

## Ultra high performance backhaul delivering up to 1.8 Gbps

Tsunami<sup>®</sup> GX-824, is a very high throughput, extremely reliable and cost-effective, all outdoor unlicensed point-to-point (PtP) microwave solution operating in the 24 GHz band. With its capacity up to 900 Mbps full duplex (1.8 Gbps aggregate), hitless ACM and modulation schemes up to 1024QAM, Tsunami<sup>®</sup> GX-824 brings new dimension to microwave links market and can be used as adequate alternative to 60 and 80 GHz millimeter wave links.

### Features

- 24 GHz Unlicensed Frequency bands
- 3.5 to 112 MHz channels
- Transmission capacity up to 900 Mbps [660 Mbps in the USA and Canada due to regulatory constraints]; 1.8 Gbps for 2+0 configuration [1.32 Gbps for the USA and Canada]
- Two Gigabit Ethernet + one SM/MM fiber interfaces
- Jumbo packets up to 10,240 Bytes
- Modulation type QPSK to 1024 QAM
- Hitless adaptive coding & modulation
- Forward error correction (FEC)
- Automatic TX power control (ATPC)
- All-Outdoor design with 1, 2, 3 or 4 foot antennas (30, 60, 90 or 120 cm)
- Full overvoltage protection of ODU unit

### Applications

- Local / Metropolitan / Wide area networks
- IPTV distribution
- Multimedia applications
- Last miles

### Management

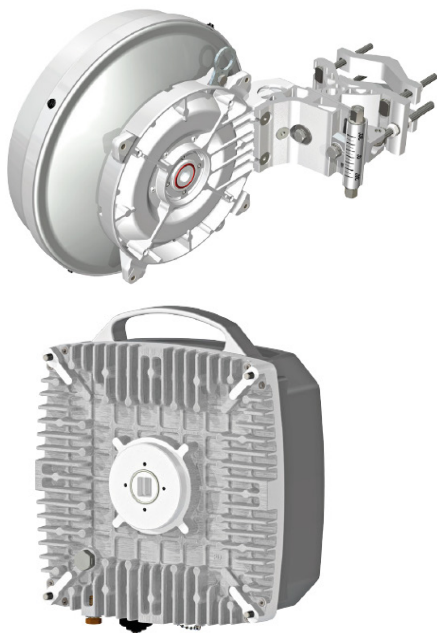
- Proprietary GX-824 Manager
- Software configurable
- Independent diagnostic channel
- SNMP protocol
- WEB interface
- Command line interface
- System configuration 1+0, 1+1 or 2+0

### Ethernet

- QoS support (VLAN p-bit / DSCP / port priority)
- Full support of VLAN and QinQ (802.1Q,802.1ad)
- Two independent Ethernet lines through radio link
- Ethernet port shutdown when the radio link is bad

### Surge Protected PoE Injector - GX-824-POEINJ

- Full overvoltage protection
- DIN rail or rack mount compatible
- Compact 1U rack unit for 3 injectors
- GX-824-POEINJ surge protected PoE injector and GX-824-PSU-ACDC 48 VDC power supply are not included in with link (to be ordered separately)



### About Proxim Wireless

Proxim Wireless is a pioneer and global leader in advanced Wi-Fi, point to point, and point to multipoint outdoor wireless systems that deliver high performance and high availability communications.

With over 30 years of wireless experience, Proxim is recognized for its unparalleled reliability, superior performance and drive for innovation.

## Specifications

PRODUCT MODELS		PART NUMBERS						
GX-824-SM-LNK-A30	Tsunami GX-824 Link, 920 Mbps FD, Gigabit Eth + SM Fiber, 1 ft – 30 cm antenna	952-00315						
GX-824-MM-LNK-A30	Tsunami GX-824 Link, 920 Mbps FD, Gigabit Eth + MM Fiber, 1 ft – 30 cm antenna	952-00316						
GX-824-SM-LNK-A60	Tsunami GX-824 Link, 920 Mbps FD, Gigabit Eth + SM Fiber, 2 ft – 60 cm antenna	952-00317						
GX-824-MM-LNK-A60	Tsunami GX-824 Link, 920 Mbps FD, Gigabit Eth + MM Fiber, 2 ft – 60 cm antenna	952-00318						
GX-824-SM-LNK-A90	Tsunami GX-824 Link, 920 Mbps FD, Gigabit Eth + SM Fiber, 3 ft – 90 cm antenna	952-00319						
GX-824-MM-LNK-A90	Tsunami GX-824 Link, 920 Mbps FD, Gigabit Eth + MM Fiber, 3 ft – 90 cm antenna	952-00320						
GX-824-SM-LNK-A120	Tsunami GX-824 Link, 920 Mbps FD, Gigabit Eth + SM Fiber, 4 ft – 120 cm antenna	952-00321						
GX-824-MM-LNK-A120	Tsunami GX-824 Link, 920 Mbps FD, Gigabit Eth + MM Fiber, 4 ft – 120 cm antenna	952-00322						
INTERFACES								
ETHERNET	Two Gigabit Ethernet 1000Base-T (RJ45) Auto MDIX ports with 10k jumbo frame support One Optic Fiber 1000Base-SX / 1000Base-LX / 1000Base-BX port							
MANAGEMENT	Diagnostic channel with Ethernet / RS-232 interface Antenna alignment voltage (BNC)							
ANTENNA (ODU)	Integrated with the ODU							
RADIO & TX SPECS								
MODULATION	QPSK, 8PSK, 16QAM, 32QAM, 64QAM, 128QAM, 256QAM, 1024QAM with Hitless adaptive coding & modulation (ACM)							
FREQUENCY BANDS	Frequency Range 24.000 to 24.250GHz [24.050 to 24.250 in the USA and Canada]							
CHANNEL BANDWIDTH	Wideband support. Configurable from 3.5 to 112 MHz [3.5 to 80 MHz for the USA and Canada]							
TX POWER	From -27 to +5 dBm							
TX POWER CONTROL	Automatic Transmit Power Control (ATPC)							
	<b>Channel Size (MHz)</b>	<b>3.5 MHz</b>	<b>7 MHz</b>	<b>14 MHz</b>	<b>28 MHz</b>	<b>56 MHz</b>	<b>80 MHz</b>	<b>112 MHz</b>
RX SENSITIVITY	QPSK	-94	-91	-88	-85	-83	-81	-79
	8PSK	-91	-88	-85	-81	-79	-77	-75
	16QAM	-88	-85	-82	-78	-76	-75	-73
	32QAM	-84	-82	-79	-75	-73	-71	-69
	64QAM	-81	-79	-76	-72	-70	-68	-66
	128QAM	-78	-76	-73	-69	-67	-65	-63
	256QAM	-75	-73	-70	-66	-64	-62	-60
	1024QAM	-68	-65	-63	-60	-57	-54	-52
ERROR CORRECTION	Reed-Solomon FEC and Convolutional Interleaver							
FREQUENCY STABILITY	< 10 ppm							
ANTENNAS OPTION								
	1 foot – 30 centimeters, 35.5 dBi 2 foot – 60 centimeters, 41 dBi 3 foot – 90 centimeters, 44 dBi 4 foot – 120 centimeters, 46 dBi							
MANAGEMENT								
LOCAL	RS-232 interface							
REMOTE	Proprietary GX-824 Manager, telnet (CLI)							
SNMP	SNMP v1, Enterprise MIB							
OTHER	Spectrum analyzer							
SECURITY								
ENCRYPTION	AES 256 bits							
QoS								
	4 queues based on physical port, 802.1p tag or IP DiffServ							
NETWORK								
MODES	1+0, 1+1 SD/FD (protected) or 2+0 (true aggregate)							
CONFIGURATION SCHEME	900 Mbps full duplex (1800 Mbps true aggregate) [660 Mbps full duplex (1320 Mbps true aggregate) in the USA and Canada]							
THROUGHPUT CAPACITY	< 90 $\mu$ s @ 900 Mbps							
LATENCY	802.1Q (4096 VLAN IDs) and QinQ							
VLAN								

POWER				
POWER INPUT MAX POWER CONSUMPTION	48 VDC (support from 36 to 72 VDC) Up to 27 W			
ENVIRONMENTAL SPECS	OPERATING TEMPERATURE	RELATIVE HUMIDITY	IP RATING	WIND LOADING
	-31 to +131 °F (-35 to +55°C)	100%	IP65	70 Mph (112 km/h) Operational, 125 Mph (200 km/h) Survival
PHYSICAL SPECS				
DIMENSIONS WEIGHT	5.2 x 10 x 11.8 in. (133 x 255 x 301 mm) 11.2 lbs (5.1 kg) without antenna			
PACKAGE CONTENTS				
	<ul style="list-style-type: none"> <li>• Two Tsunami® GX-824 ODU</li> <li>• Two antennas</li> <li>• Two Mounting Kits</li> <li>• One Quick Installation Guide</li> </ul>			
OPTIONS				PART NUMBER
GX-824-PSU-ACDC	110 – 220 VAC to -48 VDC Power Supply Unit for GX-824			949-00130
GX-824-POEINJ	Surge Protected PoE injector (-48 VDC input) for GX-824			949-00131
GX-824-CAP-SM	SM Fiber weatherproofing cap for GX-824			949-00136
GX-824-CAP-MM	MM Fiber weatherproofing cap for GX-824			949-00137
MTBF & WARRANTY				
	2 year parts and labor. ServPak Extended Support available			