



Key Benefits

- ✓ Highly cost effective & extremely compact design
- ✓ Compliant to standard 3GPP Release 11 specifications
- ✓ 4RX and 4TX Radio RF Design Support
- ✓ 4 Integrated high gain sector MIMO antennas
- ✓ 5GHz LTE-U band (B46/252/252) and optional 3.5GHz band (B42/43/48) operation support
- ✓ Advanced MIMO and Carrier Aggregation Support with full CAT6 data throughput
- ✓ DL MIMO and CA support, UL QAM64 and future CA support
- ✓ Dual ETH data port support, optional wireless backhaul support.
- ✓ GPS and Network based synchronization support via IEEE 1588v2

JTLink5000 is a highly integrated CAT6 small cell base station with all-in-one packaging of RF and base-band components. It includes integrated Quad receiver and transmitter to support two channel MIMO and Carrier Aggregation. It is available as an all outdoor solution for LTE-U applications to minimize physical footprint and operator expense.

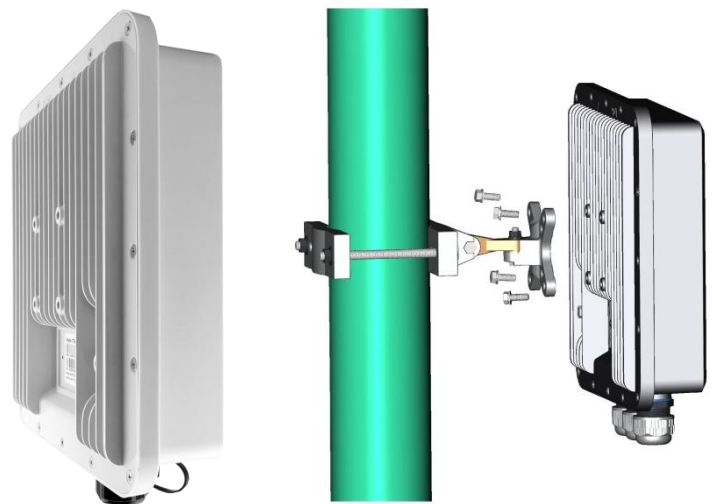
The unit is designed with integrated high gain sector antenna to achieve maximum performance and compactness and reduce system cost. The unit radio can operate in both LTE-U (5GHz) and CBRS (3.5GHz) bands simultaneously and supports intra-band and inter-band carrier aggregation with up to 230Mbps throughput.

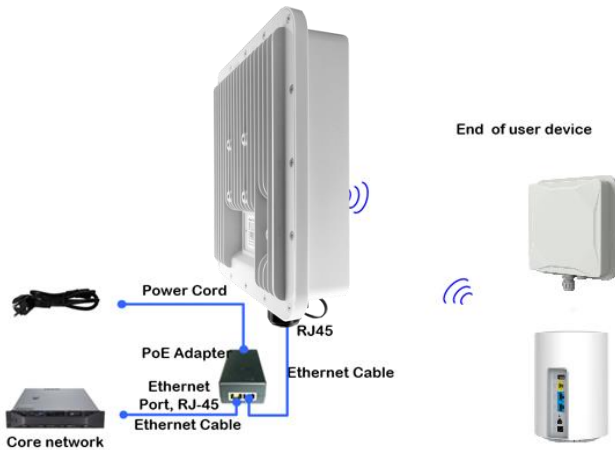
JTLink5000 comes in a fully integrated, small, elegant, yet rugged package (IP67 compliant). They are designed to be deployed outdoors without the need for a shelter and can be easily mounted on utility poles, walls, rooftops, cell towers – virtually anywhere – without the need for expensive remote radio heads.

The unique form factor of JTLink5000 secures the investment of the operator and minimizes the OPEX and CAPEX, while offering capabilities such as MIMO and advanced Frequency Domain Scheduling. These capabilities enable higher throughput, range, and capacity with more efficient use of the spectrum. JTLink5000 is interoperable with end devices of all form factors, based on all leading chips. It is also interoperable with various core network solutions.

JTLink5000 has a rich interoperable device offering with core networks and third-party end user devices including various indoor and outdoor CPEs.

JTLink5000 small-cell base station operate as part of an open, standards based eco-system that allows our customers to choose best-of-breed components; from standard LTE CPEs to EPC. The unit is designed to support large fixed deployments, offering a simpler and more cost effective solution for operators that are interested in initially rolling-out fixed or nomadic services.





Technical Specifications

Physical Parameters

| | |
|-----------------------|--------------------|
| Dimensions | 250 * 250 * 125 mm |
| Power Consumption (W) | < 40w |
| Weight | <7kg |

Ambient Parameters

| | |
|-----------------------|-------------------|
| Operating Environment | Outdoor Operation |
| Operating Temperature | -40°C to +65°C |
| Storage Temperature | -40°C to +75°C |

Capacity

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|---|----------------------|
| Peak performance data rate in Downlink (DL) in TDD Mode | 256 QAM BW_Max 40MHz |
| Peak performance data rate in Uplink (UL) in TDD Mode | 64 QAM, UL CA |
| Max. number of scheduled users per TTI | 16 users |
| Max. number of RRC_CONNECTED users | 192 users |
| Max. number of RRC IDLE users | 192 users |

Key Components

| | |
|-------------------------------------|--------------------------|
| Baseband Processor | Qualcomm FSM9955 |
| Transceiver | FTR8950 |
| K21 Protections Included | Yes |
| SFP | No |
| GPS with A-GNSS support | WGR7640 |
| Device Time | From GPS or NTP |
| PoE & Lightening & Power Protection | Required (48V/1.0A) |
| Polarization Dual Pole | ±45° |
| Horizontal 3dB BW, typ. | ±60° (3.5G) / 30° (5GHz) |
| Vertical 3dB BW, typ. | ±20° (3.5G) / 15° (5GHz) |

RF Configuration

| | |
|------------------------------|---------------------------------------|
| Number of RF of Interfaces | 6--> 2 x (2Tx, 2Rx) , 1 Sniffer, 1GPS |
| Dual Transceivers (4Tx, 4Rx) | 2 per carrier |

Physical Interfaces

| | |
|---|--|
| [Ethernet] Number Ethernet Ports | 1 WAN, 1LAN |
| [Ethernet] Supported Standard | 802.3 |
| [Ethernet] Interface Bandwidth (Mbps) | 10/100/1000 Base-T Auto-negotiating |
| [Ethernet] Communication Mode | Full Duplex |
| [Ethernet] Connector Type | RJ-45 |
| [LEDs] LED Indicators | Power, GPS, LTE Operations, Alarm, ETH (MME connected), Reserved |
| [Optical] SFP | One |
| [RF] Number of RF Ports | 4 RF, 1 Sniffer, 1GPS |
| [RF] Connector Type | MCX |
| [RF] Connector Characteristic Impedance | 50Ω |
| [RF] In-Band Input Return Loss | ≥ 15dB |
| [Power] Power Supply Type (AC or DC) | DC PoE (48V@1.0A) |
| [Power] External Power Supply | DC 48V/1.0A (Optional) |
| [Power] Connector Type | RJ-45 |
| [Power] Max. Current supported by the connector | 1.0A @ 48V |
| [Sync] Supported Synchronization Mechanisms | 1588v2, GPS, NL |
| WIFI LBT | Optional |

Operating Bands and RF

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|----------------------|---|
| 3GPP Bands | 5GHz: B46/252/255 (5150-5925MHz) 3.5GHz: B42/43/B48 (3400-3800MHz) |
| CA Support | B46/252/255+ B46/252/255 B42/43/B48+ B46/252/255 B42/43/B48+ B42/43/B48 |
| Duplex | TDD |
| RF Filtering | Required |
| RF Channelization BW | 10, 20 MHz |
| Sniffer Bands | B46, B42/43, B48 |
| DPD Support | Required |
| Frequency Exactitude | Compatible ±0.1 ppm(TCXO) or ±0.05 ppm(OCXO) |

Transmitter Performance

| | |
|---|-----------------------------------|
| RF Transmission Power | 23± 1dBm (per Tx) |
| Tx. Power Accuracy in the operating thermal range | ± 1dB |
| Tx. Power Adjustment Range | 45dB |
| RF Power Configuration Step | 1dB |
| RF Transmission Power (Transmitter switched off) | Power Spectral Density ≤85dBm/MHz |
| Adjacent Channel Leakage Ratio (ACLR) | ACLR >35dB |
| [Spurious Emissions] - Spurious Emissions according to 3GPP | According to 3GPP TS 36.141 |
| Spectral Planarity | According to 3GPP TS 36.141 |
| Max Tx EVM | <4.5% |

Receiver Performance

| | |
|--|----------|
| Rx Noise Figure | ≤4dB |
| Target Rx sensitivity (25RBs, QPSK 1/3 as defined in 3GPP TS 36.141) | ≥-103dBm |
| ACLR in the Receiver (1 channel offset) | 28dB |
| ACLR in the Receiver (2 channel offset) | 47dB |