GigaBeam
WiFiber™ Wireless Fiber

WiFiber™ G1.25 Datasheet

WIFIBER™ G-SERIES

GigaBeam Corporation was the first company to supply FCC-approved product at 70/80 GHz and leads the world-wide push for global services in this area.

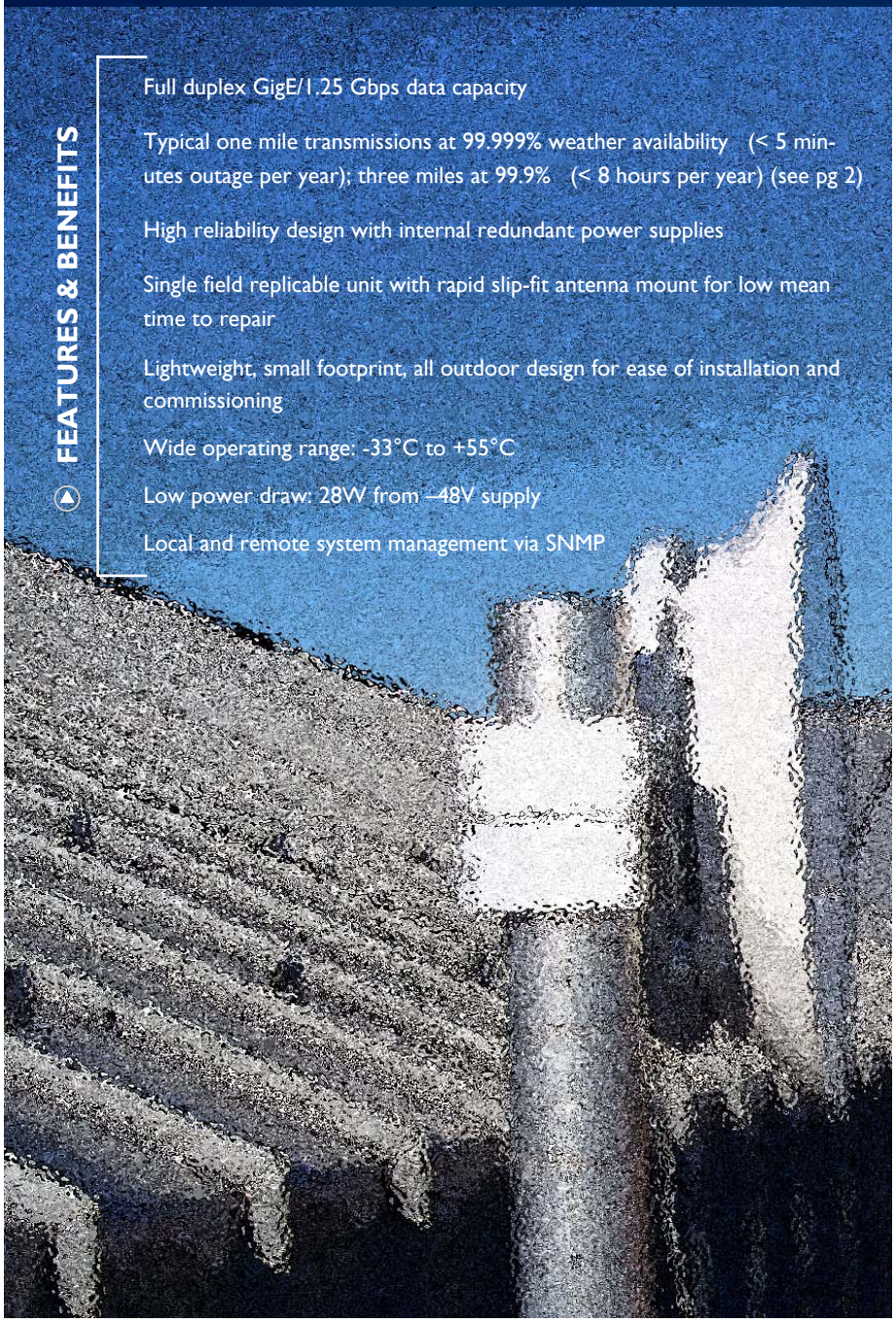
GigaBeam is a pioneer in millimeter-wave communications. GigaBeam's founders petitioned the FCC for release of the 70, 80 and 90 GHz bands and drove the rules to manage these frequencies.

WiFiber™ G1.25 Radio

Operating in the 71-76 GHz and 81-86 GHz frequency bands and carrying a 1.25 Gbps / GigE capacity payload, the WiFiber G1.25 radio provides systems operators with an extremely low cost alternative to metropolitan fiber lines. The WiFiber wireless-based network solution offers true fiber-like performance and quality of service. Together with its integrated SNMP agent, WiFiber can be controlled either by the user's own management software or interfaced to the Network Operations Center of the service provider for seamless monitoring and control.

FEATURES & BENEFITS

- Full duplex GigE/1.25 Gbps data capacity
- Typical one mile transmissions at 99.999% weather availability (< 5 minutes outage per year); three miles at 99.9% (< 8 hours per year) (see pg 2)
- High reliability design with internal redundant power supplies
- Single field replicable unit with rapid slip-fit antenna mount for low mean time to repair
- Lightweight, small footprint, all outdoor design for ease of installation and commissioning
- Wide operating range: -33°C to +55°C
- Low power draw: 28W from –48V supply
- Local and remote system management via SNMP

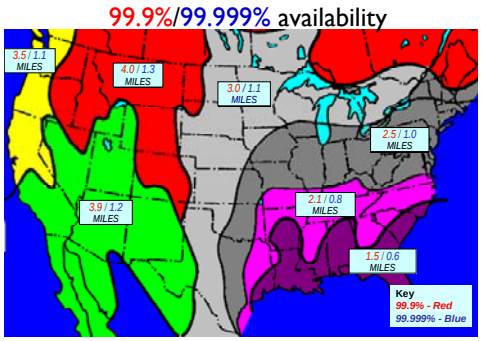


TYPICAL APPLICATIONS

- **Fiber Extensions and Replacements**
- **IP and Cellular Network Backhaul**
- **Point-to-Point Backhaul in Support of Municipal Mesh, WiFi and WiMax Networks**
- **Corporate and Campus Networks**
- **Alternative Access/Path Diversity**

G1.25/24 System Specifications

LINK DISTANCES



G-SERIES: G1.25/24

System	
Frequency Range	71-76 GHz paired with 81-86 GHz
TR Spacing	10 GHz fixed
Modulation	BPSK
Frequency Stability	± 4 ppm
Latency (two radios)	9.8 µs
Frequency Source	Synthesized, software programmable

Transmitter	
Output Power	20 dBm
Adjustable Transmitter Range	45 dB

Receiver	
Threshold (10^{-6} BER)	-57 dBm
System Noise Figure	11 dB
Error Correction	Reed-Solomon FEC

Electrical	
Input Voltage Range	-48 V DC ± 25%
Power Consumption	28 W
Dual Power Supplies	Redundant, single or independently connected

Antenna	
Mounting	Proprietary rapid slip-fit
Size and Type	2 ft (60 cm) parabolic
Polarization	Vertical or horizontal, field selectable
Gain	50 dBi @ 73.5 GHz
Beamwidth	0.4 ° @ 73.5 GHz
Weight	37 lb (17 kg)

Customer Data	
Native Network Capability	GigE
Digital Line Rates	1 Gbps full duplex
Signaling Rate	1.25 Gbps
Data Format	802.3z Gigabit Ethernet
OSI layer	Physical layer 1
Interface, physical	Fiber: Single mode, 50 µm or 62.5 µm multimode

Fault and Configuration Mgt	
Protocol	SNMP, in-band V2c
Interface	RJ-45 10/100baseT
Performance Monitoring	Bit errors, frame errors, local and remote
Craft Port	RS-232 for local management

Standards Compliance	
FCC	FCC Part 101 (47 CFR Part 101.63 to Part 101.147)
ETSI (pending)	
-RF **-EMC** **-Environmental** **-Safety**	EN 302 217 EN 301 489 EN 300 019 EN 60950
Water Ingress (pending)	IEC 60529 (IPX6)

Mechanics	
Size	12" (30cm) octagonal; 4" (10cm) depth
Weight	11 lbs (5 kg)

Operating Environment	
Operating Temp	-27 to +131 °F (-33 to + 55 °C)
Altitude	To 15,000 ft (4,500m)
Humidity	To 95% non-condensing

All specs typical, unless otherwise stated.
All specs subject to change without notice.

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