

POINT-TO-POINT

TrangoLINK Giga® 6 GHz

Split-Architecture Full Duplex Licensed Microwave IP/TDM Wireless Backhaul System

HIGH-CAPACITY POINT-TO-POINT WIRELESS NETWORK LINK

Highlights

- Up to 330+ Mbps (165+ Mbps full duplex)
- Extremely low latency, 250 μ S (typical)
- Supports FCC/IC channel sizes of 10 and 30 MHz, ETSI channel size of 28 MHz
- Standard 2-year manufacturer warranty

Performance

- » Highly flexible bandwidth management options
- » Selectable filters for improved sensitivity
- » Flexible modulation for greater spectral efficiency
- » Supports jumbo packets in GigE mode
- » Port Priority assignment (VLAN) and QoS features
- » Four configurable 10/100/1000 BaseT ports for payload
- » Eight T1/E1 ports that are automatically added to or dropped from the data stream when connected or disconnected

Fail Safe Features for High Reliability

- » Hot standby configuration for protection against equipment failure
- » Supports dual power supplies for power redundancy

Management

- » Network management through SSH, SNMP, HTTP, and Serial port
- » Built in loop back and far end monitoring

TrangoLINK Giga® is a high-performance 6 GHz licensed microwave wireless point-to-point system designed for carrier Ethernet, WiMAX/ISP broadband backhaul, mobile network backhaul, private enterprise WAN/LAN extensions, and municipal and public wireless networks.

TrangoLINK Giga® provides a full duplex wireless connection over the air that is ideal for mixed traffic that requires both IP and traditional TDM T1/E1 connectivity.

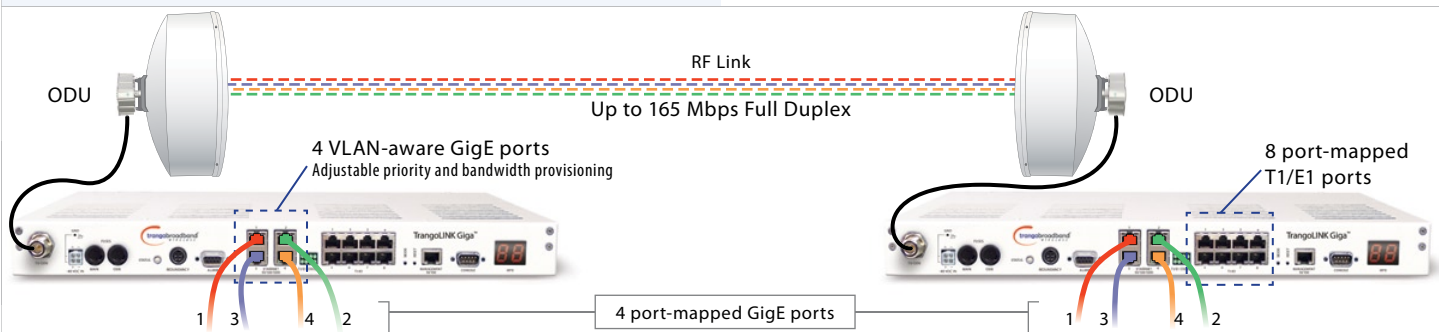
Each TrangoLINK Giga® consists of two indoor units (IDU) and two outdoor units (ODU). The ODU attaches easily to an external antenna for long-range link availability.

Benefits

- » Low cost of ownership
- » Excellent system gain for longer range and higher availability
- » No right-of-way issues, unlike fiber deployment
- » Fast ROI relative to fiber and other traditional options

Easy Setup and Deployment

- » Minimal maintenance, "set and forget"
- » Split-mount architecture with direct-mount slip-fit ODU and 1U rackmount IDU
- » Easy alignment via real-time digital LED RSSI indicators directly on both ODU and IDU
- » Full capacity out of the box, no Option Key necessary



Specifications

RADIO PARAMETERS		Band 1		Band 2			
Frequency of Operation (ODU) †	FCC/IC (252.04 MHz duplex spacing)	Band 1A: 5.935 to 6.044 GHz Band 1B: 6.187 to 6.296 GHz		Band 2A: 6.054 to 6.162 GHz Band 2B: 6.306 to 6.414 GHz			
	ETSI (252.04 MHz duplex spacing)	Band 1A: 5.935 to 6.044 GHz Band 1B: 6.187 to 6.296 GHz		Band 2A: 6.054 to 6.162 GHz Band 2B: 6.306 to 6.414 GHz			
Channel Size †	10 MHz / 30/28 MHz						
RF Power Output (max per modulation)	QPSK	16QAM	32QAM	64QAM	128QAM	256QAM	
	+22 dbm	+22 dbm	+22 dbm	+21 dbm	+20 dbm	+19 dbm	
Modulation Format	Selectable from QPSK, 16QAM, 32QAM, 64QAM, 128QAM, 256QAM						
Receiver Sensitivity	-66 dBm (256 QAM maximum speed); -90 dBm (QPSK minimum speed)						
Features	ATPC (Automatic Transmit Power Control), Modulation Shifting, Forward Error Correction						
Regulatory Compliance †	FCC/ANSI: Part 101, Part 15 Class A Unintentional Radiator, Part 101.147 (i) Industry Canada (IC): SRSP-305.9 Issue 5 ETSI: EN302 217-2-1, EN302 217-2-2, ITU-R F383-7 (lower 6 GHz)						
DATA							
Data Throughput/ RSSI (1E10 ⁻⁶ BER) †	Speeds are uni-directional. For aggregate full duplex speeds, multiply throughput numbers below by 2.						
	Channel Size	QPSK / RSSI	16QAM / RSSI	32QAM / RSSI	64QAM / RSSI	128QAM / RSSI	256QAM / RSSI
	10 Mhz	15 Mbps / -90 dBm	32 Mbps / -83 dBm	36 Mbps / -79 dBm	45 Mbps / -77 dBm	52 Mbps / -73 dBm	56 Mbps / -71 dBm
	30 / 28 Mhz	45 Mbps / -85 dBm	95 Mbps / -78 dBm	108 Mbps / -75 dBm	134 Mbps / -72 dBm	155 Mbps / -69 dBm	165 Mbps / -66 dBm
Packet Size	64-9600 bytes						
Flow Control	Yes, via Ethernet pause frames (GigE mode only)						
Security	Authentication uses 2 level password						
Configuration & Management	SSH, HTTPS, Console (RS232), Ethernet, SNMPV2						
Remote firmware update	TFTP client in radio unit						
ANTENNA	Model/Description		Gain		3 dB Beamwidth		
Antenna options	AD6G-6 / 6-foot antenna with slip-fit mount		39.0 dBi		1.9°		
POWER							
Input for Indoor Unit (IDU)	-40.5 to -57 VDC						
Power Consumption	IDU: < 70 Watts; ODU: < 20 Watts						
MECHANICAL & ENVIRONMENTAL		INDOOR UNIT			OUTDOOR UNIT (without antenna)		
Enclosure	19-inch rackmount, 1U height			Cast Aluminum with RSSI window			
Indicators	2-digit LED RSSI indicator; Ethernet speed and activity for each port; Backup OK indicator; Fault indicator; Power indicator			2-digit LED "in dBm" RSSI indicator for alignment			
IF/power/control connection	N-Female			N-Female			
Dimensions (height × width × length)	1.75 × 19 × 13 inches			12 × 12 × 6.8 inches			
Weight	3.5 lbs			6 lbs			
Temperature Range (operational)	14° to 122° F (-10° to +50° C)			-40° to 136° F (-40° to +58° C)			
Humidity	95% non condensing			100% condensing			
Interfaces	4 GigaEthernet ports RJ45 (10/100/1000BaseT ports) 8 T1/DS1 ports RJ45			N/A			
Out of band Management port	1 Ethernet port RJ45			N/A			
Alarms	2 inputs – TTL 2 outputs – Dry contact closure isolated 50V 1A			N/A			
Power connector	4 Pin Terminal Block to support redundant power supplies			N/A			
Redundancy (1+1)	4 pin circular			N/A			
Console	DB9			N/A			
Antenna Connector	N/A			Slip-fit mount / Optional waveguide adapter: WR137 / UDR70			
1+1 Protection Coupler	N/A			< -17 dB Return Loss 3.8 dB Insertion Loss (typical) 20 dB Isolation			

† Legal regulations for specific frequencies vary from region to region—users are responsible for complying with their local regulations.



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