



Tsunami® MP-8160-CPE

Presenting a 100Mbps high performance cost optimized customer premises equipment in a compact form factor operating in the 5.900 – 6.425 GHz Frequency Range!

Proxim Wireless is a leader and an early innovator in wireless technology for providing high-speed, long-range broadband wireless access solutions. The Tsunami® MP-8160-CPE is Proxim's next generation point-to-multi-point subscriber unit. The MP-8160-CPE provides maximum throughput performance tuned for WISP and Video Surveillance markets. The 8160 CPE comes in an outdoor IP67 rated form factor, and it is designed specifically for the WISP and Video Surveillance market to accelerate the service provider's break-even point, making this product ideal for large-scale wireless deployments.

World-class Performance

- Supports the frequency bands from 5.900 – 6.425 GHz
- Features an integrated dual polarity panel antenna and a 2x2 MIMO high power radio capable of up to 26dBm transmit power
- Carrier grade advanced security with AES-128 bit encryption and built-in feature-rich network protocols for bridging, routing and gateway functionality
- Supports up to 8 QoS Classes; and 8 Service Flows per class
- Enables flexible bandwidth allocation for tiered services with aggregate throughput of up to 100Mbps
- Features a very small form factor and an outdoor rated IP67 Metal enclosure
- Spectrum analyzer feature helps to study frequency bands for interference, and select a relatively low interference channel.

End-to-End Broadband Wireless Product Portfolio

- **Tsunami® MP-8100** – Wireless Point-to-Multipoint System Delivering 300Mbps Bandwidth
- **Tsunami® MP.11** – Our best selling Point-to- Multipoint product line
- **ORINOCO® AP** - The industry's Highest performance 802.11a/b/g/n access points

Proxim Wireless is a global pioneer of end-to-end broadband wireless systems that deliver the quadruple play of video, voice, data and mobility. From Wi-Fi to wireless Gigabit Ethernet – our WLAN, Wi-Fi Mesh, WiMAX and point-to-point wireless backhaul products are available through our extensive global channel networks.

Mobile Roaming Enables New Applications

Proxim innovation delivers mobile roaming of Subscriber Units (SU) between Base Station Units (BSU). Public safety first responder networks, transportation system, monitoring and telemetry, and mobile security and surveillance are now all possible with a low cost, robust system.

- Fast handoff at speeds up to 112 km per hour (70 miles per hour).
- Customizable roaming parameter maintains minimum bandwidth required for application performance

Reducing Costs for Wireless ISPs

- Flexible frequency bands (both licensed and unlicensed) worldwide provide reliable wireless broadband
- Low-cost bundle including both radio and mounting kit provides the industry's most aggressive price point and reduces the cost barriers for wireless broadband

Easy to Install

- Designed for quick, easy installation and compatible with Tsunami® MP-8160 Series products
- Deployment tools include antenna alignment and remote configuration management
- MIMO & Advanced Orthogonal Frequency Division Multiplexing techniques enhances non-line of-sight performance improving deployment in challenging areas

All-in-One CPE with Security & Gateway Features

- Built-in feature rich network protocols for Bridging, Routing and Gateway functionality
- Advanced AES-128 bit encryption protects over-the-air transmission
- Radio mutual authentication eliminates unauthorized use of the system by rogue subscriber units and man-in-the middle attacks
- MAC, Ether type, IP address packet filtering provides granular network security
- Highly secured remote management access via SSL, SSH and SNMPv3
- Proxim's proprietary Wireless Outdoor Routing Protocol (WORP®) prevents snooping

PRODUCT MODELS					
MP-8160-CPE-A100	Tsunami® MP 8160 Customer Premises Equipment, 100 Mbps, MIMO 2x2, 15dBi integrated antenna				
INTERFACES					
WIRED ETHERNET	One auto MDI-X RJ45 10/100Ethernet				
WIRELESS PROTOCOL	WORP® (Wireless Outdoor Router Protocol)				
RADIO & TX SPECS					
MIMO	2x2 MIMO				
MODULATION	OFDM				
FREQUENCY	5.900 – 6.425 GHz (Subject to Country Regulations)				
CHANNEL SIZE	40 MHz, 20 MHz, 10 MHz, 5MHz channel bandwidths with support for 1MHz channel spacing				
DATA RATE	MCS 0 to 15 for High Throughput mode (6.5 – 300 Mbps) with Dynamic Data Rate Selection				
TX POWER	Up to 25 dBm (two Tx chain)				
TX POWER CONTROL	0 – 25 dB, in 0.5 dB steps. Automatic TPC with configurable EIRP limit				
RF-PORT PROTECTION	Built-in ESD & Lightning/Surge protection in the radio				
RX SENSITIVITY (BER=10 ⁻⁶)	Channel Size	40 MHz	20 MHz	10 MHz	5 MHz
	MCS 0	-90 dBm	-92 dBm	-95 dBm	-98 dBm
	MCS 7	-72 dBm	-73 dBm	-76 dBm	-80 dBm
	MCS 8	-88 dBm	-90 dBm	-92 dBm	-96 dBm
	MCS 15	-69 dBm	-70 dBm	-73 dBm	-76 dBm
ANTENNA					
Integrated 15dBi dual Polarized (H+V) panel antenna					
MANAGEMENT					
REMOTE	Telnet and SSH, WebGUI 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				
SECURITY					
ENCRYPTION	AES-CCM 128 bits				
AUTHENTICATION	Internal MAC Address Control List, Radius based Authentication (with VLAN and QoS provisioning)				
NETWORK					
MODES	Bridging, Routing (RIP v2 and IP tunneling)				
THROUGHPUT	Up to 100 Mbps (TCP)				
GATEWAY FEATURES	DHCP Server & relay, NAT with Std ALGs, PPPoE end point				
QoS	Asymmetric Bandwidth Control	Uplink and Downlink CIR Control "committed information rate" per service flow Uplink and Downlink MIR Control "maximum information rate" per service flow			
	Packet Classification Capabilities	802.1D/802.1Q/802.1p priority, IPTOS, VLAN ID, IP source/destination address, source/destination port, Ethernet source/destination address, IP protocol, and Ethertype			
	Scheduling	Best Effort, Real Time Polling Services			
VLAN	802.1Q: Management VLAN. Transparent, Access, Trunk and Mixed mode. QinQ double tagging				
ENVIRONMENTAL SPECS					
TEMPERATURE					
OPERATING	-40° to 55°C (-40° to 131° Fahrenheit)				
STORAGE	-45° to 70°C (-49° to 158° Fahrenheit)				
HUMIDITY	Max 100% relative humidity (non-condensing)				
POWER CONSUMPTION	5 Watt typical (18 Watt max)				
PHYSICAL SPECS					
DIMENSIONS					
PACKAGED	13.58 x 7.17 x 3.43 in. (345 x 182 x 87 mm)				
UNPACKAGED	8.46 x 4.78 x 2.56 in (215 x 121.5 x 65 mm)				
WEIGHT					
PACKAGED	3.75 lbs (1.70 kg)				
UNPACKAGED	1.93 lbs (0.88 kg)				
IP RATING	IP67				
PACKAGE CONTENTS	<ul style="list-style-type: none"> ■ One Tsunami® MP-8160-CPE with 15dBi integrated antenna ■ One power injector and country specific power cord ■ One Pole mounting kit ■ One Connector weatherproofing kit (Includes all recommended weatherproofing material) ■ One Grounding kit ■ One Quick Installation Guide 				
WARRANTY	1-year on parts and labor; ServPak Extended Support available				

APPLICATIONS

- Last Mile Access**
 Competitive broadband service access alternative to DSL or cable for residences and T1 or Ethernet for businesses
- Security and Surveillance**
 High definition IP-surveillance cameras for monitoring city streets, airports, bridges, seaports, transportation, hubs, offices and warehouses
- Metropolitan Area Networks**
 Secure and reliable connectivity between city buildings
- Emergency First Responders**
 Critical information delivery such as medical data and video feeds during in-progress events
- Enterprise Campus Connectivity**
 Extend the main network to remote offices, warehouses or other buildings without leased lines

For detailed technical specifications, please go to <http://proxim.com/products/point-to-multipoint/-tsunami-mp-8100-series/tsunami-mp-8160-cpe>

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