



## 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

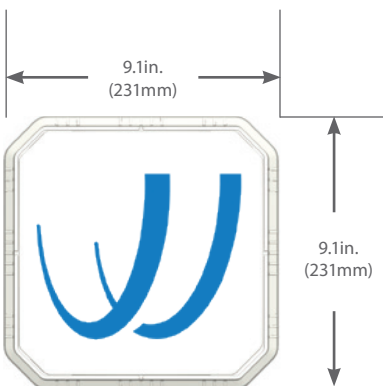
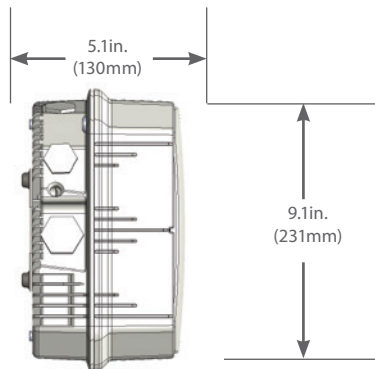
- Spectrum efficient using 64QAM in 250, 500, and 750MHz wide channels
- Full-duplex providing up to 3Gbps upstream and downstream
- Hitless adaptive rate and modulation
- QPSK/8PSK/16/32/64QAM modulation support
- Highest system gain
- Internal carrier grade L2 switch
- Built-in 2.5GbE support
- Optional 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	165.0/168.0/ 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
<b>Interfaces</b>						
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)						
<b>Ethernet</b>						
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"> <li>• IPv6, IPv4</li> <li>• L2- 8192 MAC Address</li> <li>• 4096 VLAN (IEEE 802.1Q)</li> <li>• VLAN tag translation on ingress or egress</li> <li>• Provider Bridging (IEEE 802.1ad, Q-in-Q)</li> <li>• RSTP / MSTP</li> </ul>					
<b>Ethernet QoS</b>						
Classification	<ul style="list-style-type: none"> <li>• 8 QoS queues per port with SP or DWRR scheduling</li> <li>• TCAM classification and remarking</li> <li>• DSCP translation, ingress and egress</li> <li>• Per Queues and Per Port policing and shaping</li> <li>• Full Duplex Flow control</li> </ul>					
Protection	ITU-T G.8032 Ring					
OAM	ITU-T Y.1731					
<b>Antennas</b>						
<ul style="list-style-type: none"> <li>• Integrated 20 cm, 38 dBi gain, 0.8° beamwidth</li> <li>• External 30 cm, 43.8dBi gain, 0.9° beamwidth</li> <li>• External 60 cm, 51 dBi gain, 0.4° beamwidth</li> <li>• External 90 cm, 54 dBi gain, 0.3° beamwidth</li> </ul>						
<b>Mechanical and Environmental</b>						
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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