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.

Starts at 320Mbps Throughput, Field Upgradable to 630Mbps

The Tsunami® MP-10100L 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-10100L series enables a lower cost of entry into a high bandwidth Point to Multipoint network. The ability to upgrade the products to support 80 MHz channel and deliver 630Mbps.

World Class Performance

- Point-to-Multipoint system that delivers up to 400 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)

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
- Spectrum analyzer to analyze frequency bands for interference, and select the best available channel

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

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).

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
Tsunami® MP-10100L Series

PRODUCT MODELS | PART NUMBERS
--- | ---
MP-10100L-BSU | Tsunami® MP 10100 Base Station Lite, 400 Mbps, MIMO 2x2, Type-N Connectors
901-00272 | MP-10100L-BSU-US
901-00277 | MP-10100L-BSU-WD

MP-10150L-BS9 | Tsunami® MP 10150 Base Station Lite, 400 Mbps, MIMO 2x2, 90° sector antenna
901-00274 | MP-10150L-BS9-US
901-00279 | MP-10150L-BS9-WD

MP-10150L-BS1 | Tsunami® MP 10150 Base Station Lite, 400 Mbps, MIMO 2x2, 22 dBi panel antenna
901-00275 | MP-10150L-BS1-US
901-00280 | MP-10150L-BS1-WD

MP-10100L-SUA | Tsunami® MP 10100 Subscriber Unit Lite, 400 Mbps, MIMO 2x2, Type-N Connectors
901-00273 | MP-10100L-SUA-US
901-00281 | MP-10100L-SUA-WD

MP-10150L-SUR | Tsunami® MP 10150 Subscriber Unit Lite, 400 Mbps, MIMO 2x2, 22 dBi panel antenna
901-00276 | MP-10150L-SUR-US
901-00278 | MP-10150L-SUR-WD

MP-10100L-BSx-866-UPG | Tsunami® MP 10100 Base Station Lite, 400 Mbps to 866 Mbps license upgrade
997-00032 | MP-10100L-BSx-866-UPG

MP-10100L-SUx-866-UPG | Tsunami® MP 10100 Subscriber Unit Lite, 400 Mbps to 866 Mbps license upgrade
997-00033 | MP-10100L-SUx-866-UPG

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

MIMO | 2x2.2
MODULATION | OFDM with BPSK, QPSK, QAM16, QAM64, QAM256
FREQUENCY | 4.900 – 5.925 GHz (Subject to Country Regulations)
CHANNEL SIZE | 40 MHz and 20 MHz (±5ppm channel accuracy)
DATA RATE | MCS 0 to 9 with Dynamic Data Rate Selection
TX POWER | Up to 28 dBm (dual chain)
TX POWER CONTROL | 0 - 27 dB, in 1 dB steps. Automatic TPC with configurable EIRP limit

<table>
<thead>
<tr>
<th>40 MHz</th>
<th>20 MHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>TX POWER</td>
<td>MCS0: 28</td>
</tr>
<tr>
<td></td>
<td>MCS9: 22</td>
</tr>
<tr>
<td>RX SENSITIVITY (Per=10%)</td>
<td>MCS0: –93</td>
</tr>
<tr>
<td></td>
<td>MCS9: –71</td>
</tr>
<tr>
<td>THROUGHPUT</td>
<td>Up to 324 Mbps</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-10100L-BSU/SUA | Two N-type Connectors with built-in Surge Protection
MP-10150L-BS9 | Integrated 2x2 MIMO 16dBi Dual Polarized 90 degree Sector Antenna
MP-10150L-BS1/SUR | Integrated 2x2 MIMO 22dBi Dual Polarized 1 foot 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 | Asymmetric UL/DL committed and maximum information rate per service flow
Packet Classification Capabilities | 802.1p priority, IPTOS, VLAN ID, IP addresses, ports, Ethernet addresses, IP protocol, and EtherType
Scheduling | Best Effort, Real Time Polling Services
## NETWORK

<table>
<thead>
<tr>
<th>MODES</th>
<th>Bridging, Routing (RIP v2 and IP tunneling)</th>
<th>IPv4 and IPv6 simultaneously</th>
<th>DHCP Server &amp; relay, NAT with Std ALGs, PPPoE end point with Proxy DNS</th>
<th>802.1Q: Management VLAN. Transparent, Access, Trunk and Mixed mode. QinQ double tagging</th>
</tr>
</thead>
</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

<table>
<thead>
<tr>
<th></th>
<th>14 Watt typical, 17.5 Watt maximum</th>
</tr>
</thead>
</table>

### 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)</td>
</tr>
</tbody>
</table>

### PHYSICAL SPECS

<table>
<thead>
<tr>
<th>MP-10100-BSU/SUA</th>
<th>Dimensions Packaged</th>
<th>Dimensions Unpackaged</th>
<th>Weight (Packaged)</th>
<th>Weight (Unpackaged)</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.56 x 13.0 x 7.87 in (370 x 331 x 200 mm)</td>
<td>9.84 x 8.66 x 2.83 in (250 x 220 x 72 mm)</td>
<td>9.92 lbs (4.5 kg)</td>
<td>4.20 lbs (1.9 kg)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MP-10150-BS9</th>
<th>Dimensions Packaged</th>
<th>Dimensions Unpackaged</th>
<th>Weight (Packaged)</th>
<th>Weight (Unpackaged)</th>
</tr>
</thead>
<tbody>
<tr>
<td>18.46 x 7.05 x 21.57 in (469 x 179 x 548 mm)</td>
<td>14.57 x 14.57 x 4.21 in (370 x 370 x107 mm)</td>
<td>13.67 lbs (6.2 kg)</td>
<td>7.27 lbs (3.3 kg)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MP-10150-BS1/SUR</th>
<th>Dimensions Packaged</th>
<th>Dimensions Unpackaged</th>
<th>Weight (Packaged)</th>
<th>Weight (Unpackaged)</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.56 x 13.0 x 7.87 in (370 x 331 x 200 mm)</td>
<td>12 x 12 x 3.40 in (305 x 305 x 85 mm)</td>
<td>10.91 lbs (4.95 kg)</td>
<td>5.30 lbs (2.4 kg)</td>
<td></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-10100L-BSU/SUA with two N-type surge protected connectors
- Or One Tsunami® MP-10150L-BS9/BS1/SUR 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 (RJ41) dongle
- One Grounding kit
- One Quick Installation Guide

### MTBF & WARRANTY

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