

11.2.1 Technical Specifications for RRU3804

This section provides technical specifications for RRU3804.

Supported Modes and Frequency Bands

Table 11-35 shows the modes and frequency bands supported by the RRU3804.

Table 11-35 Modes and frequency bands supported by the RRU3804

Type	Mode	Frequency Band(MHz)	RX Frequency Band (MHz)	TX Frequency Band (MHz)
DC RRU3804	UMTS	2100	192 to 1980	2110 to 2170
		1900	1850 to 1910	1930 to 1990
		AWS	1710 to 1755	2110 to 2155
		850	824 to 849	869 to 894
			835 to 849	880 to 894
AC RRU3804		2100	1920 to 1980	2110 to 2170

RF Specifications

Table 11-36 shows RF specifications for the RRU3804.

Table 11-36 RF specifications for the RRU3804

Type	Transmit and Receive Channels	Capacity	Receiver Sensitivity(dBm)			Output Power	Power Consumption
			1-Way Receiver Sensitivity	2-Way Receiver Sensitivity	4-Way Receiver Sensitivity		
RRU3804	1T2R	4 carriers	-125.8 (Frequency Band: 2100MHz/AWS)	-128.6 (Frequency Band: 2100MHz/AWS)	-131.3 (Frequency Band: 2100MHz/AWS)	RRU3804 output power	Power consumption of the DBS3900 (configured with DC RRU3804) Power consumption of the DBS3900 (configured with AC RRU3804) Power consumption of the BTS3900C (configured with DC RRU3804)
			-125.3 (Frequency Band: 1900MHz)	-128.1 (Frequency Band: 1900MHz)	-130.8 (Frequency Band: 1900MHz)		
			-125.6 (Frequency Band: 850MHz**)	-128.4 (Frequency Band: 850MHz**)	-131.1 (Frequency Band: 850MHz**)		

 **NOTE**

- As recommended in 3GPP TS25.104, the receiver sensitivity (full band) is measured at the antenna port provided that the channel rate reaches 12.2 kbit/s and the Bit Error Rate (BER) is within 0.001.
- **: Measurement value of the sub-band at 850 MHz.

The RRU3804 supports four carriers. The maximum output power is 60 W.

Table 11-37 RRU3804 output power

Number of Carriers	Maximum Output Power per Carrier (W)
1	60
2	30
3	20
4	15

 **NOTE**

The maximum output power equals the maximum output power of the PA minus the internal loss. The maximum output power is measured at the antenna port of the RF module.

Table 11-38 Power consumption of the DBS3900 (configured with DC RRU3804)

Configuration	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)		
				24Ah	50Ah	92Ah
3x1	20	390	480	2.4	5.7	11.3
3x2	20	480	650	1.7	4.3	9.0
3x3	20	630	860	1.2	3.1	6.7
3x4	15	630	860	1.2	3.1	6.7

Table 11-39 Power consumption of the DBS3900 (configured with AC RRU3804)

Configuration	Output Power per Carrier (W)	Typical Power Consumption (W)	Maximum Power Consumption (W)
3x1	20	435	540
3x2	20	555	740
3x3	20	720	980
3x4	15	720	980

 **NOTE**

- The typical power consumption is the DBS3900 works with a 40% load at 25°C ambient temperature.
- The maximum power consumption is the DBS3900 works with a 100% load at 25°C ambient temperature.
- In 3 x4 configurations, the typical and maximum power consumption are reached when the output power per carrier at the antenna port is 15 W.
- 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 11-40 Power consumption of the BTS3900C (configured with DC RRU3804)

Configuration	Output Power per Carrier (W)	Typical Power Consumption (W)	Maximum Power Consumption (W)
1x1	20	190 W	240 W
1x2	20	220 W	290 W
1x3	20	260 W	350 W

 **NOTE**

- The typical power consumption is the BTS3900C works with a 40% load at 25°C ambient temperature.
- The maximum power consumption is the BTS3900C works with a 100% load at 25°C ambient temperature.
- One WBBPb4 and one WMPT are configured.

Engineering Specifications

Table 11-41 shows equipment specifications for the RRU3804.

Table 11-41 Equipment Specifications of the RRU3804

Type	Input Power	Dimensions (H x W x D)	Weight(Kg)
DC RRU3804	<ul style="list-style-type: none"> ● -48 V DC, voltage range: -36 V DC to -57 V DC ● 200 V AC to 240 V AC single phase, voltage range: 176 V AC to 290 V AC 	<ul style="list-style-type: none"> ● 480 mm x 270 mm x 140 mm (without housing and connectors) ● 485 mm x 285 mm x 170 mm (with housing) 	<ul style="list-style-type: none"> ● Without housing: 15 kg ● With housing: 17 kg
AC RRU3804	<ul style="list-style-type: none"> ● 100/200 V AC to 120/240 V AC two phases, voltage range: 90/180 V AC to 135/270 V AC 	<ul style="list-style-type: none"> ● 480 mm x 270 mm x 220 mm (without housing and connectors) ● 485 mm x 285 mm x 250 mm (with housing) 	<ul style="list-style-type: none"> ● Without housing: 20.5 kg ● With housing: 22.5 kg

Table 11-42 shows environment specifications for the RRU3804.

Table 11-42 Environment Specifications of the RRU3804

Type	Operating temperature	Relative humidity	Absolute humidity	Atmospheric pressure	Operating environment	Shockproof protection	Ingress Protection (IP) rating
DC RRU3804	<ul style="list-style-type: none"> ● -40°C to +50°C (with 1120 W/m² solar radiation) ● -40°C to +55°C (without solar radiation) 	5% RH to 100% RH	1~30 g/m ³	70 kPa to 106 kPa	The RRU complies with the following standards: <ul style="list-style-type: none"> ● 3G TS25.141 V3.0.0 ● ETSI EN 300 19-1-4 V2.1.2 (2003-04) Class 4.1: “Non-weatherprotected locations” 	NEBS GR63 zone4	IP65
AC RRU3804							IP55

Table 11-43 shows the surge protection specifications for the ports on the RRU3804.

Table 11-43 Surge protection specifications for the ports on the RRU3804

Port	Surge Protection Mode	Specification
Power supply port	Differential mode	10 kA
	Common mode	15 kA
RF port	Differential mode	8 kA
	Common mode	40 kA
Port for dry contact alarms	Differential mode	3 kA
	Common mode	5 kA
RS485 port	Differential mode	3 kA
	Common mode	5 kA
Port for the RET antenna communication	Differential mode	3 kA
	Common mode	5 kA

Antenna Capabilities

Table 11-44 shows antenna capabilities for the RRU3804.

Table 11-44 Antenna capabilities for the RRU3804

Type	TMA Capabilites	RET Antenna Capabilities
RRU3804	Supported	Supports AISG2.0

 **NOTE**

For RRUs supporting RET antennas, the feed voltage is 12 V and feed current is 2.3 A.