



BridgeWave



GE80 & GE80X

80GHz Gigabit Ethernet Wireless Links

80GHz 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

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)

WIRELESS "VIRTUAL FIBER" SOLUTIONS FOR SERVICE PROVIDER, GOVERNMENT/MILITARY, AND ENTERPRISE APPLICATIONS

LAN EXTENSION
Extends LAN backbones between buildings

FIRST/LAST MILE
Supports high-speed access services

METRO AREA NETWORK (MAN)
Complements/extends metro fiber

SERVER CONSOLIDATION
Enables centralization of IT facilities

SPATIAL DIVERSITY
Creates redundant paths for mission-critical applications

FAST AND FLEXIBLE
Provides temporary and disaster-recovery connectivity

FIBER ALTERNATIVE
Offers fiber-equivalent performance, security and reliability

CONFIGURATIONS

- Point-to-point
- Hot standby
- Multi-hop/repeater
- Hub-and-spoke
- Ring
- Mesh

Datasheet

SPECIFICATIONS

	GE80 Gigabit Ethernet	GE80X Gigabit Ethernet Extended Range
Data Rate	1000 Mbps full-duplex	1000 Mbps full-duplex
Latency	< 50uSec	< 50uSec
Link Budget	166dB @ 10 ⁻¹² BER	180dB @ 10 ⁻¹² BER
RF Interface	72.5GHz/82.5GHz (FDD), digitally modulated (BFSK) with forward error correction RS(204,188)	
	1.4GHz bandwidth	1.4GHz bandwidth
	Min. link distance 328 ft (100 m)	Min. link distance 1,312 ft (400 m)
	256-Bit AES Encryption option (see Advanced Security datasheet for details)	
Antenna	External 12 in (31 cm) directional cassegrain	External 24 in (62 cm) directional cassegrain
	Linear polarized (H/V), 43dBi gain, 0.8° beam	Linear polarized (H/V), 50dBi gain, 0.4° beam
Ethernet Interfaces	1000base-SX with LC connectors - up to 270m 62.5/125µm MMF, or 500m 50/125µm MMF	
	10/100base-TX with RJ-45 connector - up to 100m Cat5 cable (two Ethernet surge suppressors required)	
	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	
	SysLog support	
Power	Supplied 100 – 240 VAC input, +24VDC output, indoor rated power supply (0°C to +40°C), 45watts max. consumption	
	-48VDC input option with user supplied power supply, 45watts max. consumption	
	Optional outdoor rated power supply for extreme temperatures (-40°C to +60°C) mounted in sealed enclosures	
	Max. cable length: 650 ft (200m) with 12AWG 400 ft (125m) with 14AWG, stranded wires highly recommended (24VDC surge suppressor required)	
Mount	Fine-adjust pole mount: 3.5-4.5in (8.9-11.4cm) OD -- SCH40 or higher	
Size	Radio/antenna unit: 20w * 14h * 10d (in) / 50w * 36h * 25d (cm)	Radio/antenna unit: 24w * 24h * 20d (in) / 62w * 62h * 50d (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: -30 to +50 °C (-22 to 122 °F)	
	Operating altitude: 14,764 ft maximum (4,500 m)	
Wind Loading	60 lbs. force @ 100 MPH	120 lbs. force @ 100 MPH
Regulatory	Safety: UL Listed, CE Mark, meets FCC 1.1310 general population RF MPE limits	
	RF Certifications: U.S. FCC Part 15.255 Industry Canada RSS-210	
Install Kit	Voltmeter test cable, power connectors	



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