PRODUCT SPECIFICATIONS

60GHZ WIRELESS LINKS FOR HIGH-BANDWIDTH DATA APPLICATIONS

Gigabit and Fast Ethernet links extend LAN backbones between buildings and sites, as well as extending the reach of network operator fiber.

FEATURES

60GHZ WIRELESS PERFORMANCE

- License-free operation in the U.S. and Canada

- Highly secure, narrow antenna beamwidths

- Interference-free operation, enabling high-density deployments

- Full rate, full duplex, Gigabit or Fast Ethernet

- AdaptRate™ switching overcomes rain fades

- Low latency for fiber-equivalent performance

- Forward Error Correction yields maximum link range

RELIABILITY

- Rigorous HALT/HASS testing

- Up to 99.999% availability

- 28-Year MTBF

EASE-OF-USE

- Connects directly to standard network equipment

- All-outdoor, compact design

- Low voltage power cabling

- Rapid & flexible deployment

- Embedded web-based network management agent

PRODUCT RANGES

AR60X/FE60X	Up to 1 ¹/₂ Miles	2,380 m
GE60X	Up to 1 Mile	1,820 m

AR60/FE60	Up to ³/₄ Mile	1470 m
GE60	Up to ¹/₂ Mile	990 m

ADAPTRATE™ PRODUCT SPECIFICATIONS

	AR60 AdaptRate Gigabit Ethernet Link	**AR60X** AdaptRate Extended-Range Gigabit Ethernet Link
Operating Mode	Normal mode: operates as GE60 (see below)	Normal mode: operates as GE60X (see below)
	Path fade mode: operates as FE60	Path fade mode: operates as FE60X
Mode Switching	Mode switching time: < 50 milliseconds	
	Software configurable: fixed rate vs. AdaptRate; maximize data rate vs. minimize data errors	

FIXED-RATE PRODUCT SPECIFICATIONS

	GE60 Gigabit Ethernet Link	**FE60** Fast Ethernet Link	**GE60X** Extended-Range Gigabit Ethernet Link	**FE60X** Extended-Range Fast Ethernet Link
Data Rate	1000 Mbps full-duplex	100 Mbps full-duplex	1000 Mbps full-duplex	100 Mbps full-duplex
Latency	< 50 microseconds	< 150 microseconds	< 50 microseconds	< 150 microseconds
Link Budget	143.5dB @ 10^{-12} BER	154.5dB @ 10^{-12} BER	162dB @ 10^{-12} BER	173dB @ 10^{-12} BER
RF Interface	58.1GHz/62.9GHz (FDD), digitally modulated (BFSK) with forward error correction (RS 204,188)			
	1.4GHz bandwidth	140MHz bandwidth	1.4GHz bandwidth	140MHz bandwidth
Antenna	Integrated 25 cm (1') directional cassegrain		External 62 cm (2') directional cassegrain	
	Linear polarized (V/H), 40dBi gain, 1.4° beam		Linear polarized (V/H), 46dBi gain, 0.6° beam	
Ethernet Interfaces	1000Base-SX with LC connectors—up to 270 meters 62.5/125µm MMF, or 500 meters 50/125µm MMF			
	10/100Base-TX with RJ-45 connector—up to 100 meters Cat 5 cable (surge protectors required)			
	Up to 1518-byte standard Ethernet frames (1522 bytes with 802.1q VLAN tag)			
Management	Web-based (HTML) embedded management agent: setup, security, status, statistics, software update			
	Voltmeter test points: Receive Signal Level and Link Quality			
Power	120/220 VAC input / +24 VDC output indoor power supply — 45 watts max. consumption			
	Max. cable length: 200 m. (650') with 12AWG; 125 m. (400') with 14AWG (surge protectors required)			
Mount	Pole mount: 5-11 cm (2-4.5 in.) OD		Fine-adjust pole mount: 6-11 cm (3.5-4.5 in.) OD	
	Wall mount bracket			
Size	Radio/antenna unit: 30w * 30h * 12d (cm)		Radio with antenna/mount: 62w * 62h * 50d (cm)	
Weight	Radio: 5.4 kg (11.9 lbs) Mount: 3.0 kg (6.6 lbs)		Radio: 5.2 kg (11.5 lbs) Mount: 3.6 kg (8 lbs) Antenna: 8.5 kg (19 lbs)	
Environmental	Operating temperature: -30 to +50 °C (-22 to 122 °F)			
	Operating altitude: 4,500 meters (max.)			
Wind Loading	50 lbs. force @ 100MPH		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, visual alignment tool		Voltmeter test cable, power connectors	