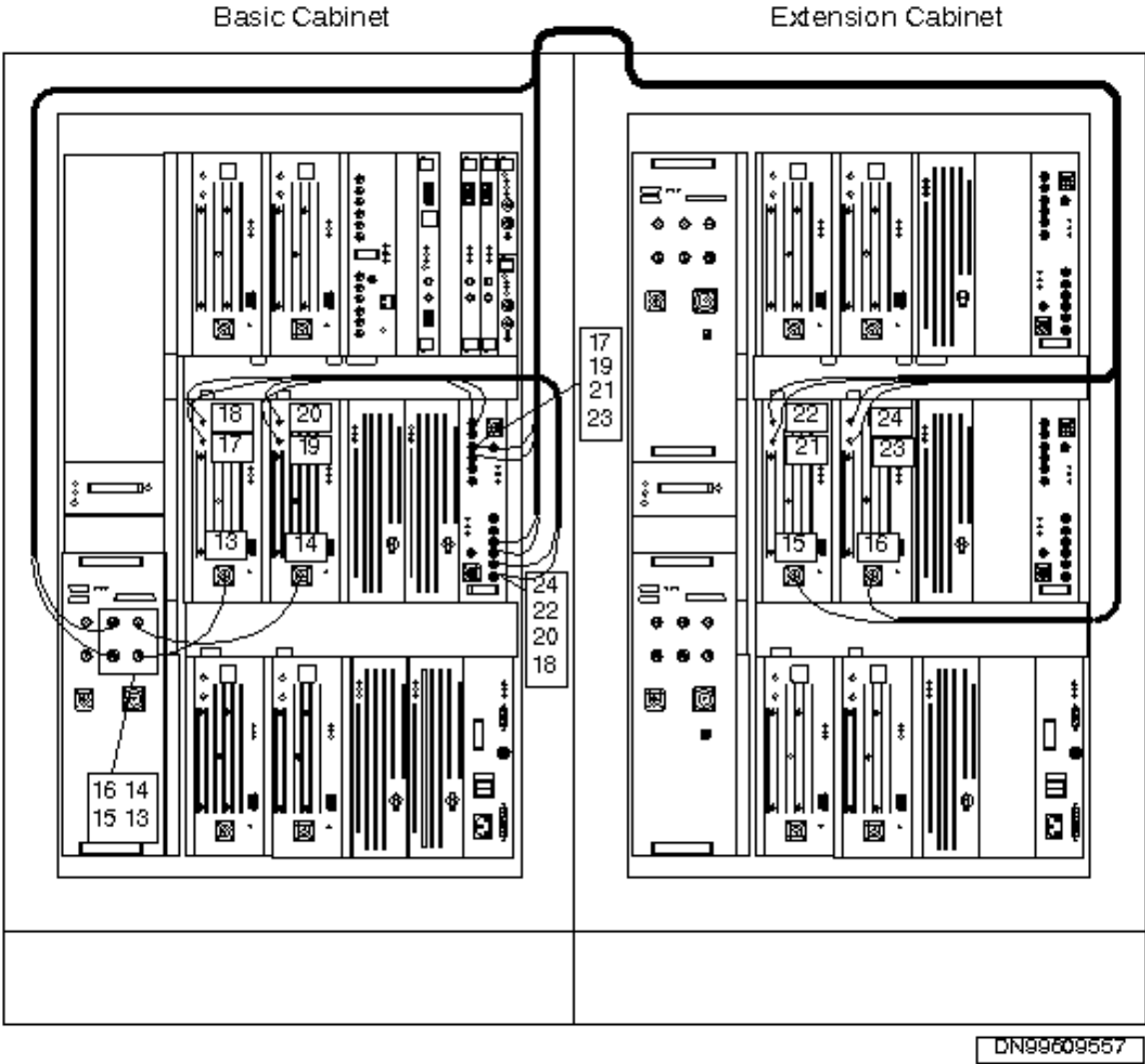


Cabling of RTCx 1 sector



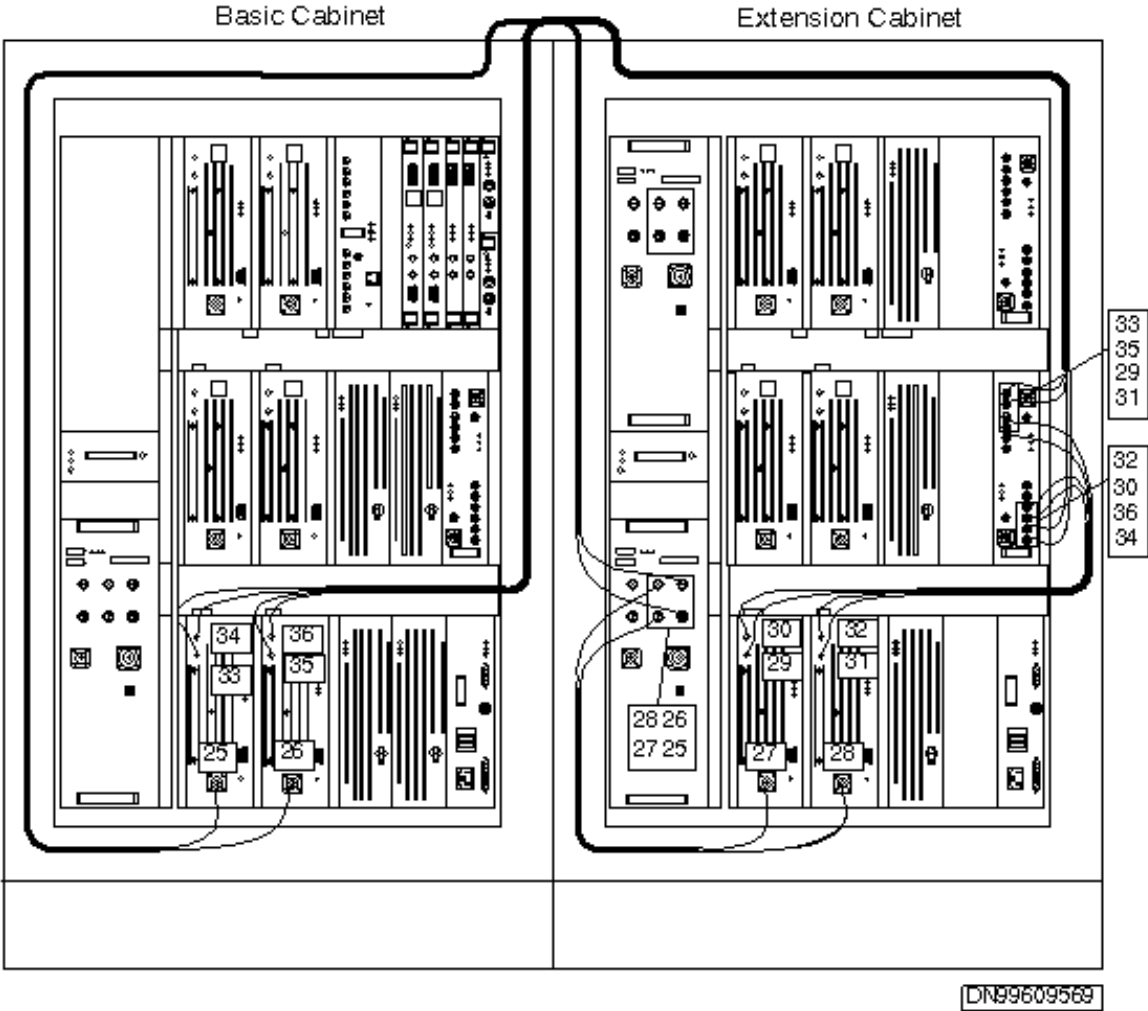
Cable No.	Cable Code	Cable Label	From Unit/Connector	To Unit/Connector
1	990629	234 303	RTC2/TX1	TRX1/TX
2	990755	235 306	RTC2/TX2	TRX2/TX
3	991700	132/232/323 103/603/703	RTC2/TX3	TRX7/TX
4	991701	133/233/333 106/606/706	RTC2/TX4	TRX8/TX
5	990594	102 115	TRX7/RX	RMU2/RX3
6	990593	101 121	TRX7/DIV RX	RMU2/DIV RX3
7	990594	105 116	TRX8/RX	RMU2/RX4
8	990594	104 122	TRX8/DIV RX	RMU2/DIV RX4
9	991571	368/302 605/215	TRX1/RX	RMU2/RX1
10	990589	301 658/221	TRX1/DIV RX	RMU2/DIV RX1
11	990591	367/305 602/216	TRX2/RX	RMU2/RX2
12	991571	304 656/222	TRX2/DIV RX	RMU2/DIV RX2

Cabling of RTCx 2 sector



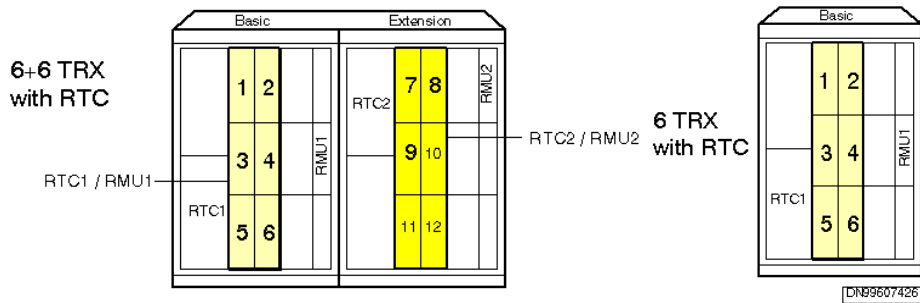
Cable No.	Cable Code	Cable Label	From Unit/Connector	To Unit/Connector
13	991700	132/232/323 103/603/703	RTC1/TX 1	TRX3/TX
14	991701	133/233/333 106/606/706	RTC1/TX 2	TRX4/TX
15	993437_*	134 703	RTC1/TX 3	TRX9/TX
16	993437_*	135 706	RTC1/TX 4	TRX10/TX
17	990594	102 115	TRX3/RX	RMU1/RX 1
18	990593	101 121	TRX3/DIV RX	RMU1/DIV RX 1
19	990594	105 116	TRX4/RX	RMU1/RX2
20	990594	104 122	TRX4/DIV RX	RMU1 DIV RX 2
21	993435_*	702 117/168	TRX9/RX	RMU1/RX 3
22	993435_*	701/757 123/101	TRX9/DIV RX	RMU1/DIV RX3
23	993435_*	705 118/167	TRX10/RX	RMU1/RX 4
24	993435_*	704/755 124/104	TRX10/DIV RX	RMU1/DIV RX 4
* Cables are included in the Horizontal Cable kit				

Cabling of RTCx 3 sector

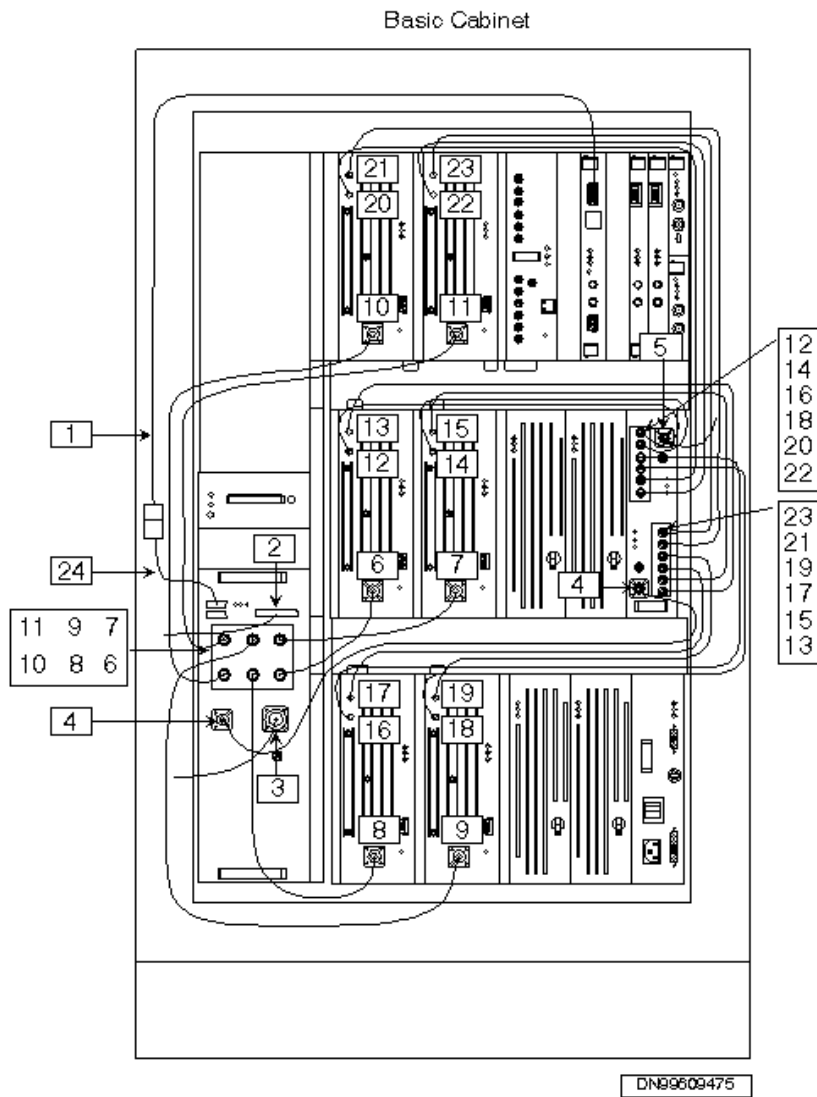


Cable No.	Cable Code	Cable Label	From Unit/ Connector	To Unit/ Connector
25	993438_*	332 203	RTC3/TX 1	TRX5/TX
26	993438_*	333 206	RTC3/TX 2	TRX6/TX
27	991702	134/234/334 203/703/803	RTC3/TX 3	TRX11/TX
28	990605	135/235/335 206/706/806	RTC3/TX4	TRX12/TX
29	990595	202 215/117	TRX11/RX	RMU3/RX 3
30	990595	201 221/123	TRX11/DIV RX	RMU3/DIV RX 3
31	990596	205 216/118	TRX12/RX	RMU3/RX 4
32	990596	204 222/124	TRX12/DIV RX	RMU3/DIV RX 4
33	993436_*	202/267 315/805	TRX5/RX	RMU3/OUT 1
34	993436_*	201/268 321/802	TRX5/DIV RX	RMU3/DIV OUT 1
35	993436_*	205/204 316/855	TRX6/RX	RMU3/OUT 2
36	993436_*	204/201 322/857	TRX6/DIV RX	RMU3/DIV OUT 2

6+6 en 6 RTCx combining met duplex en diversity GSM900 en GSM1800



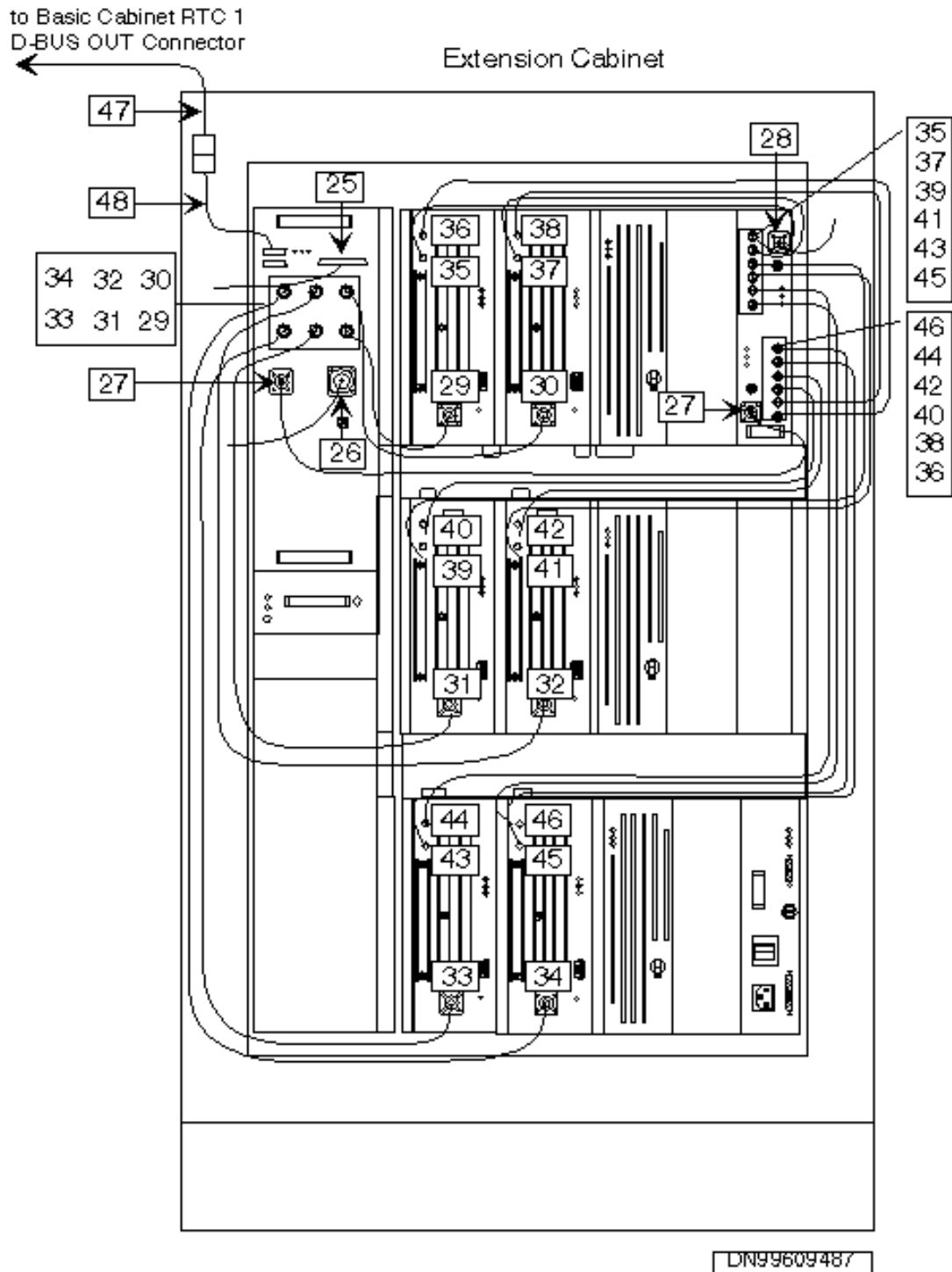
Cabling of RTCx 1 sector



Cable No.	Cable Code	Cable Label	From Unit/ Connector	To Unit/ Connector
1	991730	141 011	BCFA	Cable 992638
2	990643	139/165 R270	TRX backplane A	RTC1/PWR IN
3	991793	131/263 402	Roof/ANT3	RTC1/ANT OUT
4	990606	138/238/338 112/212/312	RTC1/RX OUT	RMU1/MAIN ANT
5	991799	410 112/152	Roof/ANT8	RMU1/DIV RX ANT
6	991700	132/232/323 103/603/703	RTC1/TX3	TRX3/TX
7	991701	133/233/333 106/606/706	RTC1/TX4	TRX4/TX
8	991702	134/234/334 203/703/803	RTC1/TX5	TRX5/TX
9	990605	135/235/335 106/706/806	RTC1/TX6	TRX6/TX
10	990630	136/236 303/803	RTC1/TX1	TRX1/TX
11	990628	137/237 306/806	RTC1/TX2	TRX2/TX
12	990594	102 115	TRX3/RX	RMU1/RX3
13	990593	101 121	TRX3/DIV RX	RMU1/DIV RX3
14	990594	105 116	TRX4/RX	RMU1/RX4
15	990594	104 122	TRX4/DIV RX	RMU1/DIV RX4

Cable No.	Cable Code	Cable Label	From Unit/ Connector	To Unit/ Connector
16	990595	202 215/117	TRX5/RX	RMU1/RX5
17	990595	201 221/123	TRX5/DIV RX	RMU1/DIV RX5
18	990596	205 216/118	TRX6/RX	RMU1/RX6
19	990596	204 222/124	TRX6/DIV RX	RMU1/DIV RX6
20	990587	302 119	TRX1/RX	RMU1/RX1
21	990597	301 125	TRX1/DIV RX	RMU1/DIV RX1
22	990597	305 120	TRX2/RX	RMU1/RX2
23	990597	304 126	TRX2/DIV RX	RMU1/DIV RX2
24	992638	141/241/341 141/241/341	Cable 991730	RTC1/D-bus IN

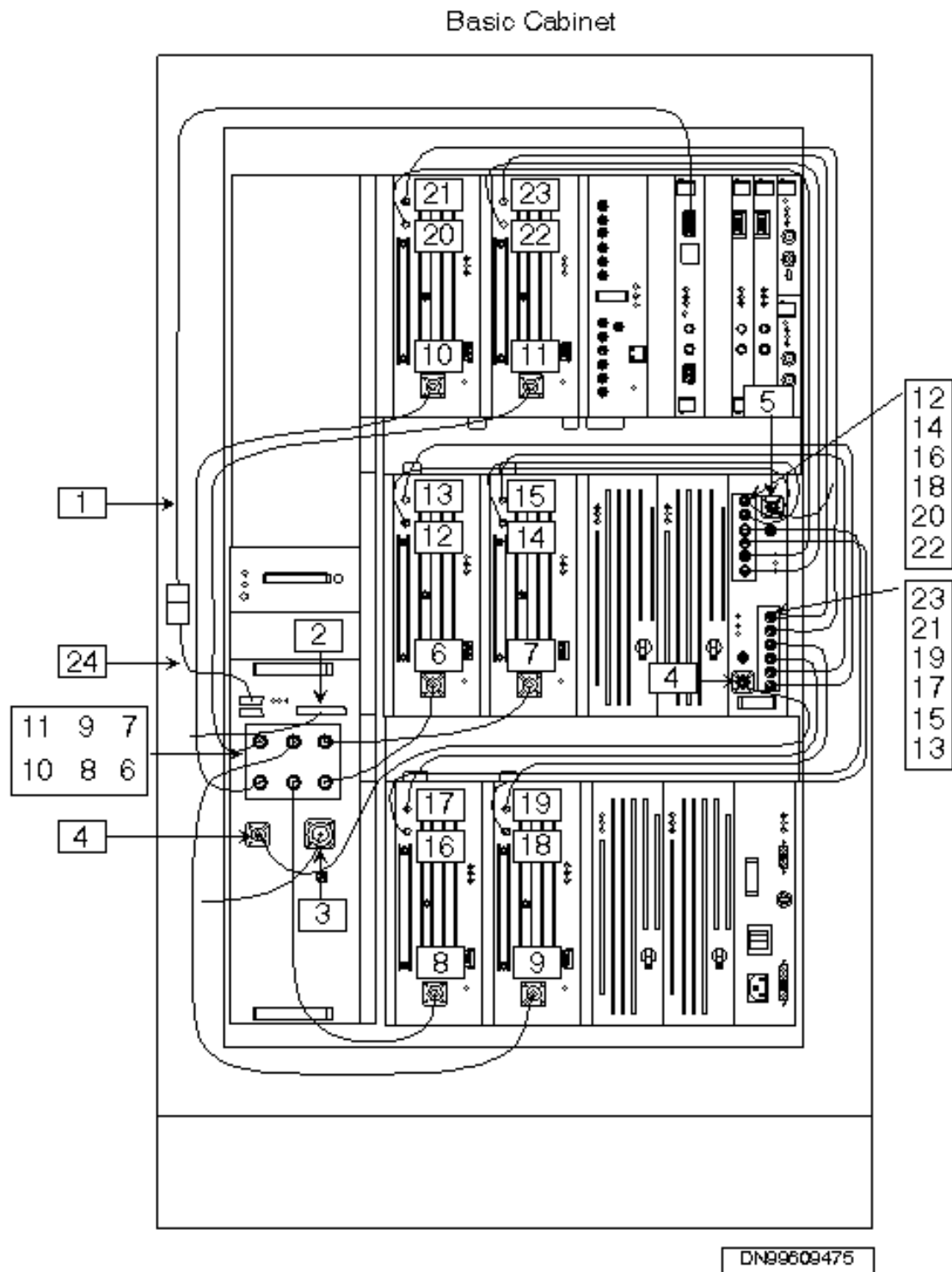
Cabling of RTCx 2 sector



Cable No.	Cable Code	Cable Label	From Unit/ Connector	To Unit/ Connector
25	990644	239/665 R670	TRX backplane C	RTC2/PWR IN
26	991795	231/663 900	Roof/ANT 10	RTC2/ANTENNA
27	990606	138/238/338 112/212/312	RTC2/RX OUT	RMU2/MAIN ANT
28	991801	212 908	Roof/ANT 15	RMU2/DIV RX ANT
29	991700	132/232/323 103/603/703	RTC2/TX1	TRX7/TX
30	991701	133/233/333 106/606/706	RTC2/TX2	TRX8/TX
31	991702	134/234/334 203/703/803	RTC2/TX3	TRX9/TX
32	990605	135/235/335 106/706/806	RTC2/TX4	TRX10/TX
33	990630	136/236 303/803	RTC2/TX5	TRX11/TX
34	990628	137/237 306/806	RTC2/TX6	TRX12/TX
35	990594	102 115	TRX7/RX	RMU2/RX1
36	990593	101 121	TRX7/DIV RX	RMU2/DIV RX1
37	990594	105 116	TRX8/RX	RMU2/RX2
38	990594	104 122	TRX8/DIV RX	RMU2/DIV RX2
39	990595	202 215/117	TRX9/RX	RMU2/RX3
40	990595	201 221/123	TRX9/DIV RX	RMU2/DIV RX3
41	990596	205 216/118	TRX10/RX	RMU2/RX4
42	990596	204 222/124	TRX10/DIV RX	RMU2/DIV RX4

Cable No.	Cable Code	Cable Label	From Unit/ Connector	To Unit/ Connector
43	990587	302 119	TRX11/RX	RMU2/RX5
44	990597	301 125	TRX11/DIV RX	RMU2/DIV RX5
45	990597	305 120	TRX12/RX	RMU2/RX6
46	990597	304 126	TRX12/DIV RX	RMU2/DIV RX6
47	991731	142 241	RTC1/D-bus OUT	Cable 992638
48	992638	141/241/341 141/241/341	Cable 991731	RTC2/D-bus IN

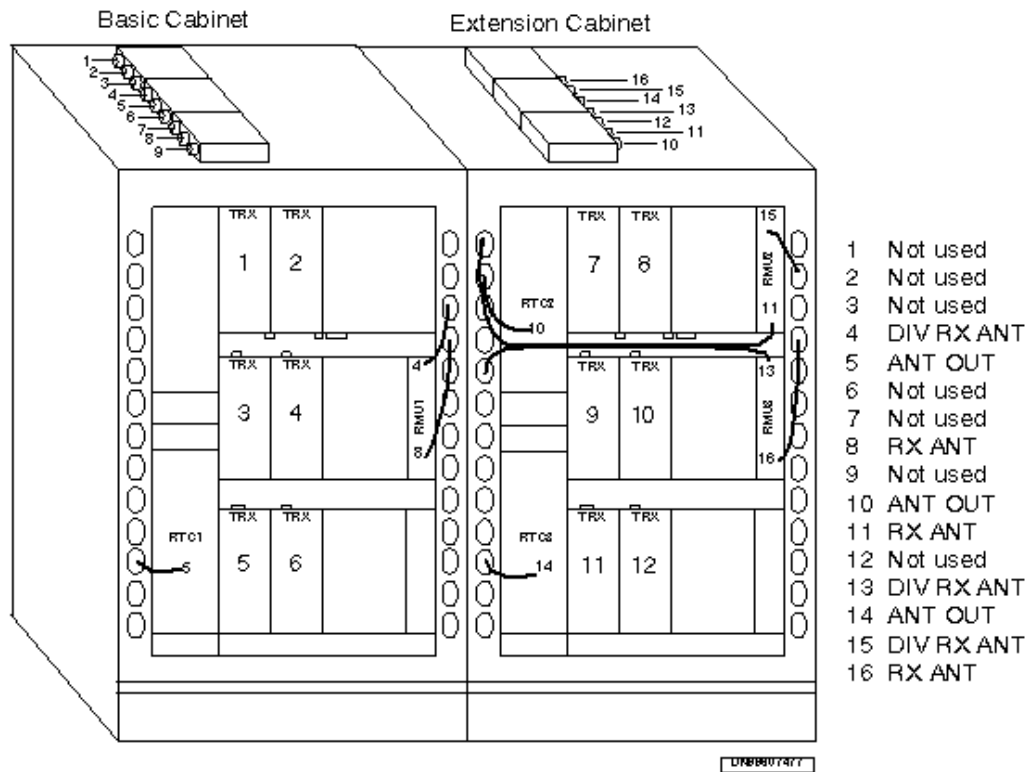
Cabling of RTCx 3 sector



Cable No.	Cable Code	Cable Label	From Unit/ Connector	To Unit/ Connector
1	991730	141 011	BCFA	Cable 992638
2	990643	139/165 R270	TRX backplane A	RTC1/PWR IN
3	991793	131/263 402	Roof/ANT3	RTC1/ANT OUT
4	990606	138/238/338 112/212/312	RTC1/RX OUT	RMU1/MAIN ANT
5	991799	410 112/152	Roof/ANT8	RMU1/DIV RX ANT
6	991700	132/232/323 103/603/703	RTC1/TX3	TRX3/TX
7	991701	133/233/333 106/606/706	RTC1/TX4	TRX4/TX
8	991702	134/234/334 203/703/803	RTC1/TX5	TRX5/TX
9	990605	135/235/335 106/706/806	RTC1/TX6	TRX6/TX
10	990630	136/236 303/803	RTC1/TX1	TRX1/TX
11	990628	137/237 306/806	RTC1/TX2	TRX2/TX
12	990594	102 115	TRX3/RX	RMU1/RX3
13	990593	101 121	TRX3/DIV RX	RMU1/DIV RX3
14	990594	105 116	TRX4/RX	RMU1/RX4
15	990594	104 122	TRX4/DIV RX	RMU1/DIV RX4

Cable No.	Cable Code	Cable Label	From Unit/ Connector	To Unit/ Connector
16	990595	202 215/117	TRX5/RX	RMU1/RX5
17	990595	201 221/123	TRX5/DIV RX	RMU1/DIV RX5
18	990596	205 216/118	TRX6/RX	RMU1/RX6
19	990596	204 222/124	TRX6/DIV RX	RMU1/DIV RX6
20	990587	302 119	TRX1/RX	RMU1/RX1
21	990597	301 125	TRX1/DIV RX	RMU1/DIV RX1
22	990597	305 120	TRX2/RX	RMU1/RX2
23	990597	304 126	TRX2/DIV RX	RMU1/DIV RX2
24	992638	141/241/341 141/241/341	Cable 991730	RTC1/D-bus IN

Antenna connections RTCx basic en extention cabinet GSM900 en GSM1800

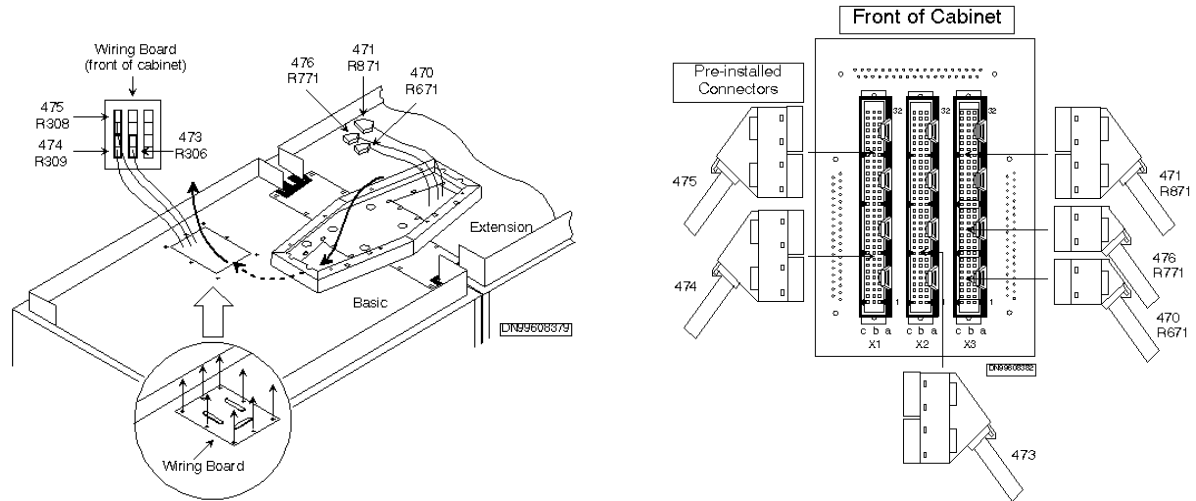


Basic cabinet antenne aansluitingen

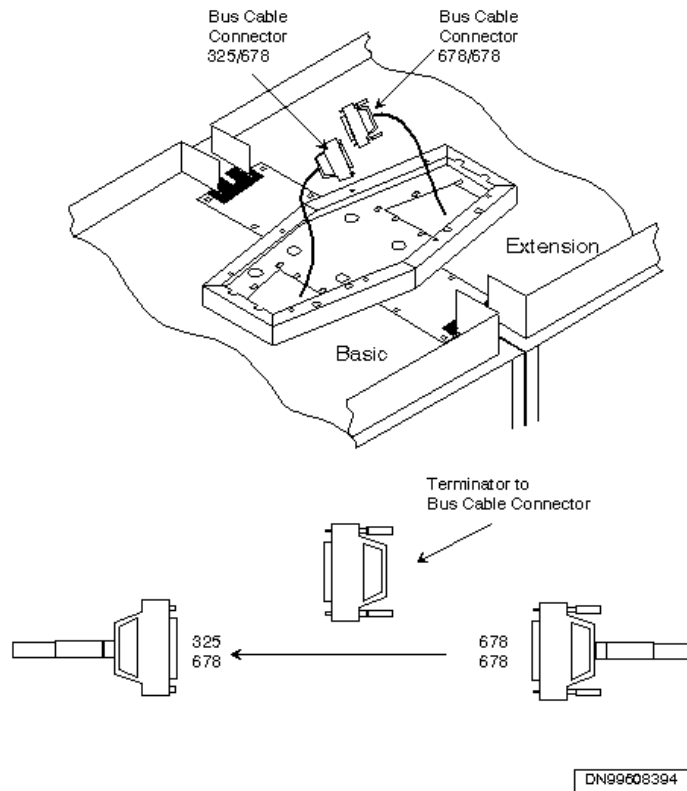
1. TX / RX 1 sector Antenne
2. RX Div. 1 sector Antenne
3. TX / RX 2 sector Antenne
4. RX Div. 2 sector Antenne
5. TX / RX 3 sector Antenne
6. RX Div. 3 sector Antenne

Extension cabinet cables connections to the basic cabinet

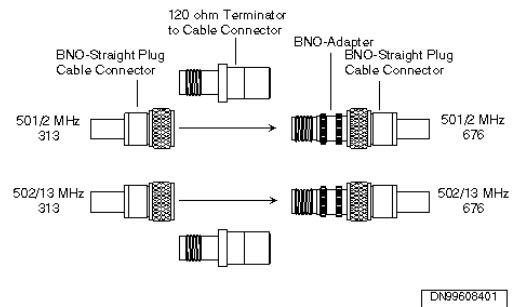
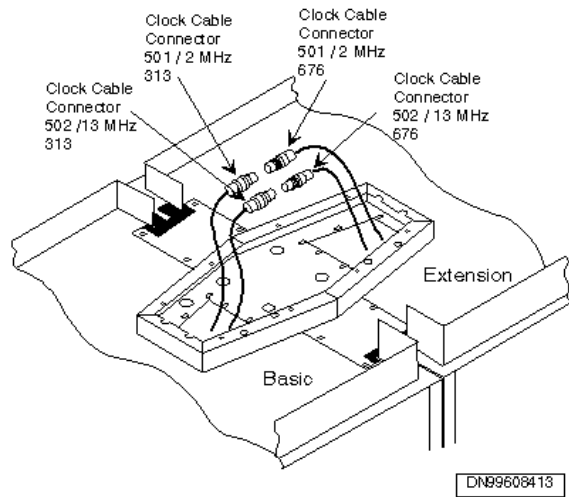
Alarm cables



Bus cables

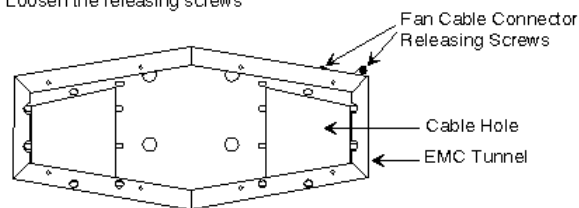


Clock cables

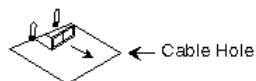


Fan Cables

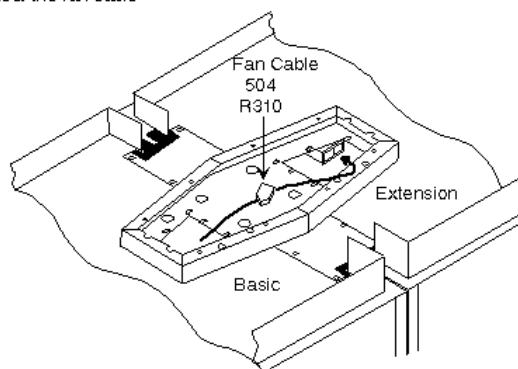
- (A) Loosen the releasing screws



- (B) Pull the connector towards the opening



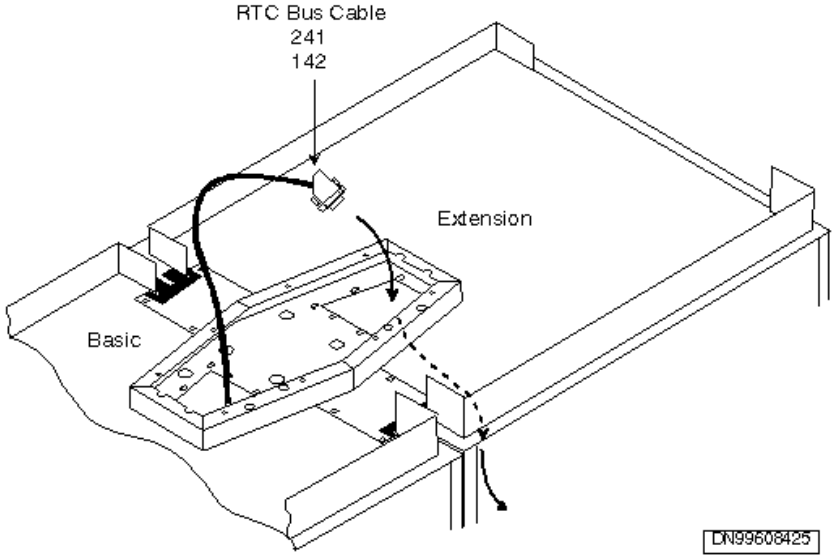
- (C) Connect the fan cable



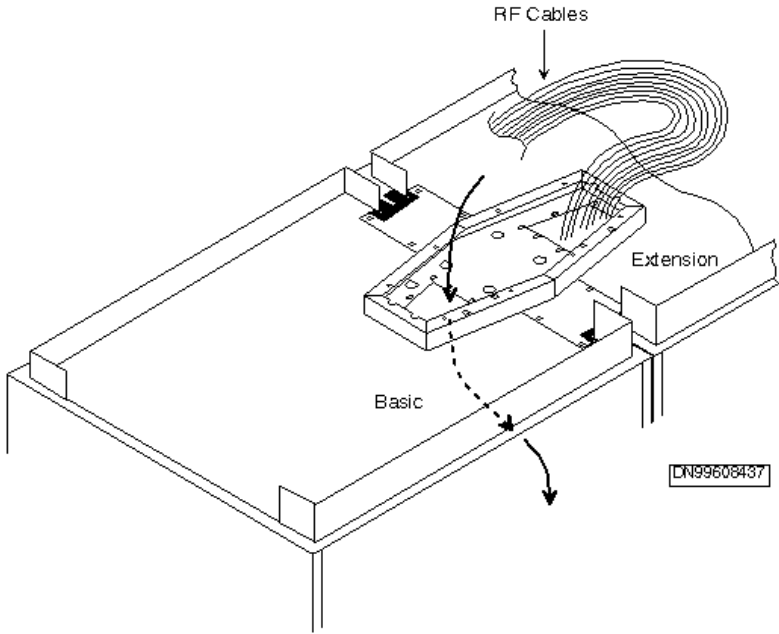
- (D) Push the connector firmly into position and tighten the screws



RTCx bus cables

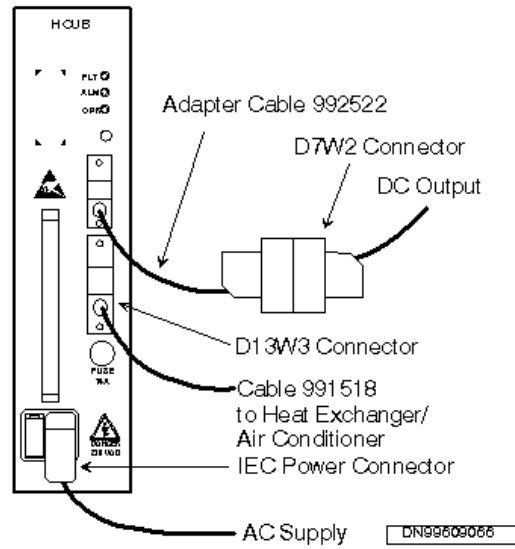


RF cables

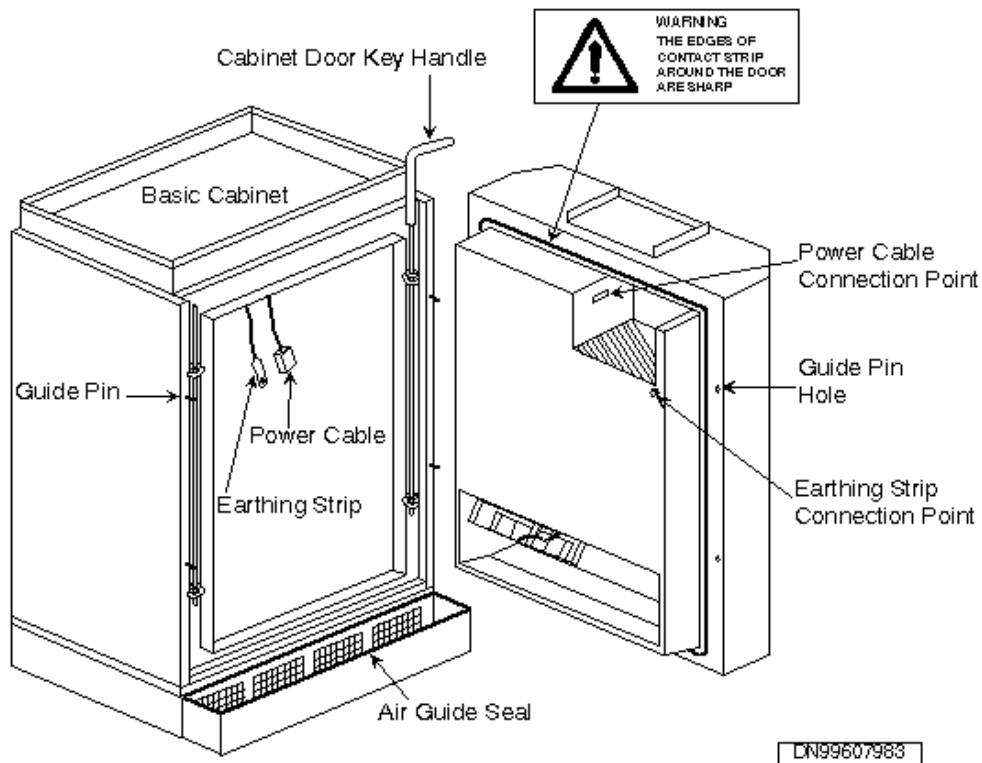


Basic en extension cabinet connections to HCUB en Heat exchanger

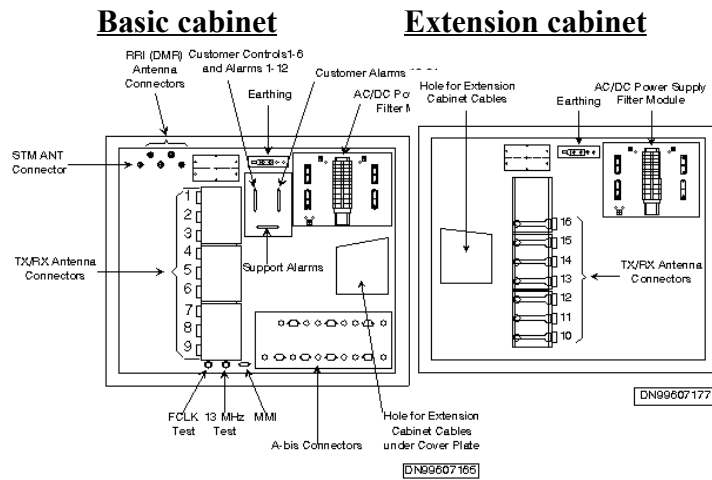
HCUB cabling



Heat exchanger cabling



Antenna connections GSM900 en GSM1800



A-bis connections GSM900 en GSM1800

