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 ph)

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
## Tsunami® MP-10100 Series

### Product Line Compatibility

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

### Specifications

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<td>MP-10150-BS9</td>
<td>901-00230 MP-10150-BS9-US</td>
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<td>901-00232 MP-10150-SUR-US</td>
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<tr>
<td>MP-10150-SUL</td>
<td>901-00234 MP-10150-SUL-US</td>
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**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**
  - 80 MHz, 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

### Thruput

- **80 MHz**
  - MCS0: 28 dBm
  - MCS9: 21 dBm
  - RX SENSITIVITY (Per=10%)
    - MCS0: -89 dBm
    - MCS9: -68 dBm
- **40 MHz**
  - MCS0: 28 dBm
  - MCS9: 22 dBm
  - RX SENSITIVITY (Per=10%)
    - MCS0: -93 dBm
    - MCS9: -71 dBm
- **20 MHz**
  - MCS0: 29 dBm
  - MCS8: 25 dBm
  - RX SENSITIVITY (Per=10%)
    - MCS0: -94 dBm
    - MCS8: -74 dBm

### THROUGHPUT

- Up to 672 Mbps
- 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-10100-BSU/SUA**
  - Two N-type Connectors with built-in Surge Protection
  - Integrated 2x2 MIMO 16dBi Dual Polarized 90 degree Sector Antenna
- **MP-10150-BS9**
  - Integrated 2x2 MIMO 22dBi Dual Polarized 1 foot Panel Antenna
- **MP-10150-SUR**
  - Integrated 2x2 MIMO 28dBi Dual Polarized 2 feet Panel Antenna

### MANAGEMENT

- **REMOTE**
  - Telnet and SSH, Web GUI and SSL/TLS, TFTP, SNMP
- **SNMP**
- **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
MODES
IP STACK
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
VLAN
802.1Q: Management VLAN. Transparent, Access, Trunk and Mixed mode. QinQ double tagging

POWER INPUT OUTPUT
36 to 57 VDC via Ethernet port1 (Power over Ethernet)
12 VDC via Access port
Power should not be provided simultaneously on both ports
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) except MP-10150-SUL 180 km/h(112.5 mph)

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

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
- Or 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.