



# 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

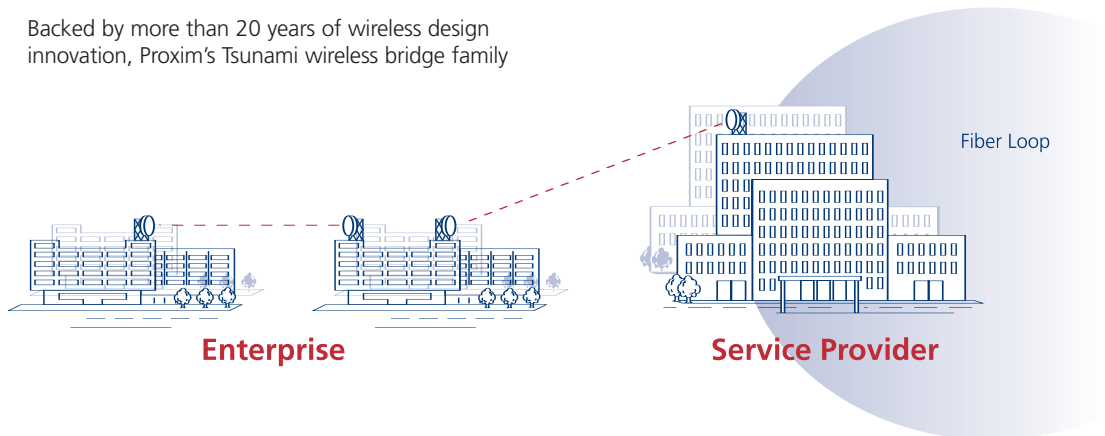
Because Tsunami bridges operate in license-exempt ISM frequency bands, they can be deployed quickly – eliminating the long lead times associated with leasing lines or trenching new fiber optic cable. This is especially useful in network redundancy and contingency planning.

- 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

Proxim Corporation is a global leader in wireless networking equipment for Wi-Fi and broadband wireless networks. Proxim provides solutions for mobile enterprise applications, security and surveillance, last mile access, voice and data backhaul, public hot spots, and metropolitan area networks. Product families include ORINOCO Wi-Fi products, Tsunami 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	10/16
<b>SYSTEM</b>							
Configuration	Split-box: IDU, RF Unit						
Modulation	DSSS; 16 QAM						
Frequency Stability	±10 ppm						
RF Attenuation Range <sup>1</sup>	15 dB						
Maximum Receive Signal	-25 dBm error free; 0 dBm no damage						
Error Floor	<10 <sup>-11</sup>						
Latency (T1) <sup>2</sup> , one-way	<300 µsec ±10%						
Error Correction	Reed-Solomon						
Security	12 character Link ID (48 bits)						
Regulatory Compliance	FCC Part 15.247; IC RS210						
FCC ID	HZB-S58-GX1						
Industry Canada ID	1856A-U5358GX1						
<b>DIGITAL LINE INTERFACES</b>							
Main Data Channel							
No waysides enabled	204 Mbps aggregate; 102 Mbps full duplex						
T1/E1 wayside enabled	204 Mbps aggregate; 102 Mbps full duplex						
2 T1 waysides enabled	198 Mbps aggregate; 99 Mbps full duplex						
2 E1 waysides enabled	196 Mbps aggregate; 98 Mbps full duplex						
10/100 Base T	RJ-45 modular jack; Auto-sense MDVMDI-X						
10/100 Base FX	SC-Type, multi-mode Fiber						
Compliance	IEEE 802.3						
Wayside Data Channels							
T1/E1	DSX-1 (2 each) or CEPT-1 (2 each), software selectable RJ-48C modular jack						
Compliance							
Maximum Packet Size	1536 bytes						
T1	ANSI-1987-T1, CCITT G.823						
E1	G.703						
<b>AUXILIARY INTERFACES</b>							
Orderwire (DTMF)	RJ-11, 100 addresses						
VF	8 pin modular jack, 4-wire 0dBm @ 600 ohm, balanced						
Aux Data (serial)	8 pin modular jack, EIA-561 19.2kbps, selectable, DCE						
<b>FAULT AND CONFIGURATION MANAGEMENT</b>							
Network Management	SNMP v2c (MIB II, Proxim enterprise MIBs), embedded HTML server, Telnet, VT-100 terminal						
Far End Management	Via NMS (embedded router, gateway address, subnet mask), front panel display						
Physical Interfaces							
NMS 1	10/100BaseT, RJ-45, auto-sense						
NMS 2	10/100BaseT, RJ-45, auto-sense						
Configuration (serial)	EIA-574, 9600bps, 9-pin Sub-D, DTE						
External Alarm Interface							
Connector	9-pin Sub-D female						
Outputs	2 Form C Relays (Major, Minor)						
Inputs	2 TTL with internal pull-ups						
<b>POWER/ENVIRONMENT</b>							
Input Voltage Range	-20 to -60 Vdc or +20 to +60 Vdc						
Power Consumption	<70 Watts						
Power Connector	3-pin terminal block						
Operating Temperature							
IDU	0°C to +50°C						
RF Unit	-30°C to +55°C						
Humidity							
IDU	95%, non-condensing						
RF Unit	100%, condensing						
Altitude	up to 15,000 ft/5000 m						
Wind Loading (RF unit)	up to 110 mph/96 kts						
MTBF IDU	>100,000 Hours						
MTBF RF Unit	>100,000 Hours						
<b>PHYSICAL DIMENSIONS</b>							
	IDU						RF Unit
Size (in/cm)	17.2 X 10.9 X 1.72 (43.6 X 27.6 X 4.4)					14.1 X 10.9 X 1.72/ (35.8 X 27.6 X 4.4)	
Weight (lbs/kg)	6.5/2.9					12.0/5.4	
<b>MECHANICAL</b>							
RF Unit							
Antenna Port	Type-N female (outdoor RF cable not provided)						
IDU Port	TNC female						
Cable to IDU	LMR-240 or equiv. <100m; LMR-400 or equiv. <200m; LMR-600 or equiv. <300m						
Mounting							
IDU	EIA rackmount, 19" or 23", 1RU						
RF Unit	EIA rackmount, 19" or 23", 1RU, or outdoor pole mount						
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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