GigaLink® 6221/6421/6451

60 GHz Millimeter Wave for 125 Mbps (FastE) and 1.25 Gbps (GigE) with Carrier-Grade Reliability

GigaLink 62xx
MMW Transceiver

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APPLICATIONS

- Point-to-point Wireless Bridge for Fast Ethernet and Gigabit Ethernet interfaces
- Enterprise LAN and PBX extension
- WAN connection redundancy
- ISP remote POP
- ISP direct customer connections using point-to-point
- Extension of an existing fiber network

Highest Link Reliability

GigaLink 6221/6421/6451 is a series of full-duplex point-to-point wireless bridges that offers affordable, highly reliable, short and medium range outdoor links for Fast Ethernet (125 Mbps) and Gigabit Ethernet (1.25 Gbps) interfaces. These field-proven millimeter wave transceivers represent one of the most reliable wireless solutions available today. Full duplex operation with near-zero latency ensures reliable operation and unlimited consecutive point-to-point links.

Unprecedented Cost Effectiveness

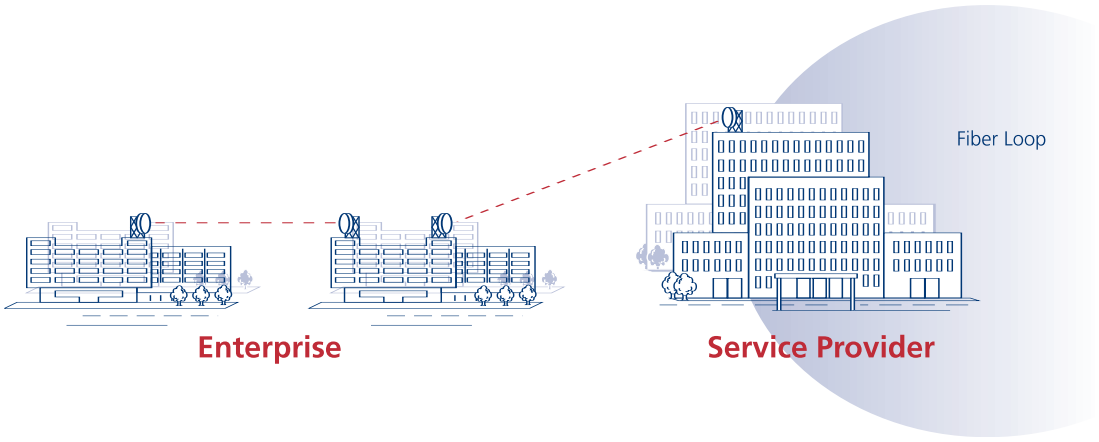
GigaLink 6221/6421/6451 systems enable customers with truly affordable broadband wireless solutions for today's last-mile applications. Since they work in the license-free 60 GHz band, there are no spectrum licenses to purchase and no expensive trenching required - this enables you to provide connectivity at a price point that will not dramatically impact CapEx and OpEx budgets.

Safety and Security

GigaLink 6221/6421/6451 systems offer outstanding safety and security. Direct exposure from a transceiver is less than 9 µW/cm (average power), and, due to the unique oxygen absorption properties of the 60 GHz spectrum, several thousand of the same frequency systems can be deployed in a ten square kilometer area without worrying about interference.

Key Features

- First FCC Part 15.255-certified millimeter wavelength system operating in the 57.05 to 64 GHz band
- Fast Ethernet (125 Mbps) and Gigabit Ethernet (1.25 Gbps) full-duplex bandwidths
- Extremely high link availability
- Narrow beamwidth increases security and enables virtually interference-free operation
- Third-generation, mature product line
- Highly cost-effective Direct Digital Modulation scheme
- Low emissions system
- Simple one-person installation and alignment
- GUI-based integrated management and SNMP capabilities
- Compact size and weight designed for outdoor deployments
- Custom network planning and link deployment tools



GigaLink 6221e and 6421e Specifications
High-Performance 125 Mbps MMW Transceiver

SYSTEM	6221e	6421e
Minimum to Maximum Distance	20 m to 430 m (65 to 1410 ft)[1]	180 m to 1230 m (590 to 4035 ft)[1]
Frequency	57.05 to 64 GHz	57.05 to 64 GHz
RF Injection Power into Antenna	10 mW	8 mW
Antenna Type	Integral Patch Array	Integral 13-in. Parabolic
Antenna Gain	28 dBi	41 dBi
3 dB Beam width	3.5 degrees	1.0 degree
Data Interface	MMF 1310 nm version, compatible with 100 Base-FX, FC Connector	
Management/Installation Interface	10 Base-T, RJ-45 Modular (with adapter cable)	10 Base-T, RJ-45 Modular (with adapter cable)
Power Interface	NEMA 5-15P	NEMA 5-15P
Management/ Installation Tools	Laptop-based software provided	Laptop-based software provided
Remote Monitoring	SNMP v1	SNMP v1
Electrical	UL - UL60950 (Pending) cUL - CSA C22.2 No. 60950 (Pending)	UL - UL60950 (Pending) cUL - CSA C22.2 No. 60950 (Pending)
Laser Safety	CDRH - Class 1 (21 CFR 1040 per Laser Notice No. 50)	
Electromagnetic	FCC - Part 15.255, Certification No. 02700000-30-30	
Input Voltage	100 to 230 VAC, 50/60 Hz	100 to 230 VAC, 50/60 Hz
Power Consumption	85 Watts	85 Watts
Maximum Input Current	0.85 Amp	0.85 Amp
Operating Temperature	-20°C to 60°C (-4°F to 140°F)	-20°C to 60°C (-4°F to 140°F)
Storage Temperature	30°C to 85°C (-22°F to 185°F)	30°C to 85°C (-22°F to 185°F)
Relative Humidity	Up to 95% Non-Condensing	Up to 95% Non-Condensing
Transceiver Dimensions (H x W x D)	16 x 24 x 12 cm (6.3 x 9.4 x 4.7 in.)	33 x 37 x 20 cm (13.0 x 14.6 x 7.9 in.)
Transceiver Weight	5.9 kg (13 lbs)	7.7 kg (17 lbs)
Power Module Dimensions (H x W x D)	16 x 16 x 10 cm (6.3 x 6.3 x 3.9 in.)	16 x 16 x 10 cm (6.3 x 6.3 x 3.9 in.)
Power Module Weight	3.2 kg (7 lbs)	3.2 kg (7 lbs)
Mounting	L-Bracket and Gimbal for 2.5-in. and 4.0-in.	L-Bracket and Gimbal for 2.5-in. and 4.0-in.
Standard Mount	OD Pipe or Wall Mount	OD Pipe or Wall Mount

[1] Under ideal operating conditions.

GigaLink 6451e-AC Specifications
High-Performance 1.25 Gbps MMW Transceiver

Minimum to Maximum Distance	150 m to 770 m (492 to 2526 ft)[1]
Frequency	57.05 to 64 GHz
RF Injection Power into Antenna	8 mW
Antenna Type	Integral 13-in. parabolic
Antenna Gain	41 dBi
3-dB Beam Width	1.0 degree
Data Interface	Two versions available: SMF 1310 nm version[2], compatible with 1000 Base-LX, FC connector MMF 850 nm version, compatible with 1000 Base-SX, FC connector
Management Interface	100 Base-FX, MMF 1310 nm, FC connector
Installation Interface	10 Base-T, RJ-45 Modular (with adapter cable)
Power Interface	MIL-C-5015-type connector (accepts 12- to 16-AWG three-conductor power cable)
Management/ Installation Tools	Laptop-based software provided
Remote Monitoring	SNMP v1
Electrical	UL - UL60950 (Pending)
Laser Safety	CDRH - Class 1 (21 CFR 1040 per Laser Notice No. 50)
Electromagnetic	FCC - Part 15.255, Certification No. 02700001-30-30
Input Voltage	100 to 230 VAC, 50/60 Hz
Power Consumption	110 W
Maximum Input Current	1.1 to 0.5 Amps
Operating Temperature	-45°C to 55°C (-49°F to 131°F)
Storage Temperature	-45°C to 60°C (-49°F to 140°F)
Relative Humidity	Up to 95%, non-condensing
Transceiver Dimensions (H x W x D) (not including mount arm)	34.5 x 34.8 x 19.6 cm (13.6 x 13.7 x 7.7 in.)
Mount Lever Arm	28 cm (11 in.)[3]
Transceiver Weight	5.9 kg (13 lbs)
Power Module Dimensions (H x W x D) (including bracket)	41.2 x 27.7 x 16.5 cm (16.2 x 10.8 x 6.5 in.)
Power Module Weight	5.5 kg (12 lbs)
Standard Mount	Pole mount for 2.5 to 4.5 in OD pipe
Mount Weight	6.6 kg (14.5 lbs)

[1] Under ideal operating conditions.

[2] SMF version is non-standard. Extended lead times may apply.

[3] Distance from pole edge to center of antenna.

GigaLink 6451e-DC Specifications
High-Performance 1.25 Gbps MMW Transceiver

Minimum to Maximum Distance	150 m to 770 m (492 to 2526 ft)[1]
Frequency	57.05 to 64 GHz
RF Injection Power into Antenna	8 mW
Antenna Type	Integral 13-in. parabolic
Antenna Gain	41 dBi
3-dB Beam Width	1.0 degree
Data Interface	Two versions available: SMF 1310 nm version[2], compatible with 1000 Base-LX, FC connector MMF 850 nm version, compatible with 1000 Base-SX, FC connector
Management Interface	100 Base-FX, MMF 1310 nm, FC connector
Installation Interface	10 Base-T, RJ-45 Modular (with adapter cable)
Power Interface	MIL-C-5015-type connector (accepts 12- to 16-AWG three-conductor power cable)
Management/ Installation Tools	Laptop-based software provided
Remote Monitoring	SNMP v1
Electrical	UL - UL60950 (Pending)
Laser Safety	CDRH - Class 1 (21 CFR 1040 per Laser Notice No. 50)
Electromagnetic	FCC - Part 15.255, Certification No. 02700001-30-30
Input Voltage	-48 VDC nominal (-40 to -57 VDC)
Power Consumption	100 W; 150 W (heaters on)
Maximum Input Current	3.0 Amps
Operating Temperature	-30°C to 50°C (-22°F to 122°F)
Storage Temperature	-30°C to 85°C (-22°F to 185°F)
Relative Humidity	Up to 95%, non-condensing
Transceiver Dimensions (H x W x D) (not including mount arm)	34.5 x 34.8 x 19.6 cm (13.6 x 13.7 x 7.7 in.)
Mount Lever Arm	28 cm (11 in.)[3]
Transceiver Weight	5.9 kg (13 lbs)
Power Inlet from Facilities	12-14 AWG Copper Wire via 1/2-in. Conduit
Power Output to Radio	12-3 SJOOW Copper Wire (3 m) with MIL-C-5015-type Connector
Standard Mount	Pole mount for 2.5 to 4.5 in OD pipe
Mount Weight	6.6 kg (14.5 lbs)

[1] Under ideal operating conditions.

[2] SMF version is non-standard. Extended lead times may apply.

[3] Distance from pole edge to center of antenna.

AIRLINX Communications, Inc.
Box 253
Greenville, NH 03048
E-mail: sales@airlinx.com
Tel: (888) 224-6814
Fax: (603) 878-0530