



# FE60U

## 60GHz Fast Ethernet Upgradeable Wireless Links

### 60GHz WIRELESS LINKS FOR HIGH-BANDWIDTH DATA 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:

- License-free operation in the U.S. and Canada
- Full rate, full duplex, Fast Ethernet upgradeable to Gigabit Ethernet
- *Field upgradable to full Gigabit Ethernet AR60 product using software key (please refer to AR60 datasheet for upgrade product specifications)*
- Interference-free operation, enabling high-density deployments
- 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)

#### 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 RANGE



**FE60U**

**Up to 1 Mile**  
(1.5 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

## SPECIFICATIONS

<b>FE60U</b> Fast Ethernet Gigabit Upgradeable	
Data Rate	100 Mbps full-duplex
Latency	< 200uSec
Link Budget	160.5dB @ 10 <sup>-12</sup> BER
RF Interface	58.1GHz/62.9GHz (FDD), diditally modulated (BFSK) with forward error correction RS(204,188) 140MHz bandwidth * Min. link distance 65ft (20m)
Antenna	Integrated 10 in (25cm) directional cassegrain Linear polarized (H/V), 40dBi gain, 1.4° 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 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	Pole mount: 2-4.5 in (5-11 cm) OD Wall mount bracket
Size	Radio/antenna unit: 12w * 12h * 6d (in) / 30w * 30h * 15d (cm) (Not including pole mount hardware)
Weight	Radio: 11.9 lbs (5.4 kg) Mount: 6.6 lbs (3.0 kg)
Environmental	Operating temperature: -30 to +50 °C (-22 to 122 °F) Operating altitude: 14,764 ft maximum (4,500 m)
Wind Loading	50 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, visual alignment tool

\* = Refer to AR60 datasheet for upgrade features