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.

Tsunami® MP-10100 Series
High Speed Point-to-Multipoint Wireless Product Family

Designed to deliver over 630 Mbps of data throughput

The Tsunami® MP-10100 product family, is a series of very high throughput, reliable and cost-effective, near-line-of-sight point-to-multipoint wireless products. The Tsunami® MP-10100 series supports the following features and is ideal for last mile access, video surveillance or mobility applications that need rugged and reliable high-speed network connectivity.

World Class Performance

- Point-to-Multipoint system that delivers up to 866 Mbps data rate and covers distances up to 10 miles (16 km)
- Dual IPv4 and IPv6 stack for transparent evolution to tomorrow’s networks
- Triple level login with monitoring, simplified or advanced web interface
- Built-in feature rich network protocols for bridging, routing and gateway functionality
- Railway certified High Speed Mobility up to 185 mph (295 km/h)

Frequency Agnostic

- Operates in unlicensed bands from 4.900 to 5.925 GHz
- Flexible RF planning with 20, 40 and 80 MHz channel size

Near-Line-of-Sight and Advanced Features

- Features dual Gigabit Ethernet ports with PoE out to power other devices such as surveillance cameras or additional radios
- Performs deep packet inspection (DPI) 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
- Built in spectrum analyzer to analyze frequency bands for interference, and select the best available channel

Key Technologies

Proxim WORP®
Combines network access control, data scheduling, advanced QoS and encryption to ensure highly efficient and secure data transmission.

Proxim ClearConnect™
A suite of interference mitigation technologies ensuring robust and reliable communications in high-density wireless deployments.

Proxim FastConnect™
Mobility technology that delivers rapid hand-off between fixed base stations and moving vehicles to ensure uninterrupted broadband at speeds up to 295 km/h (185 mph)

Carrier-Grade Backhaul

- Implements AES encryption and Radius authentication 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/TLS1.2, SSH and SNMPv3
- Features Ethernet ports with pass-through IEEE 1588v2 synchronization and support for 9k Jumbo frame

Rugged and Reliable

Designed for harsh environments, the Tsunami® MP-10100 is fully IP67 rated, and will deliver years of reliable service in conditions that include, high winds, high salt, and high temperature extremes.
Tsunami® MP-10100 Series

Product Line Compatibility

- Connects to all existing Tsunami® MP-10200, MP-10100, MP-8200, MP-820 and MP-830 products
- Fully integrates within ProximVision® Advanced Cloud Based Carrier Management System and Controller

Specifications

<table>
<thead>
<tr>
<th>PRODUCT MODELS</th>
<th>PRODUCT MODELS</th>
<th>PART NUMBERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>MP-10100-BSU</td>
<td>Tsunami® MP 10100 Base Station, 866 Mbps, MIMO 2x2, Type-N Connectors</td>
<td>901-00226 MP-10100-BSU-US</td>
</tr>
<tr>
<td>MP-10150-BS9</td>
<td>Tsunami® MP 10150 Base Station, 866 Mbps, MIMO 2x2, 90° sector antenna</td>
<td>901-00227 MP-10100-BS9-US</td>
</tr>
<tr>
<td>MP-10150-BS1</td>
<td>Tsunami® MP 10150 Base Station, 866 Mbps, MIMO 2x2, 22 dBi panel antenna</td>
<td>901-00230 MP-10150-BS1-US</td>
</tr>
<tr>
<td>MP-10100-SUA</td>
<td>Tsunami® MP 10100 Subscriber Unit, 866 Mbps, MIMO 2x2, Type-N Connectors</td>
<td>901-00231 MP-10100-SUA-US</td>
</tr>
<tr>
<td>MP-10150-SUR</td>
<td>Tsunami® MP 10150 Subscriber Unit, 866 Mbps, MIMO 2x2, 22 dBi panel antenna</td>
<td>901-00232 MP-10150-SUR-US</td>
</tr>
<tr>
<td>MP-10150-SUL</td>
<td>Tsunami® MP 10150 Subscriber Unit Long-range, 866 Mbps, MIMO 2x2, 28 dBi panel antenna</td>
<td>901-00233 MP-10150-SUL-US</td>
</tr>
</tbody>
</table>

INTERFACES

WIRED ETHERNET
Two auto MDI-X RJ45 10/100/1000Mbps Ethernet (Port #1 with PoE in & Data, Port #2 with PoE out & Data)

WIRELESS PROTOCOL
WORP® (Wireless Outdoor Router Protocol)

RADIO & TX SPECS

<table>
<thead>
<tr>
<th>MIMO</th>
<th>MODULATION</th>
<th>FREQUENCY</th>
<th>CHANNEL SIZE</th>
<th>DATA RATE</th>
<th>TX POWER</th>
</tr>
</thead>
<tbody>
<tr>
<td>2x2</td>
<td>OFDM with BPSK, QPSK, QAM16, QAM64, QAM256</td>
<td>4.900 – 5.925 GHz (Subject to Country Regulations)</td>
<td>80 MHz, 40 MHz and 20 MHz (±5ppm channel accuracy)</td>
<td>MCS 0 to 9 with Dynamic Data Rate Selection</td>
<td>Up to 28 dBm (dual chain)</td>
</tr>
<tr>
<td>TX POWER CONTROL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TX POWER</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TX POWER</td>
<td>MCS0: 28 dBm</td>
<td>MCS50: 28 dBm</td>
<td>MCS50: 29 dBm</td>
<td>0 - 27 dB, in 1 dB steps. Automatic TPC with configurable EIRP limit</td>
<td></td>
</tr>
<tr>
<td>TX POWER</td>
<td>MCS9: 21 dBm</td>
<td>MCS9: 22 dBm</td>
<td>MCS9: 25 dBm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RX SENSITIVITY (Per=10%)</td>
<td>MCS0: -89 dBm</td>
<td>MCS0: -93 dBm</td>
<td>MCS0: -94 dBm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>THROUGHPUT</td>
<td>Up to 672 Mbps</td>
<td>Up to 324 Mbps</td>
<td>Up to 137 Mbps</td>
<td></td>
<td></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-10100-BSU/SUA
Two N-type Connectors with built-in Surge Protection

MP-10150-BS9
Integrated 2x2 MIMO 16dBi Dual Polarized 90 degree Sector Antenna

MP-10150-BS1/SUR
Integrated 2x2 MIMO 22dBi Dual Polarized 1 foot Panel Antenna

Integrated 2x2 MIMO 28dBi Dual Polarized 2 feet Panel Antenna

MANAGEMENT

REMOTE
Telnet and SSH, Web GUI and SSL/TLS, 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

SYNCHRONIZATION

Pass-through IEEE 1588v2 Ethernet Synchronization

SECURITY

ENCRYPTION
AES 128

AUTHENTICATION
Internal MAC Address Control List, Radius based Authentication (with VLAN and QoS provisioning)

QoS

Asymmetric Bandwidth Control
Packet Classification
Capabilities
Scheduling
Asymmetric UL/DL committed and maximum information rate per service flow
802.1p priority, IPTOS, VLAN ID, IP addresses, ports, Ethernet addresses, IP protocol, and EtherType
Best Effort, Real Time Polling Services
## NETWORK

<table>
<thead>
<tr>
<th>MODES</th>
<th>IP STACK</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>DHCP Server &amp; relay, NAT with Std ALGs, PPPoE end point with Proxy DNS</td>
<td>802.1Q: Management VLAN. Transparent, Access, Trunk and Mixed mode. QinQ double tagging</td>
</tr>
</tbody>
</table>

### POWER

<table>
<thead>
<tr>
<th>INPUT</th>
<th>OUTPUT</th>
</tr>
</thead>
<tbody>
<tr>
<td>36 to 57 VDC via Ethernet port (Power over Ethernet) 12 VDC via Access port</td>
<td>48 to 57 VDC – 25 Watt on Ethernet port2 (PoE – software controlled) 12 VDC on Access port</td>
</tr>
</tbody>
</table>

### POWER CONSUMPTION

14 Watt typical, 17.5 Watt maximum

### 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 60ºC ( -40º to 140º Fahrenheit)</td>
<td>-50º to 70ºC ( -58º to 158º Fahrenheit)</td>
<td>100% relative humidity - IP67</td>
<td>200 km/h (125 mph) except MP-10150-SUL 180 km/h(112.5 mph)</td>
</tr>
</tbody>
</table>

### PHYSICAL SPECS

<table>
<thead>
<tr>
<th>MP-10100-BSU/SUA</th>
<th>MP-10150-BS9</th>
<th>MP-10150-BS1/SUR</th>
<th>MP-10150-SUL</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.56 x 13.0 x 7.87 in (370 x 331 x 200 mm)</td>
<td>18.46 x 7.05 x 21.57 in (469 x 179 x 548 mm)</td>
<td>14.56 x 13.0 x 7.87 in (370 x 331 x 200 mm)</td>
<td>27.55 x 6.85 x 27.55 in (700 x 174 x 700 mm)</td>
</tr>
<tr>
<td>9.84 x 8.66 x 2.83 in (250 x 220 x 72 mm)</td>
<td>14.57 x 14.57 x 4.21 in (370 x 370 x107 mm)</td>
<td>12 x 12 x 3.40 in (305 x 305 x 85 mm)</td>
<td>23.62 x 23.62 x 3.85 in (600 x 600 x 92 mm)</td>
</tr>
<tr>
<td>9.92 lbs (4.5 kg)</td>
<td>13.67 lbs (6.2 kg)</td>
<td>10.91 lbs (4.95 kg)</td>
<td>23.15 lbs (10.5 kg)</td>
</tr>
<tr>
<td>4.20 lbs (1.9 kg)</td>
<td>7.27 lbs (3.3 kg)</td>
<td>5.30 lbs (2.4 kg)</td>
<td>14.33 lbs (6.5 kg)</td>
</tr>
</tbody>
</table>

### SAFETY STANDARDS

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

### CERTIFICATIONS

USA: FCC 90Y +15E (UNII 15.247),
Canada: IC RSS 102 + RSS 111 + RSS 247,
Europe: RED EN 301 489-1 + EN 301-489-17 + EN 301 893 + EN 302 502,
Railway: EN 50155 + EN 50121 + EN 61373

### PACKAGE CONTENTS

- One Tsunami® MP-10100-BSU/SUA with two N-type surge protected connectors
- One Tsunami® MP-10150-BS9/BS1/SUR/SUL with integrated dual polarized antenna
- One power injector and country specific power cord
- One Connector weatherproofing kit (Includes all recommended weatherproofing material)
- One Wall / Pole mounting kit
- One Antenna alignment (RJ11) dongle
- One Grounding kit
- One Quick Installation Guide

### MTBF & WARRANTY

MTBF over 250 000 hours & 2-year warranty with ServPak Extended Support available.

© 2018 Proxim Wireless Corporation. All rights reserved. Proxim is a registered trademark and the Proxim logo and Tsunami® are trademarks of Proxim Wireless Corporation. All other trademarks mentioned herein are property of their respective owners. Specifications are subject to change without notice.