



Spectrum-Efficient 3Gbps Links

The BridgeWave **Flex4G-LITE (ETSI)** is an all outdoor, IP radio system operating in the 71-86GHz frequency band with capacities up to 3Gbps using 64QAM modulation. Supporting both POE and direct DC feed, this compact radio system features carrier-grade Ethernet switch functionality, hitless adaptive rate modulation, and low power consumption.

To reduce deployment costs and improve field flexibility, BridgeWave **Flex4G-LITE (ETSI)** includes a 2.5GbE port that can also be configured for CPRI operation.

BridgeWave **Flex4G-LITE (ETSI)** is available with an ultra-compact integrated 20cm antenna or with slip fit 30cm, 60cm, or 90cm antennas for ultra long range.

The BridgeWave **Flex4G-LITE (ETSI)** enables network operators to meet exponentially-increasing backhaul requirements and is field-proven with thousands of links already in use worldwide.

Performance

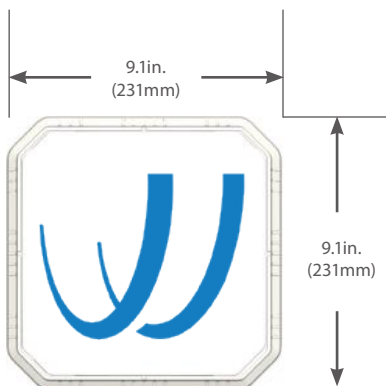
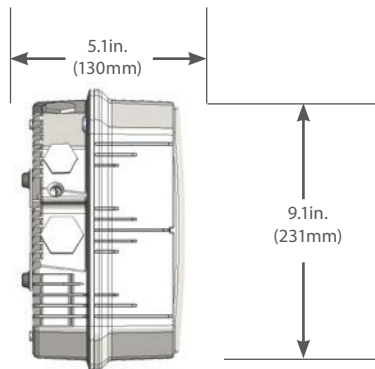
- Spectrum efficient using 64QAM in 250, 500, and 750MHz wide channels
- Full-duplex providing up to 3Gbps upstream and downstream
- Hitless adaptive rate and modulation
- QPSK/8PSK/16/32/64QAM modulation support
- Highest system gain
- Internal carrier grade L2 switch
- Built-in 2.5GbE support
- Optional CPRI support (Modes 1 - 4)
- SyncE and IEEE1588v2 compliant
- Power over Ethernet
- Compact integrated 20cm antenna available (38 dBi) for ETSI deployments
- Extreme ranges supported with optional 30cm (43.8dBi), 60cm (51dBi), and 90cm (54dBi) external slip-fit antennas
- Small form factor and lightweight
- Quick and simple deployment

Applications

- 4G/LTE backhaul for access and aggregation
- Last-mile fiber extension for enterprises
- Temporary high capacity links for disaster recovery
- LAN extensions

Dimensions

Flex4G-LITE (ETSI) with
Integrated 20cm Antenna



| | | | | | | |
|---|---|--------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| Data Throughput Rate | Up to 3000Mbps per 1+0 terminal, Up to 6000Mbps per 2+0 terminal | | | | | |
| Configurations | 1+0 Non-Protected; 2+0 Dual Path Transmission utilizing Orthogonal Mode Transducer, OMT | | | | | |
| Frequency Range | 71-76GHz / 81-86GHz | | | | | |
| Air Interface | Full Duplex FDD | | | | | |
| RF Channel Tuning | Frequency Agile in 62.5MHz steps | | | | | |
| Channel Bandwidths | 250, 500, and 750MHz | | | | | |
| Management | In-Band | | | | | |
| Latency | <50µs @ 64QAM with 1024byte packets | | | | | |
| Modulation | QPSK/8PSK/32QAM/64QAM Hitless Adaptive Code and Modulation | | | | | |
| System Performance | Modulation | Throughput | System Gain | | | |
| | | | 38 dBi Antenna | 43.8 dBi Antenna | 51 dBi Antenna | 54 dBi Antenna |
| 250MHz Channel BW | 64QAM | 1000Mbps | 150.0dB | 161.6dB | 176.0dB | 182.0dB |
| | 32QAM | 833Mbps | 154.0dB | 165.6dB | 180.0dB | 186.0dB |
| | 16QAM | 666Mbps | 159.0dB | 170.6dB | 185.0dB | 191.0dB |
| | 8PSK | 500Mbps | 162.0dB | 173.6dB | 188.0dB | 194.0dB |
| 500MHz Channel BW | 64QAM | 2000Mbps | 147.0dB | 158.6dB | 173.0dB | 179.0dB |
| | 32QAM | 1666Mbps | 151.0dB | 162.6dB | 177.0dB | 183.0dB |
| | 16QAM | 1333Mbps | 156.0dB | 167.6dB | 182.0dB | 188.0dB |
| | 8PSK | 1000Mbps | 159.0dB | 170.6dB | 185.0dB | 191.0dB |
| | QPSK | 666/333/ 166Mbps | 163.0/165.0/ 171.0dB | 176.6/179.6/ 182.6dB | 191.0/194.0/ 197.0dB | 197.0/200.0/ 203.0dB |
| 750MHz Channel BW | 64QAM | 3000Mbps | 145.0dB | 156.6dB | 171.0dB | 177.0dB |
| | 32QAM | 2500Mbps | 149.0dB | 160.6dB | 175.0dB | 181.0dB |
| | 16QAM | 2000Mbps | 154.0dB | 165.6dB | 180.0dB | 186.0dB |
| | 8PSK | 1500Mbps | 159.0dB | 170.6dB | 185.0dB | 191.0dB |
| | QPSK | 1000/666/333/ 166Mbps | 163.0/165.0/ 168.0/171.0dB | 174.6/176.6/ 179.6/182.6dB | 189.0/191.0/ 194.0/197.0dB | 195.0/197.0/ 200.0/203.0dB |
| Interfaces | | | | | | |
| Ethernet: 2 x SFPs for 1 x 2.5G/1G & 1 x 1G SFP + 4 x RJ45 10/100/1000Base-T CPRI: 1 x Option 1 to 4 (614.4Mbps to 3072.0Mbps) | | | | | | |
| Ethernet | | | | | | |
| Max Packet Size | 9600 bytes (Jumbo Frame Compatible) | | | | | |
| Ethernet Timing and Synchronization | SyncE (G.8261), IEEE 1588V2 Transparent, Boundary, and Ordinary Clock support | | | | | |
| Features | <ul style="list-style-type: none"> • IPv6, IPv4 • L2- 8192 MAC Address • 4096 VLAN (IEEE 802.1Q) • VLAN tag translation on ingress or egress • Provider Bridging (IEEE 802.1ad, Q-in-Q) • RSTP / MSTP | | | | | |
| Ethernet QoS | | | | | | |
| Classification | <ul style="list-style-type: none"> • 8 QoS queues per port with SP or DWRR scheduling • TCAM classification and remarking • DSCP translation, ingress and egress • Per Queues and Per Port policing and shaping • Full Duplex Flow control | | | | | |
| Protection | ITU-T G.8032 Ring | | | | | |
| OAM | ITU-T Y.1731 | | | | | |
| Antennas | | | | | | |
| <ul style="list-style-type: none"> • Integrated 20 cm, 38 dBi gain, 0.8° beamwidth • External 30 cm, 43.8dBi gain, 0.9° beamwidth • External 60 cm, 51 dBi gain, 0.4° beamwidth • External 90 cm, 54 dBi gain, 0.3° beamwidth | | | | | | |
| Mechanical and Environmental | | | | | | |
| Input Power Requirements | -48VDC, PoE, 30W typical (32W Max) power consumption | | | | | |
| Weight | 3.2kg / 7.1lb (with integrated antenna) | | | | | |
| Temperature Range | -45°C to +60°C (-58° to +140° F) | | | | | |
| Weather | IP67 / All Weather | | | | | |
| Safety | IEC 60950-1, -22 | | | | | |
| Regulatory RF Certification | US FCC Part 101, FCC Part 15B; ETSI EN 302 217 | | | | | |

Note: Specifications are typical and subject to change without notice.

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