



Tsunami[®] MP-8100 Series

End-to-End Broadband Wireless Product Portfolio

- **Tsunami[®] MP.11** – Our best selling Point-to- Multipoint product line
- **MeshMAX** – An all-in-one solution containing Point-to-Multipoint, Wi-Fi mesh, and Wi-Fi access point radios
- **ORINOCO[®] AP** - The industry's highest performance 802.11a/b/g/n access points

Proxim Wireless is a global pioneer of end-to-end broadband wireless systems that deliver the quadruple play of video, voice, data and mobility. From Wi-Fi to wireless Gigabit Ethernet – our WLAN, Wi-Fi Mesh, WiMAX and point-to-point wireless backhaul products are available through our extensive global channel networks.

Presenting a Wireless Solution that Exceeds 4G Speed Requirements with 300 Mbps Bandwidth!

With over 20 years of wireless innovation, Proxim has been providing Point-to-Multipoint (PtMP) solutions to carriers of all sizes for many years. Leveraging the advantages of OFDM, MIMO radio innovations and Proxim's proprietary Wireless Outdoor Routing Protocol (WORP), the Tsunami[®] MP-8100 exceeds the ITU requirements for 4G throughput speeds while providing Non-Line-Of-Sight functionality with the widest range of frequencies available. With incredible channel capacity, excellent spectrum flexibility and a prioritization platform for delivering voice, video and data applications, the MP-8100 satisfies service providers and government organizations with requirements for fast and worry-free wireless connectivity.

With data rates of 300 Mbps, the Tsunami[®] MP-8100 is an ideal solution for everything from last mile broadband wireless access (BWA) to wireless video surveillance. As the industry's first PtMP product to provide dual Gigabit Ethernet ports with PoE out, the Tsunami[®] MP-8100 becomes the first solution capable of powering IP video cameras or additional radios for even greater ease of deployment.

Supreme Performance

- A fixed PtMP solution that can deliver 300 Mbps data rates
- The only PtMP product in the market to include dual Gigabit Ethernet ports, enabling higher throughput which would otherwise be limited by the 10/100 Ethernet ports seen in other devices
- Provides reliable high performance under all traffic loads using Proxim's Wireless Outdoor Routing Protocol (WORP)

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
- Create tiered QoS service classes with ease
- Comes packaged in a compact form factor with a set of accessories for even greater ease of installation

Frequency Agnostic

- Operates in licensed and unlicensed frequency bands
- Provides flexible channel planning with planned support for 2.3 - 2.5 GHz and 4.9 - 6.0 GHz frequencies

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.11 and MeshMAX products
- Can utilize existing mounting kits of the Tsunami product line

PRODUCT MODELS																										
MP-8100-BSU	Tsunami® MP 8100 Base Station Unit, 300 Mbps, MIMO 3x3, Type-N Connectors																									
MP-8100-SUA	Tsunami® MP 8100 Subscriber Unit, 300 Mbps, MIMO 3x3, Type-N Connectors																									
MP-8150-SUR	Tsunami® MP 8150 Subscriber Unit, 300 Mbps, MIMO 2x2, 23 dBi Integrated antenna																									
MP-8150-SUR-100	Tsunami® MP 8150 Subscriber Unit, 2x50 Mbps, MIMO 2x2, 23 dBi Integrated antenna																									
INTERFACES																										
WIRED ETHERNET	One or two auto MDI-X RJ45 10/100/1000Mbps Ethernet - Port #1 with PoE in & Data (all models) - Port #2 with PoE out (802.3af pin out) & Data (Not available for MP-8150-SUR-100)																									
WIRELESS PROTOCOL	WORP™ (Wireless Outdoor Router Protocol)																									
RADIO & TX SPECS																										
MIMO	3x3 MIMO																									
MODULATION	OFDM																									
FREQUENCY	2.3 – 2.5 GHz 4.9 – 6.0 GHz (Subject to Country Regulations)																									
CHANNEL SIZE	40 MHz, 20 MHz, 10 MHz, 5MHz channel bandwidths																									
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 21 dBm (two Tx chain)																									
TX POWER CONTROL	0 – 25 dB, in 0.5 dB steps. Automatic TPC with configurable EIRP limit																									
RX SENSITIVITY (BER=10 ⁻⁶)	<table border="1"> <thead> <tr> <th>Channel Size</th> <th>40 MHz</th> <th>20 MHz</th> <th>10 MHz</th> <th>5 MHz</th> </tr> </thead> <tbody> <tr> <td>MCS 0</td> <td>-87 dBm</td> <td>-93 dBm</td> <td>-94 dBm</td> <td>-96 dBm</td> </tr> <tr> <td>MCS 7</td> <td>-71 dBm</td> <td>-75 dBm</td> <td>-78 dBm</td> <td>-81 dBm</td> </tr> <tr> <td>MCS 8</td> <td>-87 dBm</td> <td>-93 dBm</td> <td>-94 dBm</td> <td>-95 dBm</td> </tr> <tr> <td>MCS 15</td> <td>-69 dBm</td> <td>-71 dBm</td> <td>-74 dBm</td> <td>-77 dBm</td> </tr> </tbody> </table>	Channel Size	40 MHz	20 MHz	10 MHz	5 MHz	MCS 0	-87 dBm	-93 dBm	-94 dBm	-96 dBm	MCS 7	-71 dBm	-75 dBm	-78 dBm	-81 dBm	MCS 8	-87 dBm	-93 dBm	-94 dBm	-95 dBm	MCS 15	-69 dBm	-71 dBm	-74 dBm	-77 dBm
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ANTENNA	Model MP-8100-BSU and MP-8100-SUA include three N-type Connectors with built-in Surge Protection Model MP-8150-SUR(-100) includes an integrated 2x2 MIMO 23 dBi Dual Polarized panel Antenna																									
MANAGEMENT																										
LOCAL	RS-232 serial (RJ11 to DB-9 dongle provided)																									
REMOTE	Telnet and SSH, WebGUI 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																									
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)																									
THROUGHPUT	Model MP-8100-BSU, MP-8100-SUA and MP-8150-SUR up to 200 Mbps Model MP-8150-SUR-100 up to 50 Mbps (TCP) each direction (100 Mbps aggregated)																									
GATEWAY FEATURES	DHCP Server & relay, NAT with Std ALGs, PPPoE end point																									
QoS	<table border="1"> <tr> <td>Asymmetric Bandwidth Control</td> <td>Uplink and Downlink CIR Control "committed information rate" per service flow Uplink and Downlink MIR Control "maximum information rate" per service flow</td> </tr> <tr> <td>Packet Classification Capabilities</td> <td>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</td> </tr> <tr> <td>Scheduling</td> <td>Best Effort, Real Time Polling Services</td> </tr> </table>	Asymmetric Bandwidth Control	Uplink and Downlink CIR Control "committed information rate" per service flow Uplink and Downlink 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																			
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Scheduling	Best Effort, Real Time Polling Services																									
VLAN	802.1Q: Management VLAN. Transparent, Access, Trunk and Mixed mode. QinQ double tagging																									
ENVIRONMENTAL SPECS																										
TEMPERATURE																										
OPERATING	-40° to 60°C (-40° to 140° Fahrenheit)																									
STORAGE	-55° to 80°C (-67° to 176° Fahrenheit)																									
HUMIDITY	Max 100% relative humidity (non-condensing)																									
POWER CONSUMPTION	7 Watt typical (17 Watt max)																									
PHYSICAL SPECS																										
DIMENSIONS																										
PACKAGED	Model MP-8100-BSU or MP-8100-SUA: 14.56 x 13.69 x 8.18 in. (370 x 348 x 208 mm) Model MP-8150-SUR(-100): 15.94 x 15.94 x 9.21 in. (405 x 405 x 234 mm)																									
UNPACKAGED	Model MP-8100-BSU or MP-8100-SUA: 10.5 x 10.5 x 3.38 in (267 x 267 x 86 mm) Model MP-8150-SUR(-100): 14.17 x 14.17 x 3.70 in (370 x 370 x 94 mm)																									
WEIGHT																										
PACKAGED	Model MP-8100-BSU or MP-8100-SUA: 15 lbs (6.8 kg) Model MP-8150-SUR(-100): 16.31 lbs (7.4 kg)																									
UNPACKAGED	Model MP-8100-BSU or MP-8100-SUA: 7.7 lbs (3.5 kg) Model MP-8150-SUR(-100): 9.0 lbs (4.1 kg)																									
IP RATING	IP67																									
SAFETY STANDARDS	UL 60950, CAN/CSA-C22.2 No. 60950, IEC 60950, EN 60950																									
PACKAGE CONTENTS	<ul style="list-style-type: none"> ■ One Tsunami® MP 8100-BSU with three N-type surge protected connectors, or One Tsunami® MP 8100-SUA with three N-type surge protected connectors, or One Tsunami® MP-8150-SUR(-100) with an integrated 23dBi dual polarized panel 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 (Optional for MP-8150-SUR-100) ■ One Quick Installation Guide 																									
MTBF & WARRANTY	80,000 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/-tsunami-mp-8100-series/tsunamir-mp-8100/68>

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