



G I G A B E A M

GigaBeam.com

## ● Gi-Linx 5.8 Series Point to Multi-Point

5.8GHz Wireless System



Short to Medium Range Point-to-Point

Long Range Point-to-Point



Base Station



### Technology Summary

The GigaBeam 5.8 Series is a high performance 5.8GHz wireless system. With data rates to 108 Mbps and up to 400 mW of RF power, GigaBeam 5.8 delivers more capacity, farther than ever before. Such capability allows end-users to download large data files, high resolution images, video clips, and MP3 files within a matter of seconds. Streaming video and multiple VoIP connections can now be delivered or backhauled seamlessly.

Orthogonal Frequency Division Multiplexing (OFDM) technology delivers a wealth of benefits: high spectral efficiency supports class leading data rates while allowing multiple, non-overlapping channels. OFDM is also capable of robust operation in near or non-line-of-sight (NLOS) link conditions, relaxing the stringent installation requirements associated with more traditional fixed wireless equipment.

Quality of Service (QoS) features within the GigaBeam 5.8 architecture allow tagged voice and video traffic to take priority over general data packet transfer, providing reliable, real-time capability even under congested link conditions. Priority privileges for marked frames are maintained from port to port: Ethernet through RF.

With security remaining a key consideration in many applications, the GigaBeam 5.8 delivers 128 bit AES encryption / decryption at full line speed. The AES algorithm was selected to be the standard encryption method of the US Government by the National Institute of Standards and Technology (NIST) Physically, the GigaBeam 5.8 Series is fully integrated. The network engine, digital baseband, radio and antenna are all combined into a single, weatherized outdoor chassis, complete with Power over Ethernet (PoE) support. Guaranteed operational from -30C to +60C, the product can be installed at any convenient outdoor location needing only inexpensive Ethernet CAT5 cable for connection to an indoor network switch. To further assist installation, an integrated spectrum analyzer and audible antenna alignment function are provided as standard features.

The GigaBeam 5.8 is truly an enterprise class system that comes complete with full function bridge/router software and extensive network protocol and network management support.

Combining a high power, 108 Mbps OFDM radio with a high performance, QoS based bridge/router engine, the GigaBeam 5.8 Series is a powerful, yet easy-to- use product for all of your point-to-point and multipoint broadband wireless needs.

**Standard Antenna Options:** 9dBi Omni  
15dBi 90 x 10 deg. Sector

### Applications (PtMP):

- Efficient multicasting of video
- Last mile access for carriers
- Wireless ISP subscriber networks
- Distribution networks for satellite service provider
- Government/military networks
- Private networks for schools and municipalities
- Enterprise and industrial connectivity
- Marine and seashore applications
- Security/surveillance video monitoring
- Any application using Ethernet data transport



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## ● Gi-Linx 5.8 Series Point to Multi-Point

### Performance:

Link Distance <sup>1</sup>	58MSRI	58MMRI	58MLRI	58MLRC
Using Sectoral Base	2 Miles	5 Miles	8 Miles	Antenna Dependent
Using Omni Base	1 Mile	3 Miles	4.5 Miles	Antenna Dependent
Radio Power <sup>1</sup>	50 mW	400 mW	400 mW	400 mW

### Radio:

Frequency Range <sup>2</sup> :	5.470 – 5.875 GHz, country dependent
Modulation:	OFDM-BPSK, QPSK, 16QAM, 64QAM
Data Rates*:	108 Mbps, 72 Mbps, 54 Mbps, 36 Mbps, 18 Mbps, 12 Mbps, 9 Mbps, 6 Mbps
Media Access:	Prioritized CSMA/CA
DC Power:	+48Vdc/0.8A, via Power-over-Ethernet, indoor DC injector (included)

### Networking:

Ethernet:	10/100Base-T, Auto-negotiating, Full/Half duplex, up to 100m separation between radio and network closet
QoS:	Line speed packet inspection of 802.1p, IP ToS, IP, DiffServ tags, 4 queue prioritization engine, RF MAC prioritization
Frame Aggregation:	Dynamic, User enable/disable
Protocol Support:	Transparent MAC layer bridging, IP Static Routing, RIP v1/v2 Transparent VLAN (802.1g)
Management:	HTTP Web Server, FTP, VLAN, SNMP v1/v2 with trap support and custom MIB, custom Event Log, Integrated Spectrum Analyzer, Audible Tone Alignment Function

### Security:

Encryption:	Hardware accelerated, line speed 128-bit AES & 64, 128, 152-bit WEP
Authentication:	MAC address-based access control
Channel Plan:	Non- Standard

### Mechanical:

	58MSRI	58MMRI	58MLRI	58MLRC
Configuration:	Outdoor, Integrated Unit	Outdoor, Integrated Unit	Outdoor, Integrated Unit	Outdoor, Type-N Connector
Size:	13"x13"x2.5"	13"x13"x 2.5"	18"x18"x3.5"	10.25"x10"x3"
Weight:	7.5 lbs	8.0 lbs	14 lbs	4.5 lbs
Pole Mount Adapter: 2-Axis Adjustment, Accommodates 1-3" pole diameter				

### Mechanical:

	Base Station
Configuration:	Outdoor, Type-N Connector
Size:	10.25"x10"x3"
Weight:	4.5 lbs
Pole Mount Adapter: 2-Axis Adjustment, Accommodates 1-3" pole diameter	

### Environmental:

Temperature:	-40° to +60° C
Humidity:	0-100% condensing
Water/Dust protection:	Meets IP67 requirements
Lightning Suppression:	Integrated, IEC 61000-4-5 Class 5 compliant
Wind:	125 MPH survivability, 110 MPH operation
Wind Load @ 125 MPH:	83 lbs 83 lbs. 128 lbs;

### Base Station Antennas:

Omni directional antenna
90 degree sectoral antenna

### Regulatory:

Radio Compliance	FCC CFR47, 15.247
Industrie Canada	RSS 210
China	MI [2002]
EU:	EN60950-1; EN 61000-3-2; EN61000-3-3; EN 301 489-1; EN 301 893
México	NOM; Cofetel

1. System performance and link distance for 36 Mbits/sec RF link rate setting. Throughput and link distance may be lower under NLOS conditions. Radio Power and data rate settings are subject to changes according to the country of installation.  
 2. Other frequency ranges are available for deployment in countries allowing radio operation starting at 5.35 GHz. Installers are urged to check with their country's regulations authority prior to equipment purchase and deployment. Radio Power and data rate settings are subject to changes to the country of installation.