



Tsunami.GX 90

Wireless Point-to-Point Ethernet Bridges

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 DS3-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

The Speed of DS-3 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 DS-3 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

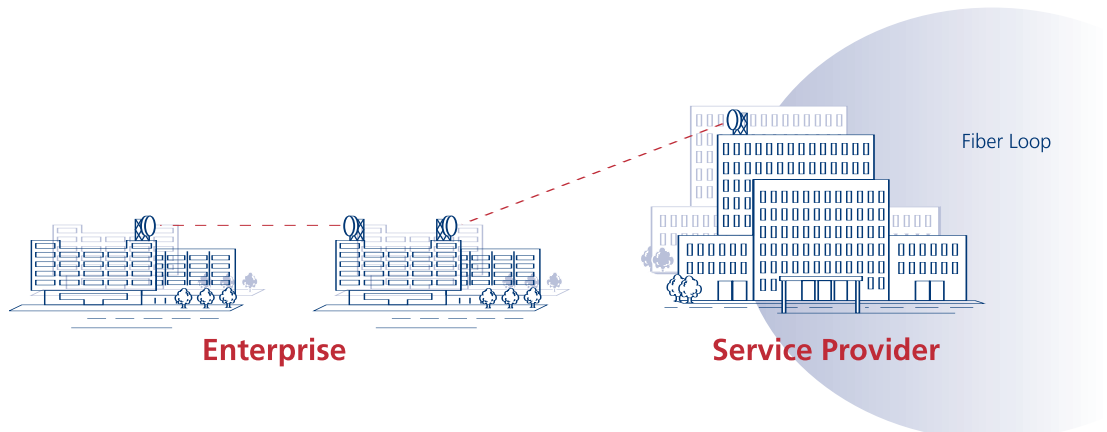
A wireless alternative to a wired network yields quality as well as flexibility. Proxim's Tsunami bridges offer the highest security and reliability available in networking today.

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



APPLICATIONS

- Enterprise LAN and PBX extension
- WAN connection redundancy
- ISP remote POP
- ISP direct customer connections using point-to-point
- Multipoint backhaul at DS-3 performance
- Extension of an existing fiber network



Tsunami.GX 90 Specifications

About Proxim

Proxim Corporation is a global leader in wireless networking equipment for Wi-Fi and broadband wireless networks. The company provides its enterprise and service provider customers with wireless solutions for the mobile enterprise, public hot spots, security and surveillance, last mile access, metropolitan area networks and voice and data backhaul.

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FREQUENCY	DIGITAL CAPACITY	CHANNEL PAIRS	FCC EMISSION DESIGNATOR	THRESHOLD (BER=1X10 ⁻⁶)	OUTPUT POWER	SYSTEM GAIN	DISTANCE (MILES/KM)		
5725-5850 MHz	98 Mbps ⁴	1	28M1G7D	≥-80 dBm	≥+23.5 dBm ¹	≥103.5 dB, 106 dB typ.	0 to >33.7/54.4 ³		
SYSTEM				POWER/ENVIRONMENT					
Configuration	Split-box: IDU, RF Unit		Input Voltage Range					-20 to -60 Vdc or +20 to +60 Vdc	
Modulation	DSSS; QPSK		Power Consumption					<70 Watts	
Frequency Stability	±10 ppm		Power Connector					3-pin terminal block	
RF Attenuation Range ¹	≥20 dB		Operating Temperature						
Maximum Receive Signal	-20 dBm error free; 0 dBm no damage		IDU					0°C to +50°C	
Error Floor	<10 ⁻¹¹		RF Unit					-30°C to +55°C	
Latency (T1) ² , one-way	325 µsec ±10%		Humidity						
Error Correction	Reed-Solomon		IDU					95%, non-condensing	
Security	12 character Link ID (48 bits)		RF Unit					100%, condensing	
Regulatory Compliance	FCC Part 15.247; IC RS210		Altitude					up to 15,000 ft/5000 m	
FCC ID	HZB-S58-GX1		Wind Loading (RF unit)					up to 110 mph/96 kts	
Industry Canada ID	1856A-U5358GX1		MTBF IDU					>100,000 Hours	
DIGITAL LINE INTERFACES				MTBF RF Unit					>100,000 Hours
Main Data Channel ⁴	96 Mbps aggregate 48 Mbps full duplex		PHYSICAL DIMENSIONS						
10/100 Base T	RJ-45 modular jack Auto-sense MDI/MDI-X		IDU		RF Unit				
10/100 Base FX	SC-Type, multi-mode Fiber		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	
Compliance	IEEE 802.3		Weight (lbs/kg)		6.5/2.9			12.0/5.4	
Wayside Data Channels			MECHANICAL						
T1	DSX-1 (2 each) RJ-48C modular jack		RF Unit						
AUXILIARY INTERFACES				Antenna Port (outdoor RF cable not provided)		Type-N female			
Orderwire (DTMF)	RJ-11, 100 addresses		IDU Port		TNC female				
VF	8 pin modular jack, 4-wire 0dBm @ 600 ohm, balanced		Cable to IDU		LMR-240 or equiv. <100m; LMR-400 or equiv. <200m; LMR-600 or equiv. <300m				
Aux Data (serial)	8 pin modular jack, EIA-561 ≤19.2kbps, selectable, DCE		Mounting						
FAULT AND CONFIGURATION MANAGEMENT				IDU		EIA rackmount, 19" or 23", 1RU			
Network Management	SNMP v2c (MIB II, Proxim enterprise MIBs), embedded HTML server, Telnet, VF-100 terminal		RF Unit		EIA rackmount, 19" or 23", 1RU, or outdoor pole mount bracket (optional)				
Far End Management	Via NMS (embedded router, gateway address, subnet mask), front panel display		SELECTABLE FREQUENCY CHANNEL PAIR						
INTERFACES				Channel Plan A		5745/5830 MHz			
NMS 1	10/100BaseT, RJ-45, auto-sense		ORDERING INFORMATION						
NMS 2	10/100BaseT, RJ-45, auto-sense		67255		Low Band Terminal, 301-57710-61H0				
Configuration (serial)	EIA-574, 9600bps, 9-pin Sub-D, DTE		67254		High Band Terminal, 301-57710-61L0				
EXTERNAL ALARM INTERFACE				ACC-GX-RF-2		Optional RF Unit Outdoor Mounting Kit			
Connector	9-pin Sub-D female		201-31075-1		Optional AC Adapter 110/220 VAC with cable and connector				
Outputs	2 Form C Relays (Major, Minor)		Call for details					ServPak 24x7 Enhanced Service and Support contracts (1yr-3yr)	
Inputs	2 TTL with internal pull-ups		SHIPPING CONFIGURATION						

¹ Output power is specified at zero attenuation

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

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

⁴ No Waysides enabled