



## **RRU3826 Description**

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# 1 Introduction

The RRU3826 is the outdoor remote radio unit. It is the RF module of the distributed NodeB and is installed close to the antenna.

The RRU3826 performs modulation, demodulation, data processing, and combination and division of baseband signals and RF signals.

## 1.1 Appearance

Figure 1-1 show a RRU3826 respectively.

**Figure 1-1** RRU3826



## 1.2 Physical Ports

RRUs have a modular design. Its external ports are located in the cabling cavity or at the bottom of the module.

**Table 1-1** Physical ports on the RRU3826

Port	Connector	Quantity	Remarks
Power supply port	OT terminal	1	Easy power connector

Port	Connector	Quantity	Remarks
Optical port	DLC connector	2	Transport ports
Alarm port	DB15 connector	1	Port for two dry contact alarm signals and one RS485 signal
Main TX and RX port	DIN round waterproof connector	1	RF ports
Diversity TX and RX port	DIN round waterproof connector	1	
Inter-RRU port	2W2 connector	1	Other ports
Communication port for the RET antenna	DB9 connector	1	

# 2 Technical Specifications

## 2.1 Frequency Band

Table 2-1 RRU3826 frequency band

Frequency Band (MHz)	RX Frequency Band (MHz)	TX Frequency Band (MHz)
2100	1920 to 1980	2110 to 2170

## 2.2 Capacity

Table 2-2 RRU3826 Capacity

Module	Capacity
RRU3826	It supports four carriers.

## 2.3 Receiver Sensitivity

Table 2-3 RRU3826 receiver sensitivity

Frequency Band (MHz)	1-Way Receiver Sensitivity (dBm)	2-Way Receiver Sensitivity (dBm)	4-Way Receiver Sensitivity (dBm)
2100	-125.8	-128.6	-131.3

**NOTE**

As recommended in 3GPP TS25.104, the receiver sensitivity (full band) is measured at the antenna connector provided that the channel rate reaches 12.2 kbit/s and the Bit Error Rate (BER) is within 0.001.

## 2.4 Output Power

The RRU3826 supports four carriers, and its output power at the antenna connector reaches 80 W.

**Table 2-4** RRU3826 output power

Number of Carriers	Output Power per Carrier (W)
1	80
2	40
3	26
4	20

**NOTE**

Maximum output power = Maximum output power of the PA - Internal losses. The maximum output power is measured at the antenna connector of the RF module.

## 2.5 Power Consumption

**NOTE**

- The typical power consumption is measured with the equipment 40% loaded at a temperature of 25 °C.
- The maximum power consumption is measured with the equipment 100% loaded at a temperature of 25 °C.

**Table 2-5** DBS3900 power consumption

Configu-ration	Output Power per Carrier (W)	Typical power consumption (W)	Maximum power consumption (W)	Power backup duration based on new batteries and typical power consumption (hour)	
				50Ah	92Ah
3 x 1	20	400	480	5.5	11.0
3 x 2	20	490	650	4.2	8.8
3 x 3	20	630	860	3.16	6.6
3 x 4	20	710	1030	2.8	5.7

**NOTE**

- In the 3x1 or 3x2 configuration, one WBBPb4 and one WMPT are configured.
- In the 3x3 or 3x4 configuration, two WBBPb4 units and one WMPT are configured.

**Table 2-6** BTS3900C power consumption

Configu-ration	Output Power per Carrier (W)	Typical power consumption (W)	Maximum power consumption (W)	Power backup duration based on new batteries and typical power consumption (hour)	
				50Ah	92Ah
1 x 1	20	190	240	12.6	23.2
1 x 2	20	220	290	10.9	20.0
1 x 3	20	260	350	9.0	16.9

**NOTE**

- One WBBPb4 and one WMPT are configured.

## 2.6 Input Power

**Table 2-7** Input power

Item	Specification
Input power	<ul style="list-style-type: none"> <li>• -48 V DC, voltage range: -36 V DC to -57 V DC</li> </ul>

## 2.7 Equipment Specifications

**Table 2-8** Equipment specifications

Item	Specification
Dimensions (H x W x D)	<ul style="list-style-type: none"> <li>- 400 mm x 300 mm x 100 mm (without the housing and connectors)</li> <li>- 400 mm x 300 mm x 120 mm (with the housing)</li> </ul>
Weight	<ul style="list-style-type: none"> <li>- Without the housing: 14 kg</li> <li>- With the housing: 15 kg</li> </ul>



## 2.8 Environment Specifications

**Table 2-9** Environment specifications

Item	Specification
Operating temperature	-40°C to +55°C (without solar radiation) -40°C to +50°C (with solar radiation)
Relative humidity	5% RH to 100% RH
Absolute humidity	1g/m <sup>3</sup> - 30g/m <sup>3</sup>
Atmospheric pressure	70 kPa to 106 kPa
Operating environment	Compliance standards:  3GPP TS 25.141 ETSI EN 300019-1-4 V2.1.2 (2003-04) Class 4.1: "Non-weather protected locations"
Shockproof protection	NEBS GR63 zone4
Ingress Protection (IP) rating	IP65

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# 3 Acronyms and Abbreviations

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**Table 3-1** Acronyms and abbreviations

<b>Acronym and Abbreviation</b>	<b>Full Name</b>
BBU	Baseband control Unit
BER	Bit Error Ratio
RRU	Radio Remote Unit
WBBP	WCDMA Baseband Process unit
WMPT	WCDMA Main Processing and Transmission unit