**Starts at 320Mbps Throughput, Field Upgradable to 630Mbps**

The Multipoint 10100L product family, is a series of very high throughput, reliable and cost-effective, near-line-of-sight point-to-multipoint wireless products. The Multipoint 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).

**Rugged and Reliable**

Designed for harsh environments, the Multipoint10100L is fully IP67 rated, and will deliver years of reliable service in conditions that include, high winds, high salt, and high temperature extremes.
Product Line Compatibility

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

Multi-Language Support
Web Interface available in English, French, Spanish and Chinese

Specifications

<table>
<thead>
<tr>
<th>PRODUCT MODELS</th>
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<th>PART NUMBERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>MP-10100L-BSU</td>
<td>Tsunami® MP 10100 Base Station Lite, 400 Mbps, MIMO 2x2, Type-N Connectors</td>
<td>901-00272 MP-10100L-BSU-US</td>
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<tr>
<td>MP-10150L-BS9</td>
<td>Tsunami® MP 10150 Base Station Lite, 400 Mbps, MIMO 2x2, 90° sector antenna</td>
<td>901-00277 MP-10100L-BSU-WD</td>
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<tr>
<td>MP-10150L-BS1</td>
<td>Tsunami® MP 10150 Base Station Lite, 400 Mbps, MIMO 2x2, 22 dBi panel antenna</td>
<td>901-00279 MP-10100L-BS9-US</td>
<td></td>
</tr>
<tr>
<td>MP-10100L-SUA</td>
<td>Tsunami® MP 10100 Subscriber Unit Lite, 400 Mbps, MIMO 2x2, Type-N Connectors</td>
<td>901-00275 MP-10100L-BS9-WD</td>
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<tr>
<td>MP-10150L-SUR</td>
<td>Tsunami® MP 10100 Subscriber Unit Lite, 400 Mbps, MIMO 2x2, 22 dBi panel antenna</td>
<td>901-00280 MP-10100L-BS1-US</td>
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<tr>
<td>MP-10100L-BSx-866-UPG</td>
<td>Tsunami® MP 10100 Base Station Lite, 400 Mbps to 866 Mbps license upgrade</td>
<td>901-00273 MP-10100L-SUA-US</td>
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<tr>
<td>MP-10100L-SUx-866-UPG</td>
<td>Tsunami® MP 10100 Subscriber Unit Lite, 400 Mbps to 866 Mbps license upgrade</td>
<td>901-00278 MP-10100L-SUA-WD</td>
<td></td>
</tr>
</tbody>
</table>

INTERFACES

WIRED ETHERNET
WIRELESS PROTOCOL
Two auto MDI-X RJ45 10/100/1000Mbps Ethernet (Port #1 with PoE in & Data, Port #2 with PoE out & Data)
WORP® (Wireless Outdoor Router Protocol)

RADIO & TX SPECS

MIMO
MODULATION
FREQUENCY
CHANNEL SIZE
DATA RATE
TX POWER
TX POWER CONTROL

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

<table>
<thead>
<tr>
<th></th>
<th>40 MHz</th>
<th>20 MHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>TX POWER</td>
<td>MCS0: 28</td>
<td>MCO: 29</td>
</tr>
<tr>
<td></td>
<td>MCO: 22</td>
<td>MC: 85</td>
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<tr>
<td>RX SENSITIVITY (Per=10%)</td>
<td>MCO: -93</td>
<td>MC: -94</td>
</tr>
<tr>
<td></td>
<td>MCO: -71</td>
<td>MC: -74</td>
</tr>
</tbody>
</table>

THROUGHPUT (RFC 2544)

|                      | Up to 324 Mbps |
|                      | Up to 137 Mbps |

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
Integrated 2x2 MIMO 16dBi Dual Polarized 90 degree Sector Antenna

MP-10100L-BS1/SUR
Integrated 2x2 MIMO 22dBi Dual Polarized 1 foot Panel Antenna

MANAGEMENT

REMOTE SNMP
SNMPv3
OTHER

Telnet and SSH, Web GUI and SSL/TLS, TFTP, SNMPv3
SNMPv1-v2c-v3, RFC-1213, RFC-1215, RFC-2790, RFC-2571, RFC-3412, RFC-3414, Private MIB
Syslog, sFlow* agent, SNTP and local time, Spectrum analyzer

Web Interface available in English, French, Spanish and Chinese

SYNCHRONIZATION

Pass-trough SyncE and Precision Time Protocol (IEEE 1588v2) Ethernet Synchronization

SECURITY

ENCRYPTION
AUTHENTICATION

AES 128
Internal MAC Address Control List, Radius based Authentication (with VLAN and QoS provisioning)
**Multipoint 10100L Series**

**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**

**MODES**
- Bridging, Routing (RIP v2 and IP tunneling)
- IPv4 and IPv6 simultaneously
- DHCP Server & relay, NAT with Std ALGs, PPPoE end point with Proxy DNS
- 802.1Q: Management VLAN, Transparent, Access, Trunk and Mixed mode. QinQ double tagging

**IP STACK**
- IPv4 and IPv6 simultaneously

**GATEWAY FEATURES**
- Bridging, Routing (RIP v2 and IP tunneling)
- IPv4 and IPv6 simultaneously
- DHCP Server & relay, NAT with Std ALGs, PPPoE end point with Proxy DNS
- 802.1Q: Management VLAN, Transparent, Access, Trunk and Mixed mode. QinQ double tagging

**POWER**

**INPUT**
- 36 to 57 VDC via Ethernet port1 (Power over Ethernet)
- 12 VDC via Access port

**OUTPUT**
- 48 to 57 VDC – 25 Watt on Ethernet port2
- (PoE – software controlled)
- 12 VDC on Access port

**POWER CONSUMPTION**
- 14 Watt typical, 17.5 Watt maximum

**ENVIRONMENTAL SPECS**
- **OPERATING TEMPERATURE**
  - -40º to 60ºC
  - (-40º to 140º Fahrenheit)
- **STORAGE TEMPERATURE**
  - -50º to 70ºC
  - (-58º to 158º Fahrenheit)
- **HUMIDITY - IP RATING**
  - 100% relative humidity - IP67
- **WIND LOADING**
  - 200 km/h (125 Mph)

**PHYSICAL SPECS**

**DIMENSIONS PACKAGED**

**DIMENSIONS UNPACKAGED**

**WEIGHT (PACKAGED)**

**WEIGHT (UNPACKAGED)**

**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 (RJ11) dongle
- One Grounding kit
- One Quick Installation Guide

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

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