



Tsunami® MP-8160-BSU
Tsunami® MP-8160-SUA

End-to-End Broadband Wireless Product Portfolio

- **Tsunami® MP-8100** – Wireless Point-to-Multipoint System Delivering 300Mbps Bandwidth
- **Tsunami®MP.11** – Our best selling Point-to- Multipoint product line
- **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 300Mbps data rate in 5.900 – 6.425 GHz Frequency Range!

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-8160 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-8160 satisfies service providers and government organizations with requirements for fast and worry-free wireless connectivity.

With data rates of 300Mbps, the Tsunami® MP-8160 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-8160 becomes the first solution capable of powering IP video cameras or additional radios for even greater ease of deployment operating in extended frequencies from 5.900 – 6.425 GHz.

World-class Performance

- PtMP solution that can deliver 300Mbps 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 enhanced 2x2 MIMO techniques to improve link performance and penetrate through or around obstructions better
- Comes packaged in a compact form factor with a set of accessories for even greater ease of installation
- 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
- 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 another wireless industry first – 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

Widest Range of Frequencies

- Provides flexible channel planning with planned support for 5.900 – 6.425 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, Ether type and IP address packet filtering for granular network security

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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

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|---|---|--|---------|---------|---------|
| PRODUCT MODELS | | | | | |
| MP-8160-BSU | Tsunami® MP 8160 Base Station Unit, 300 Mbps, 5.900 – 6.425 GHz, Type-N Connectors | | | | |
| MP-8160-SUA | Tsunami® MP 8160 Subscriber Unit, 300 Mbps, 5.900 – 6.425 GHz, Type-N Connectors | | | | |
| 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 | 2x2 MIMO | | | | |
| MODULATION | OFDM | | | | |
| FREQUENCY | 5.900 – 6.425 GHz (Subject to Country Regulations) | | | | |
| CHANNEL SIZE | 40 MHz, 20 MHz, 10 MHz, 5MHz channel bandwidths with support for 1MHz channel spacing | | | | |
| DATA RATE | MCS 0 to 15 for High Throughput mode (6.5 – 300 Mbps) with Dynamic Data Rate Selection | | | | |
| TX POWER | Up to 25 dBm (two Tx chain) | | | | |
| TX POWER CONTROL | 0 – 25 dB, in 0.5 dB steps. Automatic TPC with configurable EIRP limit | | | | |
| RF-PORT PROTECTION | Built-in ESD & Lightning/Surge protection in the radio | | | | |
| RX SENSITIVITY (BER=10 ⁻⁵) | Channel Size | 40 MHz | 20 MHz | 10 MHz | 5 MHz |
| | MCS 0 | -90 dBm | -92 dBm | -95 dBm | -98 dBm |
| | MCS 7 | -72 dBm | -73 dBm | -76 dBm | -80 dBm |
| | MCS 8 | -88 dBm | -90 dBm | -92 dBm | -96 dBm |
| | MCS 15 | -69 dBm | -70 dBm | -73 dBm | -76 dBm |
| ANTENNA | Model MP-8160-BSU and MP-8160-SUA include two N-type Connectors | | | | |
| 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, SNMP 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) | | | | |
| 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 | 10Watt typical (13.8Watt 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-8160-BSU or MP-8160-SUA: 14.56 x 13.69 x 8.18 in. (370 x 348 x 208 mm) | | | | |
| UNPACKAGED | Model MP-8160-BSU or MP-8160-SUA: 10.5 x 10.5 x 3.38 in (267 x 267 x 86 mm) | | | | |
| WEIGHT | | | | | |
| PACKAGED | Model MP-8160-BSU or MP-8160-SUA: 14.66 lbs (6.65 kg) | | | | |
| UNPACKAGED | Model MP-8160-BSU or MP-8160-SUA: 7.38 lbs (3.35 kg) | | | | |
| IP RATING | IP67 | | | | |
| PACKAGE CONTENTS | <ul style="list-style-type: none"> ■ One Tsunami® MP-8160-BSU with two N-type connectors, or One Tsunami® MP-8160-SUA with two N-type connectors ■ 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-8160>

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