



Tsunami® MP-8200 Series

Wireless Product Portfolio

- **Tsunami® 8200 Series**

PtP & PtMP product line delivering 300 Mbps plus data rate

- **Tsunami® 800 Series**

Compact and robust, high performance, PtP & PtMP product line

- **Tsunami® .11 Series**

Our best selling Point-to-point and multipoint product line

- **Tsunami® GX-810 Series**

Carrier-class IP Ethernet bridge for voice and data backhaul for service providers and enterprise applications

- **ORINOCO® AP 8000 Series**

The industry's highest performance 802.11a/b/g/n access points

Proxim Wireless is a global pioneer of broadband wireless systems that deliver the quadruple play of video, voice, data and mobility. Regardless of the application, our end-to-end product portfolio enables partners to custom-build the wireless solution that fits customer's specific needs. Our point-to-point wireless backhaul products are available through our extensive global channel networks.

Experience superior performance and unparalleled flexibility with our Tsunami® MP-8200 wireless series

Paving a new path in the wireless industry, Proxim addresses the requirement for a versatile and a high performance wireless solution, with the Tsunami® 8200 series. The Tsunami® MP-8200 delivers data rates of 300 Mbps along with excellent spectrum flexibility and high power radios capable of 25.8 dBm Tx power for extended coverage.

The Tsunami® MP-8200 features nLoS functionality and leverages the advantages of OFDM, MIMO radio innovations and Proxim's proprietary Wireless Outdoor Routing Protocol (WORP®) to provide in excess of 4G speeds with QoS class of service for delivering voice, video and data applications

With supreme throughput, high power radio, flexible channel features and dual Gigabit Ethernet ports with PoE out, for powering additional devices, the Tsunami® MP-8200 series is an ideal solution for service providers and government organizations with requirements of all kinds, from last mile broadband wireless access (BWA) to wireless video surveillance and more.

World-class Performance

- Point to Multipoint solution that can deliver 300 Mbps data rates
- High power radio capable of up to 25.8 dBm Tx power to extend the range and coverage
- Provides reliable high performance under all traffic loads using Proxim's Wireless Outdoor Routing Protocol (WORP®)
- Dual IPv4 and IPv6 stack for transparent evolution to tomorrow networks
- Seamless roaming up to 295 km/h (185 mph)

Non-Line-of-Sight and Advanced Features

- Non-line-of-sight capable, utilizing OFDM and 3x3 MIMO techniques to improve link performance and penetrate through or around obstructions better
- Features dual Gigabit Ethernet ports with PoE in/out to power other devices like surveillance cameras and wireless access points
- Enables packet identification to create unique and sophisticated service rules and tiered service classes with ease
- BSU redundancy (500 milliseconds switch over time) and Dynamic Channel Selection to ensure continuity of services whatever the condition
- Spectrum analysis feature helps to study frequency bands for interference, and select a relatively low interference channel.

Frequency Agnostic

- Operates in licensed and unlicensed frequency bands
- Flexible channel planning with 5, 10, 20 and 40MHz size
- Provides support for extended frequency bands from 4.900 to 5.925 GHz

Carrier-Grade Security

- Implements tiered security layers for the most secure outdoor wireless communications in the unlicensed frequency spectrum
- Utilizes Proxim's Wireless Outdoor Routing Protocol (WORP®), which prevents snooping, and features highly-secure remote management via SSL, SSH and SNMPv3
- Provides military-grade security with AES encryption technology, prevents unsecure client-to-client communications and leverages MAC, Ethertype and IP address packet filtering for granular network security

Product Line Compatibility

- Connects to all existing Tsunami® MP-8100 and Tsunami® MP.11

PRODUCT MODELS					
MP-8200-BSU	Tsunami® MP 8200 Base Station Unit, 300 Mbps, MIMO 3x3, Type-N Connectors				
MP-8250-BS1	Tsunami® MP 8250 Base Station Unit, 300 Mbps, MIMO 2x2, 23 dBi, 10° panel antenna				
MP-8250-BS9	Tsunami® MP 8250 Base Station Unit, 300 Mbps, MIMO 2x2, 16 dBi, 90° sector antenna				
MP-8200-SUA	Tsunami® MP 8200 Subscriber Unit, 300 Mbps, MIMO 3x3, Type-N Connectors				
MP-8250-SUR	Tsunami® MP 8250 Subscriber Unit, 300 Mbps, MIMO 2x2, 23 dBi Integrated Antenna				
INTERFACES					
WIRED ETHERNET	Two auto MDI-X RJ45 10/100/1000Mbps Ethernet - Port #1 with PoE in & Data - Port #2 with PoE out (802.3af pin out) & Data				
WIRELESS PROTOCOL	WORP® (Wireless Outdoor Router Protocol)				
RADIO & TX SPECS					
MIMO	3x3MIMO				
MODULATION	OFDM with BPSK, QPSK, QAM16, QAM64				
FREQUENCY	4.900 – 5.925 GHz (Subject to Country Regulations)				
CHANNEL SIZE	40 MHz, 20 MHz, 10 MHz*, 5 MHz* channel bandwidths * Not applicable for DFS Band				
DATA RATE	MCS 0 to 15 for High Throughput mode (6.5 – 300 Mbps) with Dynamic Data Rate Selection BPSK, QPSK, 16-QAM and 64-QAM for legacy mode (6Mbps - 54Mbps)				
TX POWER	Up to 25.8dBm (Triple chain)				
TX POWER CONTROL	0 – 25 dB, in 0.5 dB steps. Automatic TPC with configurable EIRP limit				
RX SENSITIVITY (PER=10%)	Channel Size	40 MHz	20 MHz	10 MHz	5 MHz
	MCS 0	-87 dBm	-93 dBm	-95 dBm	-98 dBm
	MCS 7	-71 dBm	-74 dBm	-76 dBm	-79 dBm
	MCS 8	-87 dBm	-91 dBm	-93 dBm	-96 dBm
	MCS 15	-68 dBm	-72 dBm	-74 dBm	-77 dBm
OTHER	Dynamic Channel Selection (DCS) based on interference detection Dynamic Frequency Selection (DFS) based on radar signature Automatic Transmit Power Control (ATPC) with EIRP limit support				
ANTENNA	MP-8200-BSU or SUA	Three N-type Connectors with built-in Surge Protection			
	MP-8250-BS1 or SUR	Integrated 2x2 MIMO 23dBi Dual Polarized Panel Antenna			
	MP-8250-BS9	Integrated 2x2 MIMO 16dBi Dual Polarized 90 degree Sector Antenna			
MANAGEMENT					
LOCAL	RS-232 serial (RJ11 to DB-9 dongle provided)				
REMOTE	Telnet and SSH, Web GUI and SSL, TFTP, SNMPv3				
SNMP	SNMP v1-v2c-v3, RFC-1213, RFC-1215, RFC-2790, RFC-2571, RFC-3412, RFC-3414, Private MIB				
OTHER	Syslog, sFlow™ agent, SNTp and local time, Spectrum analyzer				
SECURITY					
ENCRYPTION	AES-CCM 128 bits				
AUTHENTICATION	Internal MAC Address Control List, Radius based Authentication (with VLAN and QoS provisioning)				
NETWORK					
MODES	Bridging, Routing (RIP v2 and IP tunneling)				
IP STACK	IPv4 and IPv6 simultaneously				
THROUGHPUT	Up to 240 Mbps				
GATEWAY FEATURES					
QoS	Asymmetric Bandwidth Control UL and DL CIR Control "committed information rate" per service flow UL and DL MIR Control "maximum information rate" per service flow Packet Classification Capabilities 802.1D/802.1Q/802.1p priority, IPTOS, VLAN ID, IP source/destination address, source/destination port, Ethernet source/destination address, IP protocol, and Ethertype Scheduling Best Effort, Real Time Polling Services				
VLAN	802.1Q: Management VLAN, Transparent, Access, Trunk and Mixed mode. QinQ double tagging				
POWER CONSUMPTION	12 Watt typical (22 Watt max)				
ENVIRONMENTAL SPECS					
OPERATING TEMPERATURE	-40° to 60°C (-40° to 140° Fahrenheit) Will continue operating if temperature temporarily varies between -50° and 70°C (-58° and 158° Fahrenheit).				
STORAGE TEMPERATURE	-55° to 80°C (-67° to 176° Fahrenheit)				
HUMIDITY - IP RATING	100% relative humidity - IP67				
WIND LOADING	200 km/h (125 mph)				
PHYSICAL SPECS					
PACKAGED	MP-8200-BSU or MP-8200-SUA	14.56 x 13.69 x 8.18 in. (370 x 348 x 208 mm)	15 lbs (6.8 kg)		
	MP-8250-SUR	15.94 x 15.94 x 9.21 in. (405 x 405 x 234 mm)	16.31 lbs (7.4 kg)		
UNPACKAGED	MP-8200-BSU or MP-8200-SUA	10.79 x 11.14 x 3.38 in (274 x 283 x 86 mm)	7.7 lbs (3.5 kg)		
	MP-8250-SUR	14.17 x 14.17 x 3.70 in (370 x 370 x 94 mm)	9.0 lbs (4.1 kg)		
SAFETY STANDARDS					
PACKAGE CONTENTS	UL 60950, CAN/CSA-C22.2 No. 60950, IEC 60950, EN 60950 (part -1 and -2) <ul style="list-style-type: none"> ■ One Tsunami® MP-8200-BSU with three N-type surge protected connectors Or One Tsunami® MP-8200-SUA with three N-type surge protected connectors Or One Tsunami® MP-8250-SUR with integrated 23 dBi dual polarized antenna ■ One power injector and country specific power cord ■ One Wall / Pole mounting kit ■ One Connector weatherproofing kit (Includes all recommended weatherproofing material) ■ One Serial (RJ-11 to DB9) dongle ■ One Grounding kit ■ One Gigabit PoE Surge Arrestor ■ One Quick Installation Guide 				
MTBF & WARRANTY	>250,000 hours & 1-year on parts and labor; ServPak Extended Support available.				

APPLICATIONS

- Last Mile Access**
 Competitive broadband service access alternative to DSL or cable for residences and T1 or Ethernet for businesses
- Security and Surveillance**
 High definition IP-surveillance cameras for monitoring city streets, airports, bridges, seaports, transportation hubs, offices and warehouses
- Metropolitan Area Networks**
 Secure and reliable connectivity between city buildings
- Emergency First Responders**
Critical information delivery such as medical data and video feeds during in-progress events
- Enterprise Campus Connectivity**
 Extend the main network to remote offices, warehouses or other buildings without leased lines

For detailed technical specifications, please go to <http://proxim.com/products/point-to-multipoint/tsunamiir-mp-8200-series>

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