



# Tsunami.GX 200

## Wireless Point-to-Point Ethernet Bridge



### APPLICATIONS

- Enterprise LAN and PBX extension
- WAN connection redundancy
- ISP remote POP
- ISP direct customer connections using point-to-point
- Affordable multipoint backhaul
- Extension of an existing fiber network

### Fast, Cost-Effective Extension of IP Networks

Proxim's Tsunami™.GX is a full-duplex point-to-point wireless Ethernet bridge with an innovative split-box design. This latest generation of high-capacity wireless bridges is designed to reduce the expense of extending IP networks and to simplify installation. Secure wireless technology significantly reduces total cost of ownership and speeds deployment, while a split-box design adds installation flexibility. The Tsunami.GX also provides best-in-class system performance with native IP interfaces by eliminating the overhead associated with T1/E1-to-Ethernet connections.

- Perfect for data and data/voice network backhaul applications and for replacing, extending or backing up leased lines
- Indoor-only installation facilitates quick maintenance and easier upgrades
- Indoor/outdoor installation improves system gain and reduces total cost of ownership

### Easily Manage and Troubleshoot Your Wireless Network

Tsunami.GX bridges offer sophisticated, preventative management tools to simplify network maintenance and eliminate downtime. Advanced diagnostic tools identify and isolate potential issues before they impact the network.

- Standards-based SNMP management and web-based GUI simplifies remote management and integrates easily into existing software platforms
- Built-in spectrum analyzer and an alarm log facilitate RF planning and post-deployment tuning

### Greater than leased line speeds with the Ease of Ethernet

Backed by more than 20 years of wireless design innovation, Proxim's Tsunami wireless bridge family

easily and affordably enables network extension, redundancy and backhaul. Tsunami wireless bridges eliminate fiber installation costs and leased line fees to bring you the capacity of more than eight leased lines with the TCO of Ethernet.

- High capacity for bandwidth-intensive applications such as PBX extension, data backhaul and critical link redundancy
- No expensive recurring leased line costs
- Superior system gain ensures consistent, high quality network operation

### Deploy in Days

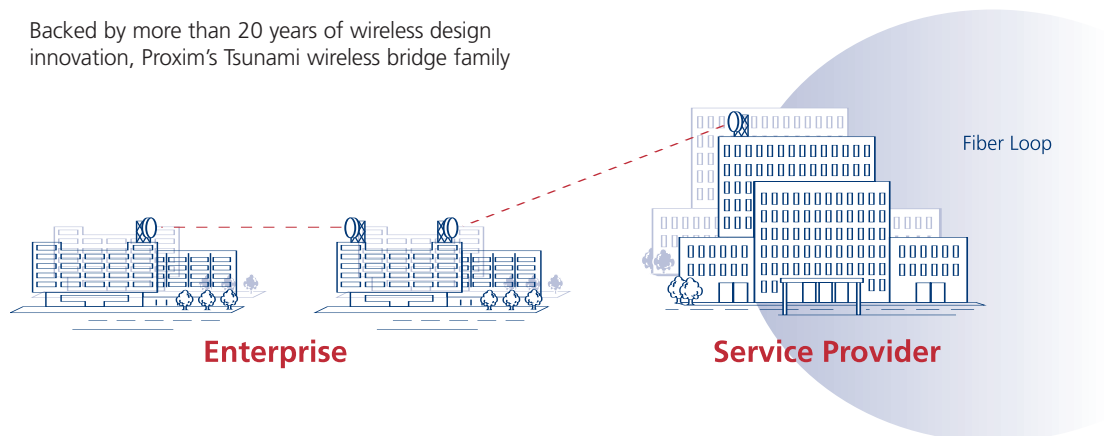
Because Tsunami bridges operate in license-exempt ISM frequency bands, they can be deployed quickly – eliminating the long lead times associated with leasing lines or trenching new fiber optic cable. This is especially useful in network redundancy and contingency planning.

- Rapid device deployment and flexible re-deployment
- ISPs maintain business continuity, even in severe conditions
- Enterprises minimize costly business application downtime

### Reliable and Secure

A wireless alternative to a wired network yields quality as well as flexibility. Proxim's Tsunami bridges offer the highest security and reliability available in networking today.

- Over 99.999% reliable RF transmission
- Meets or exceeds wired network security
- Proprietary encryption methods ensure secure data transmission



# Tsunami.GX 200 Specifications

## About Proxim Wireless

Proxim Wireless is a global leader in networking equipment for Wi-Fi and broadband wireless networks. Proxim provides solutions for enterprise applications, last mile access, municipal broadband networks, and cellular backhaul. Product families include ORiNOCO and TeraStar Wi-Fi products; Tsunami, TeraBridge, Gigalink, and TeraOptic Ethernet bridges, and Lynx point-to-point digital radios.

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FREQUENCY	DIGITAL CAPACITY	NON-OVERLAPPING FREQUENCY PAIRS	FCC EMISSION DESIGNATOR	THRESHOLD (BER=1X10 <sup>-6</sup> )	OUTPUT POWER <sup>1</sup>	SYSTEM GAIN	DISTANCE (MILES/KM)
5725-5850 MHz	216 Mbps	1	32M5G1D	≥ -73dBm	≥19 dBm	≥92 dB	20/32 <sup>3</sup>
<b>SYSTEM</b>				<b>POWER/ENVIRONMENT</b>			
Configuration	Split-box: IDU, RF Unit			Input Voltage Range			
Modulation	DSSS; 16 QAM			-20 to -60 Vdc or +20 to +60 Vdc			
Frequency Stability	±10 ppm			Power Consumption			
RF Attenuation Range <sup>1</sup>	15 dB			<70 Watts			
Maximum Receive Signal	-25 dBm error free; 0 dBm no damage			Power Connector			
Error Floor	<10 <sup>-11</sup>			3-pin terminal block			
Latency (T1) <sup>2</sup> , one-way	<300 µsec ±10%			Operating Temperature			
Error Correction	Reed-Solomon			IDU			
Security	12 character Link ID (48 bits)			RF Unit			
Regulatory Compliance	FCC Part 15.247; IC RS210			0°C to +50°C			
FCC ID	HZB-S58-GX1			-30°C to +55°C			
Industry Canada ID	1856A-U5358GX1			Humidity			
<b>DIGITAL LINE INTERFACES</b>				IDU			
Main Data Channel				RF Unit			
No waysides enabled	204 Mbps aggregate; 102 Mbps full duplex			95%, non-condensing			
T1/E1 wayside enabled	204 Mbps aggregate; 102 Mbps full duplex			100%, condensing			
2 T1 waysides enabled	196 Mbps aggregate; 98 Mbps full duplex			Altitude			
2 E1 waysides enabled	196 Mbps aggregate; 98 Mbps full duplex			up to 15,000 ft/5000 m			
10/100 Base T	RJ-45 modular jack; Auto-sense MDI/MDI-X			Wind Loading (RF unit)			
10/100 Base FX	SC-Type, multi-mode Fiber			up to 110 mph/96 kts			
Compliance	IEEE 802.3			MTBF IDU			
Wayside Data Channels				MTBF RF Unit			
T1/E1	DSX-1 (2 each) or CEPT-1 (2 each), software selectable RJ-48C modular jack			>100,000 Hours			
Compliance				>100,000 Hours			
Maximum Packet Size	1536 bytes			<b>PHYSICAL DIMENSIONS</b>			
T1	ANSI-1987-T1, CCITT G.823			IDU			
E1	G.703			RF Unit			
<b>AUXILIARY INTERFACES</b>				Size (in/cm)			
Orderwire (DTMF)	RJ-11, 100 addresses			17.2 X 10.9 X 1.72 (43.6 X 27.6 X 4.4)			
VF	8 pin modular jack, 4-wire 0dBm @ 600 ohm, balanced			Weight (lbs/kg)			
Aux Data (serial)	8 pin modular jack, EIA-561 19.2kbps, selectable, DCE			6.5/2.9			
<b>FAULT AND CONFIGURATION MANAGEMENT</b>				MECHANICAL			
Network Management	SNMP v2c (MIB II, Proxim enterprise MIBs), embedded HTML server, Telnet, VT-100 terminal			RF Unit			
Far End Management	Via NMS (embedded router, gateway address, subnet mask), front panel display			Antenna Port			
Physical Interfaces				Type-N female (outdoor RF cable not provided)			
NMS 1	10/100BaseT, RJ-45, auto-sense			IDU Port			
NMS 2	10/100BaseT, RJ-45, auto-sense			TNC female			
Configuration (serial)	EIA-574, 9600bps, 9-pin Sub-D, DTE			Cable to IDU			
External Alarm Interface				LMR-240 or equiv. <100m; LMR-400 or equiv. <200m; LMR-600 or equiv. <300m			
Connector	9-pin Sub-D female			Mounting			
Outputs	2 Form C Relays (Major, Minor)			IDU			
Inputs	2 TTL with internal pull-ups			RF Unit			
				EIA rackmount, 19" or 23", 1RU			
				Pole Mount Bracket (optional)			
				<b>FREQUENCY PLANS</b>			
				A: 5745/5830 MHz			
				<b>ORDERING INFORMATION</b>			
				66768			
				Low Band Terminal			
				66769			
				High Band Terminal			
				ACC-GX-RF-2			
				Optional RF Unit Outdoor Mounting Kit			
				201-31075-1			
				Optional AC Adapter 110/220 VAC with cable and connector			
				Call for details			
				ServPak 24x7 Enhanced Service and Support contracts (1yr-3yr)			
				<b>SHIPPING CONFIGURATION</b>			
				Tsunami.GX 200 IDU (Indoor Unit); ISM Low Band or High Band RF Unit; IDU Indoor Rack Management Kit; ACC-GX-RF-1 RF Unit Indoor Mounting Kit (includes 12" IDU to RFU TNC-to-TNC cable); Quick Install Guide; CD-User Documentation			

<sup>1</sup> Output power is specified at zero attenuation

<sup>2</sup> Does not include air latency of approximately 5.4 µsec/mile

<sup>3</sup> RF Unit installed outdoors with 6ft. parabolic antenna, 99.995% one-way RF Link availability, average climate/terrain, no multipath reflection. Assumes FCC regulations for EIRP

For detailed technical specifications, please go to [http://www.proxim.com/products/bwa/point/tsunami/tsunami\\_gx\\_200/techspecs.html](http://www.proxim.com/products/bwa/point/tsunami/tsunami_gx_200/techspecs.html)

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