



INTRODUCTION

The product is an advanced multi-band outdoor 4 x 80 watt Remote Radio Unit (RRU) that supports operation in GSM and Long-Term Evolution (LTE) Frequency Division Duplex (FDD) modes and is hardware-ready for NR 5G technology. The device can operate in either single-band or multi-band configurations, supporting up to 4T4R. It also supports both multi-carrier and single-carrier operation modes.

Cooperating with a Base-Band Unit (BBU), the RRU provides customers with advanced, high-performance distributed wireless solutions suitable for a variety of scenarios. It combines multiple technologies to provide wireless outdoor coverage solutions, improving outdoor coverage and capacity while eliminating blind spots at low cost.

The distributed solution (BBU+RRU) is easy to deploy and flexible to configure, effectively meeting outdoor wireless network capacity and coverage requirements.

The product comes with a standard one-year warranty; an extended warranty is available.

HIGHLIGHTS

NOTE: Features can vary based on model or region.

- Frequency Combination: B1+B3/B8+B20+B28
- Operating Mode: GSM/LTE/NR(*)
- Reduced OPEX and can be powered easily by the compact outdoor smart UPS.
- Supports software update to 5G(*) or 4G+5G(*) RRU
- Supports RET functionality with AISG 2.0

(*) Will be available later.

TECHNOLOGY

Standard	GSM/LTE/NR*
Frequency Band	Band1 (UL 1920MHz– 1980 MHz, DL 2110 MHz– 2170 MHz) Band3 (UL 1710 MHz– 1785 MHz, DL 1805 MHz– 1880 MHz) Band8 (UL 880MHz– 915 MHz, DL 925 MHz– 960 MHz) Band20 (UL 832MHz– 862 MHz, DL 791 MHz– 821 MHz) Band28 (UL 703MHz– 733 MHz, DL 758 MHz– 788MHz)
Channel Bandwidth	GSM: 200KHz LTE: 5/10/15/20 MHz
Instantaneous BW(IBW)(MHz)	B1: 60MHz B3: 47.5MHz B8: 22.5MHz B20: 20.5MHz B28: 27.5MHz
Occupied BW(OBW)(MHz)	B1: 40MHz B3: 40MHz B8 : 22.5MHz B20: 20MHz B28: 20MHz
Carrier Configuration	B8+B20+B28: • 1 x 2TRX GSM cell • 1 x 4TRX GSM cell • 1 x 4T4R LTE-FDD cell • 1 x 4TRX GSM cell + 1 4T4R LTE-FDD cell • 2 x 4T4R LTE-FDD cells • 2 x 4T4R LTE-FDD cells + 1 x 4TRX GSM cell B1+B3: • 1 x 2TRX GSM cell • 1 x 4TRX GSM cell

	1 x 4T4R LTE-FDD cell 1 x 4TRX GSM cell + 1 4T4R LTE-FDD cell 2 x 4T4R LTE-FDD cells
Max Output Power*	B28: 4x40W B20: 4x40W B8: 4x40W B28+B20 LTE only: shares 4x40W (configured through the UI) B28+B8: 4x40W+4x40W B20+B8: 4x40W+4x40W B28+B20+B8: 4x40W(B28+B20)+4x40W(B8)
Transmit Power Range	39dBm to 49dBm per port (configurable with 1 dB interval)
Rx Sensitivity with One Antenna*	GSM: -110dBm LTE FDD: -105.5dBm

*a: will be released later

*b: Ax C W in the Max Output Power indicates that the number of TX channels of the RF module is A and the maximum output power of each TX channel is CW.

*c: The LTE FDD receiver sensitivity, as recommended in 3GPP TS 36.141, is measured under a 5 MHz bandwidth based on the FRC A1-3 in Annex A.1 (QPSK, R = 1/3, 25 RBs) standard.

INTERFACE

Interface Type	CPRI
Data Interface	2 x optical interface (SFP+)
Power Supply	-36V DC ~ -57V DC, nominal -48VDC AC adaptor (multi-national standards)
LED Indicators	5 x status LED PWR/RUN/ALM/LINK0/LINK1
Antenna	4T4R external high gain antenna with mini-DIN connectors
RET	AISG2.0 with RS-485 option, 24V DC ~30V DC

PHYSICAL

Typical Power Consumption*	Typical 680W, maximum 1050W
Weight	B8+B20+B28: 25 kg (55.13 lb, excluding mounting kits) B1+B3: 23.5 kg (51.81 lb, excluding mounting kits)
Dimensions (HxWxD)	B8+B20+B28: 480 mm x 370mm x 147 mm / 18.90 in. x 15.57 in. x 5.71 in. (without handles or external connectors) B1+B3: 480mm x 370mm x 131mm / 18.90 in. x 15.57 in. x 5.16 in. (without handles or external connectors)
Volume	B8+B20+B28: 26 liters B1+B3: 23.5 liters
Installation	Pole or wall mount
MTBF	≥ 150000 hours
MTTR	≤ 4 hours
Basic reporting functions	RSSI, VSWR, TSSI (transmission signal strength), temperature, etc.
Cooling Method	Natural convection cooling for vertical installation
Noise Figure	Room temperature: <2.5 All temperature: <3
Operating Temperature	-40°F to 131°F / -40°C to 55°C
Storage Temperature	-49°F to 158°F / -45°C to 70°C
Humidity	5% to 95%
Ingress Protection Rating	IP66
Salt Fog / Salt Spray	GR-487
Seismic Specification	Telcordia GR-63-CORE, Section 4.4 Zone 4
Wind Resistance	ETSI300019-1-4
EMC	ETSI EN 301 489-4

	ETSI EN 301 908-1
ESD	Contact Discharge 8kV (Criteria B) Air Discharge 15kV (Criteria B) (GR-1089-CORE section 2)
Safety	EN 60950-1 Last edition EN 60950-22 Last edition
RF	EN 301 908-1 V6.2.1 EN 301 908-14 V5.2.1

*a: The typical power consumption of an RF module is measured when the ambient temperature is 25°C (77°F) and the traffic load reaches 50%.