About Proxim Wireless

Proxim Wireless is a pioneer and global leader in advanced Wi-Fi, point to point, and point to multipoint outdoor wireless systems that deliver high performance and high availability communications.

With over 30 years of wireless experience, Proxim is recognized for its unparalleled reliability, superior performance and drive for innovation.

The compact and robust form factor of Tsunami® Multipoint 820 series is an ideal solution for urban wireless deployments. It is eminently suitable discrete mounting in city streets and offers high reliability for the connection of Video Surveillance, traffic monitoring and traffic light management systems.

The Tsunami® Multipoint 820 series is also adapted for in vehicle mounting and supports transparent roaming for data on the move.

High Performance

- Designed with a high 26 dBm power transmitter, and 2x2 MIMO technology, the 820 delivers excellent connectivity even in difficult conditions.
- The Non Line of Sight (NLOS) performance of the 820 series enables installation in challenging environments.

Compact, Quick and Easy to Install

Though designed in a small form factor, the 820 packs quite a punch and Comes ready to install with a complete “bring-your-own-pole” installation kit that includes basic pole mount and grounding kits, connector weather proofing kit and a power injector. The on board signal strength indicator that makes installations really easy and hassle free.

Mobility

The Multipoint 820 Series, with the help of Proxim’s roaming technology - FastConnect, is able to establish unparalleled handoff times and support delay-sensitive multimedia applications even when mobile at speeds of up to 285 km/h (196 mph).

Built for Extremes

The 820 aluminum enclosures is approved after stringent screening involving Drop, Shock, Salt Spray, Thermal, and Reliability tests. In addition, the enclosures is IP 67 rated that ensures the 820 delivers high performance even in hostile weather conditions with minimal downtime.

Powered by WORP®

At the core of every Tsunami® 820 lies Proxim’s proprietary Wireless Outdoor Routing Protocol - WORP®, which is a reliable, secure and efficient protocol that optimizes the performance of multi-play outdoor wireless Point-to-Point and Point-to-Multipoint links.

Compatibility

Connects to all Tsunami® MP-10200, MP-10100, MP-8200, MP-820 and MP-830 product families.

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### Specifications

#### PRODUCT MODELS

<table>
<thead>
<tr>
<th>PART NUMBERS</th>
<th>PRODUCT MODELS</th>
</tr>
</thead>
<tbody>
<tr>
<td>901-00135 MP-820-BSU-100-US</td>
<td>Tsunami® MP 820 Base Station Unit, 100 Mbps, MIMO 2x2, N-Type Connectors</td>
</tr>
<tr>
<td>901-00133 MP-820-BSU-100-WD</td>
<td>Tsunami® MP 820 Base Station Unit, 100 Mbps, MIMO 2x2, 15 dBi Antenna</td>
</tr>
<tr>
<td>901-00185 MP-825-BS3-100-US</td>
<td>Tsunami® MP 825 Base Station Unit, 100 Mbps, MIMO 2x2, N-Type Connectors</td>
</tr>
<tr>
<td>901-00184 MP-825-BS3-100-WD</td>
<td>Tsunami® MP 825 Base Station Unit, 100 Mbps, MIMO 2x2, 15 dBi Antenna</td>
</tr>
<tr>
<td>901-00136 MP-820-SUA-50-US</td>
<td>Tsunami® MP 820 Subscriber Unit, 50 Mbps (upgradable to 100 Mbps), MIMO 2x2, N-Type Connectors</td>
</tr>
<tr>
<td>901-00134 MP-820-SUA-50-WD</td>
<td>Tsunami® MP 820 Subscriber Unit, 50 Mbps (upgradable to 100 Mbps), MIMO 2x2, 15 dBi Antenna</td>
</tr>
<tr>
<td>901-00174 MP-820-SUA-100-US</td>
<td>Tsunami® MP 820 Subscriber Unit, 100 Mbps, MIMO 2x2, N-Type Connectors</td>
</tr>
<tr>
<td>901-00173 MP-820-SUA-100-WD</td>
<td>Tsunami® MP 820 Subscriber Unit, 100 Mbps, MIMO 2x2, 15 dBi Antenna</td>
</tr>
<tr>
<td>901-00176 MP-825-SUR-50-US</td>
<td>Tsunami® MP 825 Subscriber Unit, 50 Mbps (upgradable to 100 Mbps), MIMO 2x2, 15 dBi Antenna</td>
</tr>
<tr>
<td>901-00175 MP-825-SUR-50-WD</td>
<td>Tsunami® MP 825 Subscriber Unit, 50 Mbps (upgradable to 100 Mbps), MIMO 2x2, 15 dBi Antenna</td>
</tr>
<tr>
<td>901-00195 MP-825-SUR-100-US</td>
<td>Tsunami® MP 825 Subscriber Unit, 100 Mbps, MIMO 2x2, 15 dBi Antenna</td>
</tr>
<tr>
<td>901-00212 MP-825-SUR-100-WD</td>
<td>Tsunami® MP 825 Subscriber Unit, 100 Mbps, MIMO 2x2, 15 dBi Antenna</td>
</tr>
</tbody>
</table>

#### WIRED ETHERNET

- One auto MDI-X RJ45 10/100/1000Mbps Ethernet with PoE

#### WIRELESS PROTOCOL

- WORP® (Wireless Outdoor Router Protocol) or WORP sync

#### RADIO & TX SPECS

- **MIMO**: 2x2 2 OFDM with BPSK, QPSK, QAM16, QAM64
- **MODULATION**: 4.900 - 5.925 GHz (Subject to Country Regulations)
- **FREQUENCY**: 40 MHz, 20 MHz, 10 MHz\(^*\), 5 MHz\(^*\) channel bandwidths
- **CHANNEL SIZE**: MCS 0 to 15 for High Throughput mode (6.5 – 300 Mbps) with Dynamic Data Rate Selection
- **DATA RATE**: BPSK, QPSK, 16-QAM and 64-QAM for legacy mode (6Mbps - 54Mbps)
- **TX POWER**: Up to 26 dBm (dual chain)
- **TX POWER CONTROL**: 0 – 15 dB, in 0.5 dB steps. Automatic TPC with configurable EIRP limit

#### RX SENSITIVITY (PER=10%)

<table>
<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>-88 dBm</td>
<td>-92 dBm</td>
<td>-93 dBm</td>
<td>-94 dBm</td>
</tr>
<tr>
<td>MCS 7</td>
<td>-72 dBm</td>
<td>-74 dBm</td>
<td>-75 dBm</td>
<td>-77 dBm</td>
</tr>
<tr>
<td>MCS 8</td>
<td>-88 dBm</td>
<td>-91 dBm</td>
<td>-93 dBm</td>
<td>-94 dBm</td>
</tr>
<tr>
<td>MCS 15</td>
<td>-69 dBm</td>
<td>-71 dBm</td>
<td>-72 dBm</td>
<td>-75 dBm</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-820-BSU-100/SUA-50’/SUA-100**: Two N-type connectors
- **MP-825-BS3-100/SUR-50’/SUR-100**: Integrated 15 dBi dual Polarized (H+V) panel antenna (12 dB before 5.000 GHz and 14 dB beyond 5.850 GHz)

#### MANAGEMENT

- **LOCAL**
  - RS-232 serial (RJ11 to DB-9 dongle provided)
- **REMOTE**
  - Telnet and SSH, Web GUI and SSL, TFTP, SNMPv3
- **SNMP**
- **OTHER**
  - Syslog, sFlow\(^*\) agent, SNTP and local time, Spectrum analyzer

#### SYNCHRONIZATION

- Synchronize internal clock to Pulse Per Second signal received from either GPS module connected to RJ11 serial port or Ethernet
- Synchronization module connected to RJ45 ethernet port

#### SECURITY

- **ENCRYPTION**
  - AES-CCM 128 bits
- **AUTHENTICATION**
  - Internal MAC Address Control List, Radius based Authentication (with VLAN and QoS provisioning)

#### QoS

- **Asymmetric Bandwidth Control**
  - Uplink and Downlink CIR Control *committed information rate* per service flow
- **Packet Classification Capabilities**
  - Uplink and Downlink MIR Control *maximum information rate* per service flow
  - 802.1D/802.1Q/802.1p priority, IPTOS, VLAN ID, IP protocol, IP source/destination address, Ethernet source/destination address, source/destination port, and EtherType
  - Best Effort, Real-Time Polling Services
## NETWORK

<table>
<thead>
<tr>
<th>MODES</th>
<th>IP STACK</th>
<th>THROUGHPUT</th>
<th>GATEWAY FEATURES</th>
<th>VLAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bridging, Routing (RIP v2 and IP tunneling)</td>
<td>IPv4 and IPv6 simultaneously</td>
<td>MP-820-BSU-100/100/SUA-100</td>
<td>MP-820-BSU-100/100/SUA-100 up to 100 Mbps, 32 subscriber max</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>MP-825-BS3-100/SUR-100</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>MP-820-SUA-50+ or MP-825-SUR-50+</td>
<td>Up to 50 Mbps (license upgradable to 100 Mbps)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>DHCP Server &amp; relay, NAT with Std ALGs, PPPoE end point with Proxy DNS</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>802.1Q: Management VLAN. Transparent, Access, Trunk and Mixed mode. QinQ double tagging</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## POWER SUPPLY

Via provided PoE injector or directly from 12 VDC source through serial port

## ENVIRONMENTAL SPECS

<table>
<thead>
<tr>
<th>OPERATING TEMPERATURE</th>
<th>STORAGE TEMPERATURE</th>
<th>HUMIDITY - IP RATING</th>
<th>WIND LOADING</th>
</tr>
</thead>
<tbody>
<tr>
<td>-40º to 55ºC (-40º to 131º Fahrenheit)</td>
<td>-55º to 70ºC (-67º to 158º Fahrenheit)</td>
<td>Max 100% relative humidity (non-condensing) - IP67</td>
<td>180 km/h (112 mph)</td>
</tr>
</tbody>
</table>

## PHYSICAL SPECS

<table>
<thead>
<tr>
<th>DIMENSIONS PACKAGED</th>
<th>DIMENSIONS UNPACKAGED</th>
<th>WEIGHT (PACKAGED)</th>
<th>WEIGHT (UNPACKAGED)</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.81x10.83x5.31 in (300x275x135 mm)</td>
<td>5.02x8.68x2.85 in (127.5x220.5x72.5 mm)</td>
<td>7.93 lbs (2.7 kg)</td>
<td>2.75 lbs (1.250 kg)</td>
</tr>
<tr>
<td>11.81x10.83x5.31 in (300x275x135 mm)</td>
<td>4.96x8.62x2.58 in (126x219x65.5 mm)</td>
<td>7.27 lbs (3.3 Kg)</td>
<td>2.10 lbs (0.950 kg)</td>
</tr>
</tbody>
</table>

## SAFETY STANDARDS

UL 60950-1/22, CAN/CSA-C22.2 No. 60950-1/22, IEC 60950-1/22, EN 60950-1/22

## PACKAGE CONTENTS

- One Tsunami® MP-820-BSU-100 with two N-type surge protected connectors
- Or One Tsunami® MP-820-SUA-50+ with two N-type surge protected connectors
- Or One Tsunami® MP-825-BS3-100/SUR-100 with 15 dBi integrated antenna
- Or One Tsunami® MP-825-SUR-50+ with 15 dBi integrated antenna
- One 32 W power injector with country specific power cord
- One Wall / Pole mounting kit (Tsunami MP-825-BS3/SUR)
- One Pole mounting Kit (Tsunami MP-820-BSU/SUA)
- One Connector weatherproofing kit (Includes all recommended weatherproofing material)
- One Serial (RJ-11 to DB9) dongle
- One Grounding kit
- One Quick Installation Guide

## MTBF & WARRANTY

MTBF over 350,000 hours & 2-year warranty with ServPak Extended Support available

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