

Aurora M56

Outdoor Base Station Datasheet

Baicells
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INTRODUCTION

The Baicells Aurora M56 mmW is an advanced outdoor millimeter wave integrated base station (gNB), which is designed and developed based on Qualcomm 5G SoC solution. This 54 dBm EIRP gNB features low power consumption, a compact form factor, and easy maintenance.

This product helps operators to enhance the coverage performance of 5G networks effectively, improve the capacity of 5G networks and eliminate coverage dead zones; meanwhile it also can help to reduce the system power consumption.

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

HIGHLIGHTS

NOTE: Features can vary based on model or region.

- Standard NR Bands: n258 (24.25GHz ~ 27.5GHz); n257(26.5GHz ~ 29.5GHz); n261(27.5GHz ~ 28.3GHz)
- 5G-NR TDD (3GPP R16 compliant)
- GUI-based local and remote Web management
- Supports up to **2x200MHz** bandwidth
- Peak data rate:
DL:2.5Gbps@2CC*200MHz,
UL:1.6Gbps@2CC*200MHz*(DSUUU)
- Supports PDU session setting
- Supports cell setting

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- Supports standalone (SA) mode: FR2 only
- Supports SCTP control (IKE SCTP)
- All In One (AIO) small cell form factor for quick and easy installation
- Highly secure with equipment certification against potential intrusion risk
- Supports TR-069 network management interface
- Its low power consumption reduces OPEX, and the unit can be powered by Baicells compact indoor smart UPS

TECHNOLOGY

Standard	5G NR TDD (3GPP R16 compliant)
TDD UL/DL Configuration	0.625ms periodicity ($\mu=3$): DDDSU
Frequency Band	n257(26.5GHz ~ 29.5GHz) n258 (24.25GHz ~ 27.5GHz) n261(27.5GHz ~ 28.3GHz)
Channel Bandwidth	200MHz x 2CC*
Multiplexing	DL:2, UL:2
Security	Radio: SNOW 3G/AES-128 Backhaul: IPsec (X.509 AES-128, AES-256, SHA-128, SHA-256)

INTERFACE

Ethernet Interface	1 optical (10G SFP+) and 1 RJ-45 Ethernet interface (1 GE)
Power Supply	-40VDC to -57VDC, nominal -48VDC (optional 90VAC ~ 264VAC, nominal voltage 110/220VAC)
Protocols Used	IPv4/v6, UDP, TCP, ICMP, NTP, SSH, IPsec, TR-069, HTTP/HTTPS, DHCP
Network Management	IPv4/v6, HTTP/HTTPS, TR-069, SSH
VLAN	802.1Q
LED Indicators	4 status LEDs PWR/ACT/RUN/ALM
Antenna	64 dual-polarized antenna elements, built-in with Maximum +/-60 degrees
GPS Antenna	External GPS antenna, N-Type connector

PERFORMANCE

Peak Data Rate	200 MHz /CC	DL (Mbps)	UL (Mbps)
	0.625ms periodicity (DDDSU)	1300@1CC 2400@2CC	300@1CC 600@2CC*
	0.625ms periodicity (DSUUU)	500@1CC 1000@2CC*	800@1CC 1500@2CC*
Latency	<5 milliseconds		
Receive Sensitivity	-105 dBm EIRP(per polarization)		
Modulation	UL: MCS0 (QPSK) to MCS28 (64QAM) DL: MCS0 (QPSK) to MCS27(256QAM)		
Maximum transmit power	<22dBm		
Antenna Gain	27dBi		
EIRP	n257: 54dBm EIRP Max. (H+V polarization) @ boresight beam n258: 54dBm EIRP Max. (H+V polarization) @ boresight beam n261: 54dBm EIRP Max. (H+V polarization) @ boresight beam		
Quality of Service	Complied with 3GPP standards 5G QoS Identifier (5QI)		
ARQ/HARQ	Supported		
Synchronization	GPS		

FEATURES

Voice	VoNR
Maintenance	- Local/Remote Web maintenance - Online status management - Performance statistics - Fault management - Local/Remote software upgrade - Logging - Connectivity diagnosis - Auto startup

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PHYSICAL

Surge Suppression	Network interface: 1KV Power Interface: Differential mode: 2KA; Common mode: 4KA
Lightning Protection	Power Interface: Differential mode: ± 10 KA; Common mode: ± 20 KA
MTBF	≥ 150000 hours
MTTR	≤ 1 hour
Ingress Protection Rating	IP65
Operating Temperature	-30°C to 50°C
Storage Temperature	-40°C to 65°C
Humidity	2% to 95% RH
Atmospheric Pressure	70 KPa to 106 KPa
Power Consumption	Typical 150W, Maximum 180W
Weight	Without bracket: 20.24 lbs/9.2kg With bracket: 21.2 lbs/9.6kg
Dimensions (HxWxD)	15 x 11 x 3.5 inches 380 x 280 x 88 millimeters
Installation	Pole or wall mount

MODEL NUMBERS

BSC7257L254D	Integrated Outdoor TDD gNB,n258,26500-29500MHz,54dBm EIRP,-48VDC, Internal ANT,1*RJ45(GE)+1*SFP+(10G),GPS,IP65
BSC7258L254D	Integrated Outdoor TDD gNB,n258,24250-27500MHz,54dBm EIRP,-48VDC, Internal ANT,1*RJ45(GE)+1*SFP+(10G),GPS,IP65
BSC7261L254D	Integrated Outdoor TDD gNB,n258,27500-28300MHz,54dBm EIRP,-48VDC, Internal ANT,1*RJ45(GE)+1*SFP+(10G),GPS,IP65

NOTE: Customized versions can be requested.