

cnWave 5G Fixed Base Transceiver Station

Base Transceiver Station Quick Look

A simple, affordable yet powerful 5G fixed wireless solution for 24–29 GHz spectrum.

- Throughput of over 3 Gbps per sector
- Using Multi-User MIMO
- Based on 5G NR protocol using SDR architecture to enable continuous evolution and enhancements



cnWave™ 5G Fixed Base Transceiver Station (BTS) Key Features

- Multi-User MIMO technology enhances sector capacity by combining a smart beamforming antenna array with multiple RF transmit and receive chains, effectively multiplying available capacity.
- One radio model capable of operation from 24.25 GHz to 29.50 GHz spectrum, covering the most common 5G bands globally.
- High-performance radio interface optimized for fixed wireless and frequency reuse across a network.
- 2 SFP+ ports allow 1 Gbps or 10 Gbps optical interfaces.

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Product Model Numbers

Integrated 90° Sector	C280500A101A
B1000 Fully Featured	

Spectrum

Frequency Range	24.25 ~ 29.50 GHz
Channel Width	50, 56, 100, 112 MHz channels

Interface

MAC (Media Access Control) Layer	5G NR air interface
Subscribers per Sector	Up to 120
Physical Layer	5G NR air interface-based, OFDM 120 KHz subcarrier spacing, DL and UL 8x8 MU-MIMO
Ethernet Interface	10/100/1000BaseT, SFP support for 1 Gbps or 10 Gbps optical
User Traffic	Ethernet Layer 2
Network Management	IPv4/IPv6 (dual stack), HTTP/HTTPS, TFTP, SNMPv2c and v3 Cambium Networks cnMaestro™
VLAN	802.1ad (DVLAN Q-inQ), 802.1Q with 802.1p priority Dynamic port VID learning

Security

Encryption	FIPS-197 128-bit AES, 256-bit AES
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Performance

Channel Size	DL MCS	DL Sensitivity (dB)	UL MCS	UL Sensitivity (dB)
112 MHz	MCS 23	-91.5	MCS 23	-78.5
	MCS 6	-111.1	MCS 6	-98.2
56 MHz	MCS 24	-93.3	MCS 22	-82.7
	MCS 6	-114.1	MCS 6	-101.2
Maximum EIRP	+44 dBm			
Hybrid ARQ	Yes, DL and UL			
Maximum Deployment Range	Up to 10 km (6.4 mi)			
Latency	10 ms, typical			
TDD Synchronization	Embedded GPS, sync-over-power or IEEE1588v2			
TDD Symmetry	5:2, 6:1, 4:3			
Quality of Service	4 levels			

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Antenna

Type	Integrated
Integrated Antenna Peak Gain	23 dBi
Beam width - Azimuth	90° integrated (selectable polarity H or V, 6 dB roll-off)
Beam width - Elevation	15°

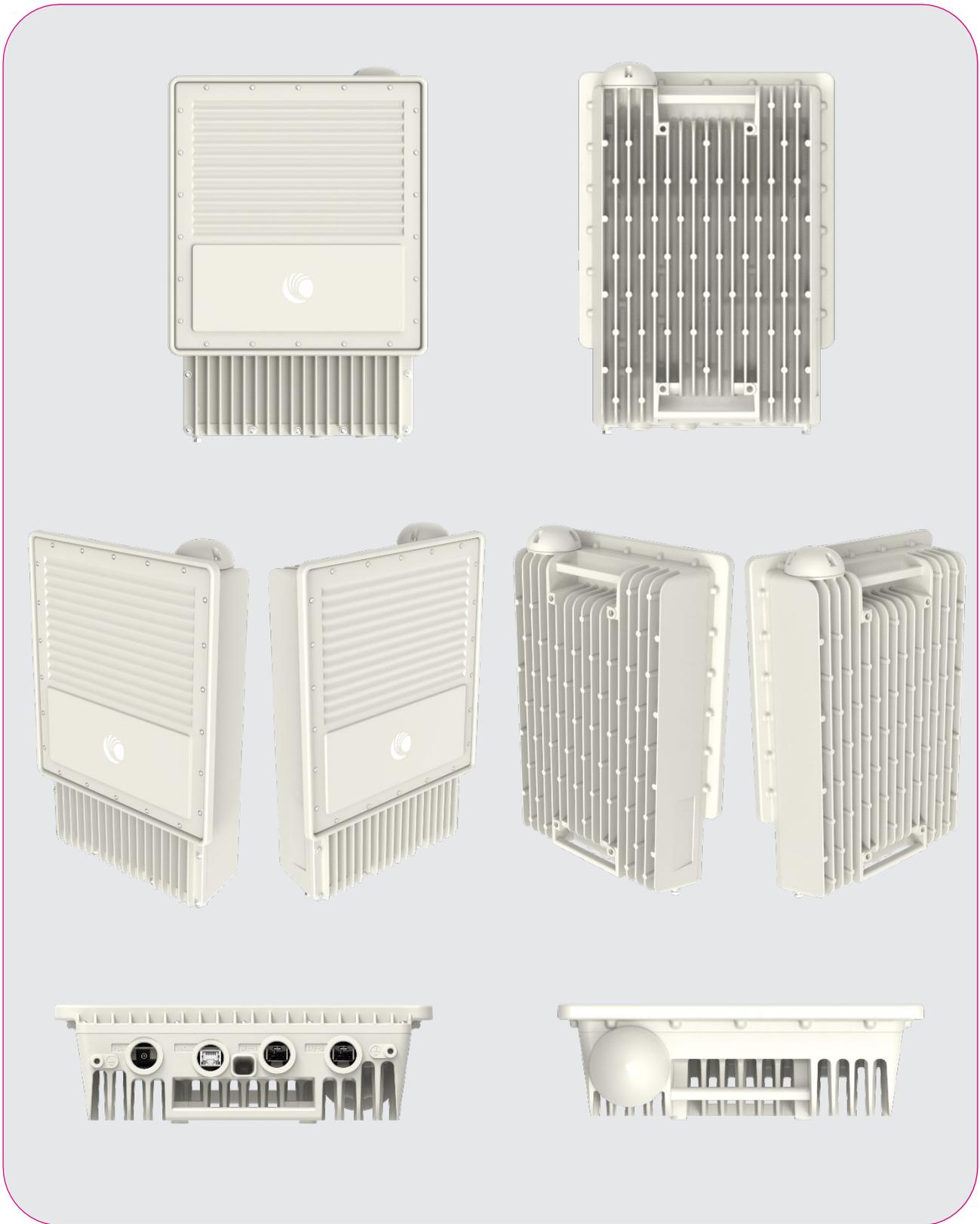
Physical

Surge Suppression (with LPU)	MAIN ports: EN61000-4-5: 10/700us, 4 kV voltage waveform, recommended external surge suppressor: Model # C000065L007B DC IN port: EN61000-4-5: 10/700us, 4 kV voltage waveform, recommended external surge suppressor: Model # C000000L114A
Mean Time Between Failure	>40 years
Environmental	IP67, IP66
Temperature/Humidity	-40°C to 60°C (-40°F to 140°F), 100% non-condensing
Weight	Without Mounting Brackets: 11.3 kg (25 lb); with Mounting Brackets: 13.8 kg (30.4 lb)
Wind Survival	200 kph (124 mph)
Wind Loading – Front Facing	@ 144 kph (90 mph): <613 N @ 177 kph (110 mph): <927 N @ 200 km/h (124 mph): <1183 N
Dimensions	49 x 34 x 11 cm (19.5 x 13.4 x 4.3 in)
Power Consumption	180W maximum
Input Voltage	40~60 V DC
Mounting	Pole mount with included brackets 32 mm (1.25 in) to 100 mm (4 in) pole diameter

Certifications

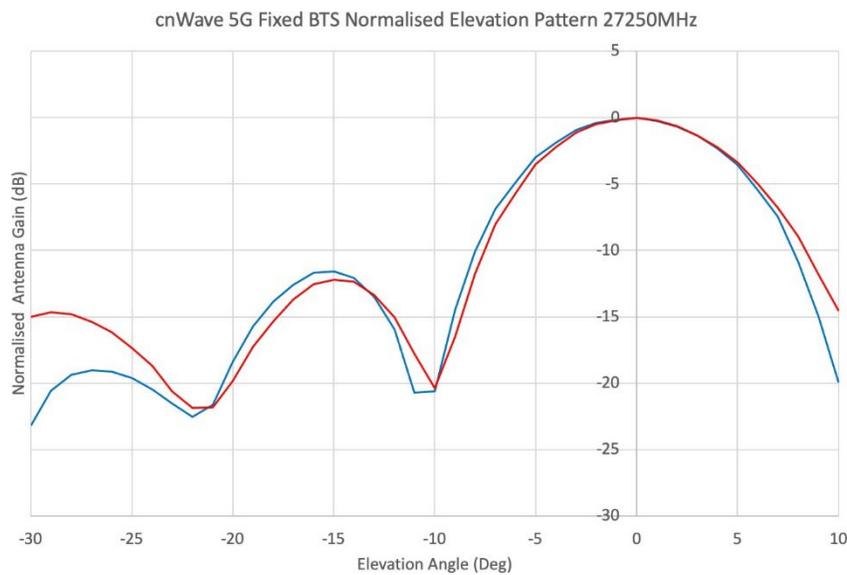
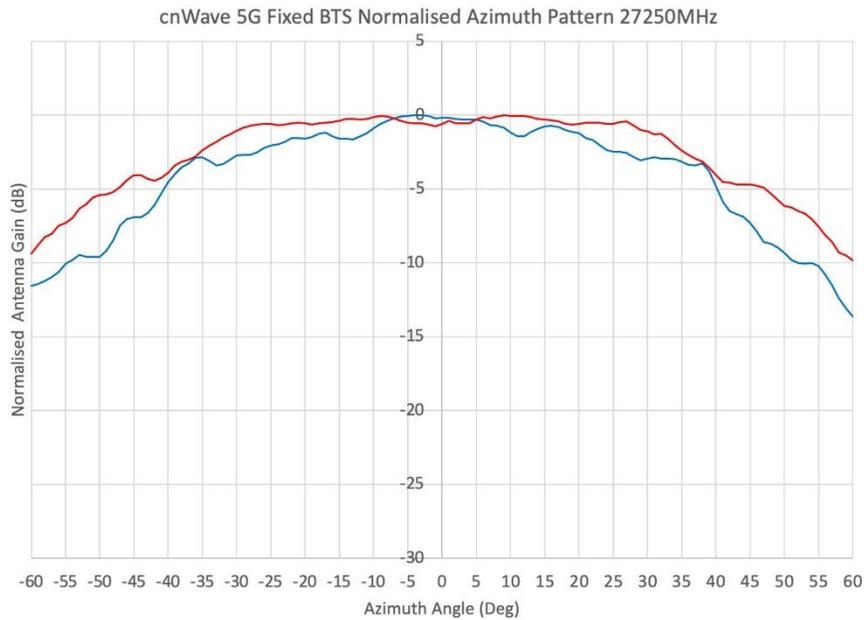
ISED Canada	RSS-191, SRSP 342.25 & SRSP 325.25
FCC	CFR47 Part 101 & CFR47 Part 30
CE	EN 302 326-2, v2.1.0

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Base Transceiver Antenna Patterns (Sector Mode)



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Cambium Networks enables service providers, enterprises, industrial organizations, and governments to deliver exceptional digital experiences and device connectivity with compelling economics. Our ONE Network platform simplifies management of Cambium Networks' wired and wireless broadband and network edge technologies. Our customers can focus more resources on managing their business rather than the network. We make connectivity that just works.

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