



# Tsunami™

## 1000BaseSX Wireless Gigabit Ethernet Bridge



### Cost-Effective Gigabit-Speed Capacity

The Tsunami wireless Gigabit Ethernet bridge is the world's first 1000BaseSX system to provide wireless gigabit point-to-point connectivity while preserving native IP. Tsunami Gigabit meets the ever-growing demand for greater WAN/MAN bandwidth at a significantly lower cost than fiber solutions.

Tsunami Gigabit is an ideal alternative to multiple T1s or fiber-optic cable and can be used to extend or provide redundancy to existing fiber networks.

#### Tackle Your Toughest Bandwidth Problems

Tsunami wireless Gigabit Ethernet bridges deliver carrier-class wireless solutions that meet critical connectivity needs for:

- Enterprise IT managers building out their private networks by creating WAN/MAN connectivity for building-to-building and campus-to-campus locations
- Service providers extending fiber networks to create new connections for "last-mile" or remote access requirements
- Internet Service Providers expanding the network backbone to establish new points of presence (POP)

#### About the Tsunami Product Family

The Tsunami family of Ethernet bridges provides wireless solutions that meet the growing demand for transparent and reliable high-speed network interconnectivity.

In addition to Tsunami 1000BaseSX, the world's first license-exempt Gigabit Ethernet bridge, the Tsunami product line includes:

**Tsunami 10BaseT**, a cost-effective, high-capacity alternative to multiple wireline T1 connections.

**Tsunami 100BaseT/F**, offering wireless Fast Ethernet connectivity for data communications at full-duplex 100BaseT/F speeds.

### PRODUCT HIGHLIGHTS

#### Highest Capacity Available

- Removes network bandwidth bottlenecks
- Native IP is preserved throughout the system with direct connections to Gigabit switches

#### Easily Installed and Operational the Next Day

- License-exempt, eliminating delays from regulatory approvals
- Faster to deploy than new fiber
- Eliminates schedule delays due to new fiber right-of-way issues

#### Accelerates and Maximizes Return on Investment

- Faster payback compared to trenching new fiber or multi-year lease contracts
- Gigabit Ethernet connectivity at half the cost of an OC-3 connection

#### Carrier-Class Reliability

- Meets or exceeds traditional Telco wireline standards
- Eliminates line cuts inherent with wireline networks
- Longer distances and highest reliability due to superior system gain

### KEY FEATURES

- License-exempt in many countries
- 430 Mbps full-duplex data capacity
- Four wayside T1 channels included
- Frequency ranges: 5250-5350 MHz and 5725-5825 MHz (U-NII Band)
- Compliant with key industry standards
- Network management through SNMP or HTTP
- Works with VPN (IEEE 802.1Q) for virtual LAN compatibility
- Built-in loopback, far-end monitoring, and private telephone network orderwire
- 2-year warranty

## Product Specifications

PRODUCT	MODEL NUMBER	FREQUENCY BAND	DATA CAPACITY (FULL DUPLEX)	VOICE CAPACITY	CHANNEL PLAN	THRESHOLD (BER=1X10 <sup>-6</sup> )	OUTPUT POWER (MINIMUM)	SYSTEM GAIN	DISTANCE (MILES/KM)
Tsunami 480	27900-G1	5250-5350 MHz and 5725-5825 MHz	430 Mbps	4 x T1	1 (A)	-73 dBm	+10 dBm +15 dBm	83 dB	< 7/11

### System

Frequency Band (Dual)	5250-5350 MHz and 5725-5825 MHz
Aggregate Capacity	872 Mbps
Data Capacity	430 Mbps Full Duplex
Voice Capacity	4 x T1
Antenna Connector	Two (2) N-Type female
Output Power (5.8 GHz)	+15 dBm
(5.3 GHz)	+10 dBm
RF Attenuation Range	16 dB, minimum
Receiver Threshold	-73 dBm, BER=1x10 <sup>-6</sup> , min.
System Gain	83 dB
Maximum Receive Level	-20 dBm, error-free
Latency	<500 μs
Regulatory Compliance	US: FCC Part 15.407, Class A Canada: IC RSS-210

### Data Interface

Gigabit Ethernet Interface	1000BaseF(SX)
Connector	SC
Compliance	IEEE 802.3d, 802.3z, 802.1q

### Telco Interface

Interface	DSX-1
Connector	RJ-48C female
Compliance	ANSI T1-102-1987

### Auxiliary Connections

Orderwire Handset	2-wire, RJ-11
VF Orderwire Bridge	600 ohm, balanced, 4-wire, 0 dBm, DB9
Configuration Port	RS-232, DB9 Software download
Network Management (NMS)	10/100BaseT/F (HTTP, SNMP)
Aux. Data Port (Clear Service Channel)	RS-232/RS-422, 19.2k baud, DB9
Alarm Port	2 ea. Form C, 6 ea. TTL, DB9
Test Points	Output power, near- and far-end RSL
Wayside Channels	4 x T1 (DSX-1)

### Power/Environment

DC Power	±37 to ±63 Volts, <250 Watts
Optional AC Adapter	100-250 Volts, 50-60 Hz
Power Connector	6-pin barrier strip, plug-in
Operational Temperature	
Indoor Unit	0° to +50° C
Outdoor Unit	-30° to +65° C
Humidity	0 to 95% non-condensing
Altitude	15,000 feet/4572 meters, maximum

### Physical

Indoor Unit	
Size (WxHxD)	17.2 x 3.5 x 14.5 inches (2RU) 43.7 x 8.9 x 36.8 cm
Weight	11 lbs/5 kg
Outdoor Unit	
Size (WxHxD)	9 x 13 x 5 inches 22.9 x 33 x 12.7 cm
Weight	20 lbs/9 kg

### Mounting (Installation)

EIA Rack Mount	19-inch/48.2 cm, 2-rack unit height (mounting brackets supplied)
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#### For Sales and Technical:

Pulse, Inc.  
www.pulsewan.com  
sales@pulsewan.com

Toll Free (USA)  
Tel: 888-785-7393

International:  
Tel: 1-909-699-3891