



# GE80 & GE80X

## 80 GHz Gigabit Ethernet Wireless Links

### 80 GHz WIRELESS LINKS FOR HIGH-BANDWIDTH APPLICATIONS

BridgeWave is the leading supplier of gigabit RF connectivity solutions for service provider, government, military and enterprise applications. BridgeWave Gigabit Ethernet links extend network operator fiber to provide high-capacity access and backhaul, as well as extending enterprise LANs between buildings and sites.

### FEATURES

#### PERFORMANCE:

- Full rate, full duplex, Gigabit Ethernet
- Interference-free operation enabling high-density deployments
- Simple, fast path licensing
- Low latency for fiber-equivalent performance
- Forward Error Correction provides maximum link range



GE80



GE80X

### WIRELESS VIRTUAL FIBER SOLUTIONS FOR:



#### Enterprise

Server centralization, remote data storage and backup, leased line replacement.



#### Healthcare

Secure, HIPAA-compliant connectivity, medical office, lab network access, real-time imaging & records, application connectivity.



#### Education

High-performance campus connectivity, Wi-Fi and security camera backbone.



#### Government/Municipalities

Video surveillance systems, traffic control and monitoring, Wi-Fi/4.9GHz backhaul.



#### Service Provider

High-capacity business services, fiber extensions, cellular/Wi-Fi/WiMAX backhaul, redundant fiber overlays, mesh.



#### Mobile Backhaul

Future-proof full-rate gigabit backhaul for next generation 4G/LTE/WiMAX backhaul.

#### SECURITY:

- Highly secure narrow beamwidth antennas
- Secure Management software option provides HTTPS management access and RADIUS authentication (see Advanced Security datasheet)
- AES Encryption hardware option provides the ultimate level of full line-rate data protection (see Advanced Security datasheet)

#### RELIABILITY:

- Rigorous HALT/HASS testing; 28-Year MTBF
- Up to 99.999%, carrier-grade availability

#### EASE-OF-USE:

- Connects directly to standard network equipment
- All-outdoor, compact design
- Low voltage power cabling
- Rapid & flexible deployment
- Embedded web and SNMP based network management agent

### CONNECTIVITY RANGES

GE80

Up to 4 Miles  
(6.5 km)

GE80X

Up to 5 Miles  
(8 km)

DATASHEET



# Specifications

	<b>GE80</b> Gigabit Ethernet	<b>GE80X</b> Gigabit Ethernet Extended Range
Data Rate	1000 Mbps full-duplex	1000 Mbps full-duplex
Latency	< 40u Sec	< 40u Sec
Link Budget	172 dB @ 10 <sup>-12</sup> BER	186 dB @ 10 <sup>-12</sup> BER
	174 dB @ 10 <sup>-6</sup> BER	188 dB @ 10 <sup>-6</sup> BER
RF Interface	72.5 GHz/82.5 GHz (FDD), digitally modulated (BFSK) with forward error correction RS(204,188)	
	1.4 GHz bandwidth	1.4 GHz bandwidth
	Min. link distance 328 ft (100 m)	Min. link distance 1,312 ft (400 m)
Antenna	External 12 in (31 cm) directional cassegrain	External 24 in (62 cm) directional cassegrain
	Linear polarized (H/V), 44 dBi gain, 0.9° beam	Linear polarized (H/V), 51 dBi gain, 0.4° beam
Ethernet Interfaces	1000base-SX with LC connectors - up to 270 m 62.5/125µm MMF, or 500 m 50/125µm MMF	
	10/100base-TX with RJ-45 connector (with integral surge suppressor) - up to 100 m CAT5 cable	
	Maximum Ethernet frame length: 1632 bytes	
Management	Web-based (HTML) embedded management agent: setup, security, status, statistics, software update	
	Secure Management Access (see Advanced Security datasheet for details)	
	SNMP support: MIB-II and BridgeWave enterprise MIB	
	Voltmeter test points: Receive Signal Level and Link Quality	
	RADIUS Authentication, SysLog support	
Power	Supplied 100 – 240 VAC input, +24 VDC output, indoor rated power supply (0°C to +40°C). 45 watts max. consumption	
	-48 VDC input option with user supplied power supply, 45 watts max. consumption	
	Max. cable length: 650 ft (200m) with 12AWG 400 ft (125m) with 14AWG, stranded wires highly recommended (surge suppressor required)	
Mount	Fine-adjust pole mount: 3.5-4.5 in (8.9-11.4 cm) OD -- SCH40 or higher	
Size	Radio/antenna unit: 20 w * 14 h * 10 d (in) / 50 w * 36h * 25 d (cm)	Radio/antenna unit: 24 w * 24 h * 20 d (in) / 62 w * 62 h * 50 d (cm)
Weight	Radio with antenna and mount: 22 lbs (10 kg)	Radio with antenna and mount: 38.5 lbs (17.5 kg)
Environmental	Operating temperature: -33°C to +55°C (-27°F to 131°F)	
	Operating altitude: 14,764 ft maximum (4,500 m)	
Wind Loading	46 lbs. force @ 125 MPH	202 lbs. force @ 125 MPH
Regulatory	Safety: UL Listed, CE Mark, EN60950, meets FCC 1.1310 general population RF MPE limits	
	RF Certifications: EN302217 (2008-11), U.S. FCC Part 15.255	
Install Kit	Voltmeter test cable, power connectors	



BridgeWave strongly recommends that a link analysis be performed to ensure the system meets the individual application requirements. Please contact BridgeWave Sales. BridgeWave reserves the right to change specifications and features listed herein without notice or obligation.

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