BridgeWave
COMMUNICATIONS

FE80U & FE80XU

80 GHz Fast Ethernet Upgradeable Wireless Links

FE80U

FE80XU

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, Fast Ethernet upgradeable to Gigabit Ethernet
- *Field upgradeable to full Gigabit Ethernet AR80 product using software key* (please refer to AR80 data sheet for upgrade product specifications)
- Interference-free operation enabling high-density deployments
- Simple, fast path licensing
- Low latency for fiber-equivalent performance
- Forward Error Correction provides maximum link range

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)

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

FE80U	Up to 5 Miles (8 km)
FE80XU	Up to 7 Miles (11.5 km)

DATASHEET

Specifications

	FE80U Fast Ethernet / Gigabit Upgradeable	FE80XU Fast Ethernet Extended / Gigabit Upgradeable
Data Rate	100 Mbps full-duplex	100 Mbps full-duplex
Latency	< 220u Sec	< 220u Sec
Link Budget	183 dB @ 10^{-12} BER	197 dB @ 10^{-12} BER
	185 dB @ 10^{-6} BER	199 dB @ 10^{-6} BER
RF Interface	72.5 GHz/82.5 GHz (FDD), digitally modulated (BFSK) with forward error correction RS(204,188)	
	285 MHz bandwidth @ 100 Mbps*	285 MHz bandwidth @ 100 Mbps**
	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: U.S. FCC Part 15.255, EN302217 (2008-11)	
Install Kit	Voltmeter test cable, power connectors	

*   = Refer to AR80 datasheet for upgradeable features
**   = Refer to AR80X datasheet for upgradeable features