

# Tsunami® MP-10100L Series

## High Throughput Point-to-Multipoint Wireless Solution



**Increase your multipoint capacity over 300 Mbps throughput with the all new Tsunami® MP-10100L 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-10100L, a software License controlled version of Tsunami® MP-10100 that delivers up to 400 Mbps data rate in a 40 MHz channel. The Tsunami® MP-10100L benefits from all advantages and features of Tsunami® MP-10100 and it can be field license upgraded to very high throughput mode of over 600Mbps of useable capacity.

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 over 13 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 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
- 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

### Product Line Compatibility

- Connects to all existing Tsunami® MP-10100, 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-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-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-SUA	Tsunami® MP 10100 Subscriber Unit Lite, 400 Mbps, MIMO 2x2, Type-N Connectors	901-00273 MP-10100L-SUA-US	901-00278 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	901-00281 MP-10150L-SUR-WD		
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	5.150 – 5.925 GHz (Subject to Country Regulations)				
CHANNEL SIZE	40 MHz and 20 MHz				
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				
TX POWER	40 MHz	20 MHz			
	MCS0: 28	MCS0: 29			
	MCS9: 22	MCS8: 25			
RX SENSITIVITY (Per=10%)	MCS0: -93	MCS0: -94			
	MCS9: -71	MCS8: -74			
THROUGHPUT	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	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					
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)	48 to 57 VDC – 25 Watt on Ethernet port2 (PoE – software controlled)			
	12 VDC via Access port	12 VDC on Access port			
	Power should not be provided simultaneously on both ports.				
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, 180 km/h (112.5 mph)		
PHYSICAL SPECS					
	PRODUCT MODELS	DIMENSIONS PACKAGED (per unit)	DIMENSIONS UNPACKAGED (per unit)	WEIGHT (PACKAGED)	WEIGHT (UNPACKAGED)
	MP-10100L-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-10150L-BS9	18.46 x 7.05 x 21.57 in (469 x 179 x 548 mm)	14 x 14 x 3.40 in (370 x 370 x 85 mm)	13.67 lbs (6.2 kg)	7.27 lbs (3.3 kg)
	MP-10150L-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)
SAFETY STANDARDS					
	UL 60950, CAN/CSA-C22.2 No. 60950, IEC 60950, EN 60950 (part -1 and -22)				
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.				