



Tsunami[®] MP-8100 Series

Wireless Product Portfolio

- **Tsunami[®] 8000 Series** – PtP & PtMP product line delivering 300 Mbps plus data rate
- **Tsunami[®] .11 Series** – Our best selling Point-to-point and multipoint product line
- **Tsunami[®] GX800**– Carrier-class IP Ethernet bridge for voice and data backhaul for service providers and enterprise applications
- **Tsunami[®] QB 62000**– High capacity, small footprint PtP backhaul solution with 1Gbps throughput
- **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 data rate!

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

- PtMP solution that can deliver 300 Mbps data rates
- 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
- Spectrum analyzer feature helps to study frequency bands for interference, and select a relatively low interference channel.

Mobile Roaming Enables New Applications

Proxim innovation delivers mobile roaming of Subscriber Units (SU) between Base Station Units (BSU). Public safety first responder networks, transportation system monitoring and telemetry, and mobile security and surveillance are now all possible with a low cost, robust system.

- Fast handoff at speeds up to 112 km per hour (70 miles per hour).
- Customizable roaming parameter maintains minimum bandwidth required for application performance

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 products

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1. Proxim recommends 60W PoE (not supplied in standard package) when the second Ethernet Port (Ethernet 2) is utilized for power applications
2. 48 VDC (15 W average) is tolerable on the second Ethernet port (Ethernet 2). Ensure connected device can support the same voltage
3. Use PoE Splitter (not supplied in standard package) when the second Ethernet port is utilized for data applications

| 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 | | | | |
| INTERFACES | | | | | |
| WIRED ETHERNET | 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 | | | | |
| 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 [*] 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 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 ⁻⁵) | <i>Channel Size</i> | <i>40 MHz</i> | <i>20 MHz</i> | <i>10 MHz</i> | <i>5 MHz</i> |
| | <i>MCS 0</i> | -87 dBm | -93 dBm | -94 dBm | -96 dBm |
| | <i>MCS 7</i> | -71 dBm | -75 dBm | -78 dBm | -81 dBm |
| | <i>MCS 8</i> | -87 dBm | -93 dBm | -94 dBm | -95 dBm |
| | <i>MCS 15</i> | -69 dBm | -71 dBm | -74 dBm | -77 dBm |
| ANTENNA | Model MP-8100-BSU and MP-8100-SUA include three N-type Connectors with built-in Surge Protection Model MP-8150-SUR 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, 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) | | | | |
| THROUGHPUT | Model MP-8100-BSU, MP-8100-SUA and MP-8150-SUR up to 200 Mbps | | | | |
| GATEWAY FEATURES | DHCP Server & relay, NAT with Std ALGs, PPPoE end point | | | | |
| QoS | 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 | | | |
| VLAN | 802.1Q: Management VLAN. Transparent, Access, Trunk and Mixed mode. QinQ double tagging | | | | |
| POWER CONSUMPTION | 7 Watt typical (17 Watt max) | | | | |
| 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) | | | | |
| 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: 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: 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: 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: 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 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 ■ 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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