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.

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™ GX-800 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

**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 40 MHz size**
- **Provides support for extended frequency bands from 4.90 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**

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MP-8200-BSU</td>
<td>Tsunami™ MP 8200 Base Station Unit, 300 Mbps, MIMO 3x3, Type-N Connectors</td>
</tr>
<tr>
<td>MP-8250-BS1</td>
<td>Tsunami™ MP 8250 Base Station Unit, 300 Mbps, MIMO 2x2, 11 dbi, 10º panel antenna</td>
</tr>
<tr>
<td>MP-8200 SUA</td>
<td>Tsunami™ MP 8200 Subscriber Unit, 300 Mbps, MIMO 3x3, Type-N Connectors</td>
</tr>
<tr>
<td>MP-8250-SUR</td>
<td>Tsunami™ MP 8250 Subscriber Unit, 300 Mbps, MIMO 2x2, 23 dbi Integrated Antenna</td>
</tr>
</tbody>
</table>

**INTERFACES**

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wired Ethernet</td>
<td>Two auto MDI-X RJ45 10/100/1000Mbps Ethernet</td>
</tr>
</tbody>
</table>

**Wireless Protocol**

<table>
<thead>
<tr>
<th>Protocol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>WORP®</td>
<td>Wireless Outdoor Router Protocol</td>
</tr>
</tbody>
</table>

**Radio & TX specs**

<table>
<thead>
<tr>
<th>Modulation</th>
<th>8x8MIMO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>4.900 – 5.925 GHz (Subject to Country Regulations)</td>
</tr>
<tr>
<td>Channel Size</td>
<td>40 MHz, 20 MHz, 10 MHz, 5 MHz channel bandwidths</td>
</tr>
<tr>
<td>Data Rate</td>
<td>MCS 0 to 15 for High Throughput mode (6.5 – 300 Mbps) with Dynamic Data Rate Selection</td>
</tr>
<tr>
<td>TX Power</td>
<td>Up to 25,8dBm (Triple chain)</td>
</tr>
<tr>
<td>TX Power Control</td>
<td>0 – 25 dB, in 0.5 dB steps. Automatic TPC with configurable EIRP limit</td>
</tr>
</tbody>
</table>

**RX Sensitivity (Per-10%)**

<table>
<thead>
<tr>
<th>Channel Size</th>
<th>MCS 0</th>
<th>MCS 7</th>
<th>MCS 8</th>
<th>MCS 15</th>
</tr>
</thead>
<tbody>
<tr>
<td>40 MHz</td>
<td>-67 dB</td>
<td>-71 dB</td>
<td>-87 dB</td>
<td>-68 dB</td>
</tr>
<tr>
<td>20 MHz</td>
<td>-94 dB</td>
<td>-74 dB</td>
<td>-91 dB</td>
<td>-72 dB</td>
</tr>
<tr>
<td>10 MHz</td>
<td>-95 dB</td>
<td>-76 dB</td>
<td>-93 dB</td>
<td>-74 dB</td>
</tr>
<tr>
<td>5 MHz</td>
<td>-98 dB</td>
<td>-79 dB</td>
<td>-96 dB</td>
<td>-77 dB</td>
</tr>
</tbody>
</table>

**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-B59: 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
- Other: Syslog, sFlow™ agent, SINE and local time, Spectrum analyzer

**Security**

- Encryption: AES-CCM 128 bits
- Authentication: Internal MAC Address Control List, Radius based Authentication (with VLAN and 802.1X provisioning)

**Network**

- Bridging, Routing (RIP v2 and IP tunneling)
- IPv4 and IPv6 simultaneously

**Throughput**

- Up to 240 Mbps

**Gateway Features**

- DHCP Server & relay, NAT with std ALGs, PPPoE end point with Proxy DNS

**QoS**

- Asymmetric Bandwidth Control
- Packet Classification Capabilities: 802.1D/802.1Q/802.1P priority, IPTOS, VLAN ID, IP source/destination port, Ethernet source/destination address, IP source/destination address, IP protocol, and Ethertype

**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: -40ºF to 60ºC (-40ºC to 140ºF Fahrenheit)
- Storage Temperature: -55ºF to 80ºC (-55ºC to 176ºF Fahrenheit)
- Humidity: 100% relative humidity - IP67

**Wind Rating**

- 200 km/h (125 mph)

**Physical Specs**

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>MP-8200-BSU or MP-8200-SUA</td>
<td>14.56 x 13.69 x 8.18 in. (370 x 348 x 208 mm)</td>
</tr>
<tr>
<td>MP-8250-SUR</td>
<td>15.94 x 15.94 x 9.21 in. (405 x 405 x 234 mm)</td>
</tr>
</tbody>
</table>

**Unpackaged**

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>MP-8200-BSU or MP-8200-SUA</td>
<td>10.79 x 11.14 x 3.38 in (274 x 283 x 86 mm)</td>
</tr>
<tr>
<td>MP-8250-SUR</td>
<td>14.17 x 14.17 x 3.70 in (370 x 370 x 94 mm)</td>
</tr>
</tbody>
</table>

**Safety Standards**

- UL 60950, CAN/CSA-C22.2 No. 60950, IEC 60950, EN 60950 (part 1 and 22)

**Package Contents**

- One Tsunami™ MP-8200-BSU with three N-type surge protected connectors
- One Tsunami™ MP-8250-BS1 with three N-type surge protected connectors
- 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; ServoPak 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


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