

# Tsunami® MP-10100 series

## Very High Throughput Point-to-Multipoint Wireless Solution



### Increase your multipoint capacity to over 630 Mbps throughput with the Tsunami® MP-10100 series

Proxim Wireless is a leader and an early innovator in wireless technology providing high-speed, long-range and mobile broadband wireless solutions. Proxim introduces the Tsunami® MP-10100, a very high throughput, high power, extremely reliable and cost-effective, near-line-of-sight point-to-multipoint (PMP) wireless solution.

The Tsunami® MP-10100 supports the following features specifically for last miles access, video surveillance or mobility application that need very high-speed broadband wireless access:



Proxim WORP®, a highly evolved QoS platform tailored to deliver voice, video and data applications



Proxim ClearConnect™, a suite of different techniques all working together to ensure robust and reliable radio communications in noisy deployments



Proxim FastConnect™, a High Speed Mobility solution for Buses, Trains, Metros and Ferries

### 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

### 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

### 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

PRODUCT MODELS		PART NUMBERS	
MP-10100-BSU	Tsunami® MP 10100 Base Station, 866 Mbps, MIMO 2x2, Type-N Connectors	901-00226	MP-10100-BSU-US
MP-10150-BS9	Tsunami® MP 10150 Base Station, 866 Mbps, MIMO 2x2, 90° sector antenna	901-00230	MP-10150-BS9-US
MP-10150-BS1	Tsunami® MP 10150 Base Station, 866 Mbps, MIMO 2x2, 22 dBi panel antenna	901-00260	MP-10150-BS1-US
MP-10100-SUA	Tsunami® MP 10100 Subscriber Unit, 866 Mbps, MIMO 2x2, Type-N Connectors	901-00228	MP-10100-SUA-US
MP-10150-SUR	Tsunami® MP 10150 Subscriber Unit, 866 Mbps, MIMO 2x2, 22 dBi panel antenna	901-00232	MP-10150-SUR-US
MP-10150-SUL	Tsunami® MP 10150 Subscriber Unit Long-range, 866 Mbps, MIMO 2x2, 28 dBi panel antenna	901-00234	MP-10150-SUL-US
		901-00227	MP-10100-BSU-WD
		901-00231	MP-10150-BS9-WD
		901-00261	MP-10150-BS1-WD
		901-00229	MP-10100-SUA-WD
		901-00233	MP-10150-SUR-WD
		901-00235	MP-10150-SUL-WD

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 / MODULATION	2x2:2 / 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									
	<table border="1"> <thead> <tr> <th>80 MHz</th> <th>40 MHz</th> <th>20 MHz</th> </tr> </thead> <tbody> <tr> <td>MCS0: 28</td> <td>MCS0: 28</td> <td>MCS0: 29</td> </tr> <tr> <td>MCS9: 21</td> <td>MCS9: 22</td> <td>MCS8: 25</td> </tr> </tbody> </table>	80 MHz	40 MHz	20 MHz	MCS0: 28	MCS0: 28	MCS0: 29	MCS9: 21	MCS9: 22	MCS8: 25
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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
MP-10150-SUL	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	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	
MODES	Bridging, Routing (RIP v2 and IP tunneling)
IP STACK	IPv4 and IPv6 simultaneously
GATEWAY FEATURES	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	
	17 Watt typical

ENVIRONMENTAL SPECS		
OPERATING TEMPERATURE	STORAGE TEMPERATURE	HUMIDITY, IP RATING, WIND LOADING
-40° to 60°C (-40° to 140° Fahrenheit)	-50° to 70°C (-58° to 158° Fahrenheit)	100% relative humidity, IP67, 200 km/h (125 mph) except MP-10150-SUL: 180 km/h (112.5 mph)

PHYSICAL SPECS				
PRODUCT MODELS	DIMENSIONS PACKAGED (per unit)	DIMENSIONS UNPACKAGED (per unit)	WEIGHT (PACKAGED)	WEIGHT (UNPACKAGED)
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 inches (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	
<ul style="list-style-type: none"> <li>One Tsunami® MP-10100-BSU/SUA with two N-type surge protected connectors</li> <li>Or One Tsunami® MP-10150-BS9/BS1/SUR/SUL with integrated dual polarized antenna</li> <li>One power injector and country specific power cord</li> <li>One Connector weatherproofing kit (Includes all recommended weatherproofing material)</li> </ul>	<ul style="list-style-type: none"> <li>One Wall / Pole mounting kit</li> <li>One Antenna alignment (RJ11) dongle</li> <li>One Grounding kit</li> <li>One Quick Installation Guide</li> </ul>

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