



LTE TDD

RRU3279 Product Description

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1 Overview

The RRU3279 is a remote radio unit (RRU). One or more RRU3279 modules constitute the radio frequency (RF) part of a distributed E-UTRAN NodeB (eNodeB). The RRU3279 can be mounted onto a pole, stand, or concrete wall. It also can be installed close to antennas to shorten the feeder length, reduce feeder loss, and improve system coverage. RRUs modulate and demodulate baseband and RF signals, process data, amplify power, and detect standing waves.

1.1 Exterior

1.2 Ports

1.1 Exterior

Figure 1-1 shows the exterior of the RRU3279.

Figure 1-1 RRU3279



1.2 Ports

Each RRU has a modular structure. Its external ports are located at the bottom of the unit or in the cabling cavity. Table 1-1 describes the ports on the RRU3279.

Table 1-1 Ports on the RRU3279

Port	Connector	Quantity	Description
Common public radio interface (CPRI) port	DLC	2	Connects to the baseband unit (BBU).
RF port	Type N, female	8	Connects to an antenna
Remote Global Positioning System (RGPS) port	DB15	1	Connects to an RGPS antenna.
Ground port	OT	2	Ground protection
Power supply socket	Tool-less male connector (pressfit type)	1	Provides -48 V DC power input.
Calibration port	Type N, female	1	Calibration port, supporting OOK signal transmission.
RET	DB9	1	Communication port for the RET antenna, supporting RET signal transmission
EXT_ALM	DB15	1	Alarm monitoring port used for monitoring one RS485 signal and two dry contact signals

2 Technical Specifications

- 2.1 Frequency Band
- 2.2 Capacity
- 2.3 Output Power
- 2.4 Power Consumption
- 2.5 Input Power
- 2.6 Cascading Capability and Distance
- 2.7 Physical Specifications
- 2.8 Environmental Specifications

2.1 Frequency Band

Table 2-1 Frequency band supported by the RRU3279

Frequency Band	Frequency Range(MHz)	Carrier Bandwidth(MHz)	Maximum IBW(MHz)	Maximum OBW(MHz)
Band 40 (2.3 GHz)	2300 to 2400	10, 15 or 20	80	80
Band 38 (2.6 GHz)	2575 to 2615	10, 15 or 20	40	40
Band 41 (2.5GHz)	2496 to 2690	10, 15 or 20	80	80

2.2 Capacity

The maximum carriers supported by the RRU3279 vary with the frequency band:

- 2.3 GHz: four carriers
- 2.6 GHz: two carriers

- 2.5 GHz: four carriers

2.3 Output Power

Table 2-2 lists the output power of the RRU3279.

Table 2-2 Maximum output power of the RRU3279

Frequency Band	Transmit Power of Each RF Channel	Total Transmit Power of the Eight RF Channels
Band 40 (2.3 GHz)	20 W	160 W
Band 38 (2.6 GHz)	20 W	160 W
Band 41 (2.5 GHz)	20 W	160 W

 **NOTE**

The output power of an RRU3279 varies with filters and uplink-downlink subframe configurations.

2.4 Power Consumption

Table 2-3 Power consumption

Frequency Band (GHz)	Output Power	Typical Power Consumption (W) (2:2)	Maximum Power Consumption (W) (2:2)	Typical Power Consumption (W) (3:1)	Maximum Power Consumption (W) (3:1)
2.3	8*10W	207	265	268	354
2.3	8*15W	239	326	311	438
2.3	8*20W	256	361	335	487
2.5, 2.6	8*10W	231	280	308	367
2.5, 2.6	8*15W	258	330	338	443
2.5, 2.6	8*20W	284	375	374	511

2.5 Input Power

Table 2-4 Input power

Item	Specifications
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Item	Specifications
Input power	-48 V DC (voltage range: -36 V DC to -57V DC)

2.6 Cascading Capability and Distance

Table 2-5 Cascading capability and distance

Cascading Capability	Maximum Distance from the BBU (km)
The RRU3279 does not support cascading.	The maximum distance between an RRU3279 module and the BBU is 10 km.

2.7 Physical Specifications

Table 2-6 Physical specifications

Item	Specifications
Dimensions (height x width x depth)	480 mm x 300 mm x 120 mm (18.90 in. x 11.81 in. x 4.72 in.) (17 L)
Weight	≤ 18kg (39.68 lb)

2.8 Environmental Specifications

Table 2-7 Environmental Specifications

Item	Specifications
Working temperature	-40°C to +50°C (-40°F to +113°F) (with solar radiation of 1120 W/m ²) -40°C to +55°C (-40°F to +122°F) (without solar radiation)
Relative humidity	5% RH to 100% RH
Atmospheric pressure	70 kPa to 106 kPa
Operating environment	The RRU3279 complies with the following standards: <ul style="list-style-type: none"> • 3GPP TS36.141 • ETSI EN 300019-1-4 V2.1.2 (2003-04) Class 4.1:

Item	Specifications
	"Non-weatherprotected locations"
Anti-seismic protection	NEBS GR63 zone4
Ingress Protection (IP) rating	IP65

3 Acronyms and Abbreviations

Numerics

3GPP 3rd Generation Partnership Project

B

BBU baseband unit

C

CPRI common public radio interface

D

DC direct current

E

E-UTRAN evolved universal terrestrial radio access network

eNodeB E-UTRAN NodeB

ETSI European Telecommunications Standards Institute

N

NEBS Network Equipment Building System

I

IBW instantaneous bandwidth

O

OBW	occupied bandwidth
R	
RET	remote electrical tilt
RF	radio frequency
RGPS	Remote Global Positioning System
RRU	remote radio unit