![Proxim wireless — Performance Matters. Proxim Delivers.®]

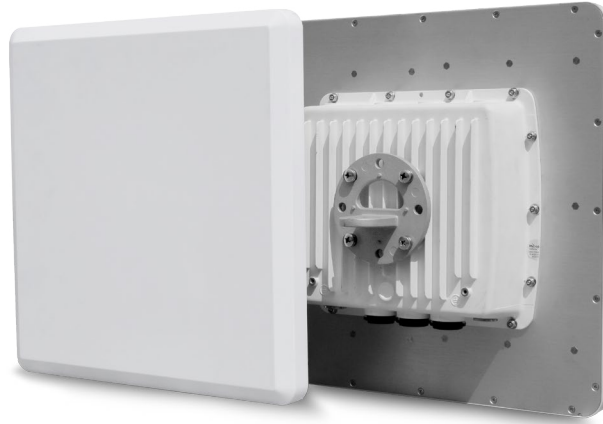# Tsunami® MP-10250-BSX

Advanced Point-to-Multipoint Wireless Base Station

Implementing Intelligent Technologies with Tsunami® MP-10250-BSX
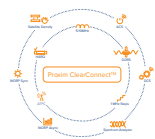
Proxim Wireless is a leader and an early innovator in wireless technology providing high-speed, long-range and mobile broadband wireless solutions.

The Tsunami® MP-10250-BSX is an intelligent base station that combines a beam steering (BeamX™) antenna and a scan radio (Proxim SmartScan™) with the very high throughput, high power, robust and especially reliable Tsunami® 10000 product line. This product delivers a solution that is extremely robust in the face of interference, delivers more Mbps at a given point in the network and opens up additional 5GHz spectrum.

The Tsunami® MP-10250-BSX supports the following features specifically for last miles access or video surveillance application that need advanced QoS, interference resistant, 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
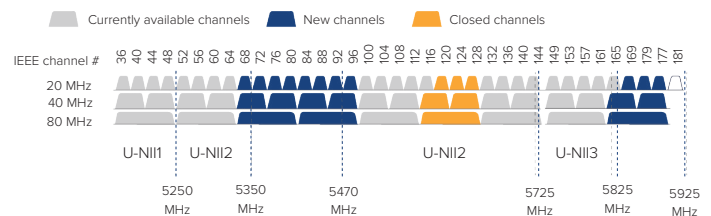

Proxim SmartConnect™, next generation improvements that anticipates disturbances to optimize performances

World Class Performance

- Point-to-Multipoint base station that delivers up to 866 Mbps data rate and covers distances up to 10 miles (16 km)
- AES 128 encryption, Radius authentication and highly-secure remote management via SSL/TLS1.2, SSH and SNMPv3
- Service flow based QoS with deep packet inspection (DPI) to ensure that the most important data arrives with priority
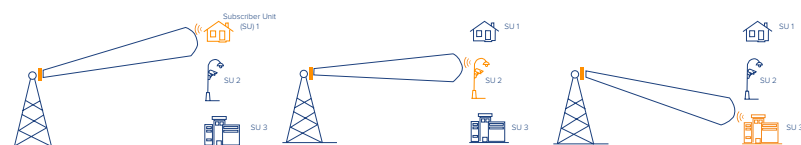- Built-in feature rich network protocols for IPv4 and IPv6 bridging, routing and gateway functionality

Proxim SmartScan™

- Performs background analysis of the full RF spectrum and creates channel availability tables to allow an immediate switch to a free channel in case of weather radar detection or heavy interference
- By removing the initial transmission delay, SmartScan makes DFS channel more efficient.
- It also opens access to the 5.600–5.650 GHz sub-band, and enables effective use of up to 355 MHz of DFS spectrum.

BeamX™ Antenna

- Smart antenna delivering a 17° beam that electronically steers itself to the remote subscriber unit over 60° sector, to limit interferences from nearby RF sources
- By improving the radio Signal to Noise Ratio (SNR), BeamX enables higher modulations and thus improves throughput.

Product Line Compatibility

- Connects to all existing Tsunami® MP10100, MP-10100L, 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-10250-BSX	Tsunami® MP 10250 Base Station Unit, 867 Mbps, MIMO 2x2, 16 dBi BeamX antenna, scan radio	901-00291 MP-10250-BSX-US	901-00292 MP-10250-BSX-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	2x2:2 and 0x2:2 (scan radio)
MODULATION	OFDM with BPSK, QPSK, QAM16, QAM64, QAM256
FREQUENCY	4.900 – 5.850 GHz (Subject to Country Regulations)
CHANNEL SIZE	80 MHz, 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

	80 MHz	40 MHz	20 MHz	Scan Radio
TX POWER	MCS0: 28	MCS0: 28	MCS0: 29	N/A
	MCS9: 21	MCS9: 22	MCS8: 25	
RX SENSITIVITY (Per=10%)	MCS0: -89	MCS0: -93	MCS0: -94	N/A
	MCS9: -68	MCS9: -71	MCS8: -74	
THROUGHPUT	Up to 672 Mbps	Up to 324 Mbps	Up to 137 Mbps	N/A

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-10250-BSX	Integrated 2x2 MIMO Beam Steering antenna:

Beam Width	17° spanning over ± 30° sector
Receive Gain	16 dBi (11 dBi before 5.150 GHz)
Transmit Gain	20 dBi (11 dBi before 5.150 GHz)

MANAGEMENT

REMOTE	Telnet and SSH, Web GUI and SSL, 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)

PHYSICAL SPECS

PRODUCT MODELS	DIMENSIONS PACKAGED (per unit)	DIMENSIONS UNPACKAGED (per unit)	WEIGHT (PACKAGED)	WEIGHT (UNPACKAGED)
MP-10250-BSX	18.46 x 7.05 x 21.57 in (469 x 179 x 548 mm)	14 x 14 x 3.40 in (371 x 371 x 85 mm)	13.67 lbs (6.2 kg)	7.27 lbs (3.3 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

PACKAGE CONTENTS

- One Tsunami® MP-10250-BSX with integrated BeamX antenna and scan radio
- 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