

# Tsunami® MP-826-CPE

## High Performance Customer Premises Equipment for WISPs



### Rugged outdoor Point-to-Multipoint CPE operating in the 5.900 – 6.425 GHz band.

The Tsunami® Multipoint 826 CPE is an ideal solution for large-scale wireless deployments and provides excellent value propositions to WISPs planning wireless broadband last-mile access deployments. Specifically designed to operate in the 6.4 Ghz band, this product is designed to be fully compatible with the MP8620 series products.

Leveraging the advantages of OFDM, and MIMO radio innovations combined with Proxim's proprietary Wireless Outdoor Routing Protocol (WORP®), the Tsunami® Multipoint 826 CPE provides excellent performance and throughput even in Non Line-of-Sight (NLOS) installations.

The MP-826-CPE enables transparent roaming up to 295 km/h (185 mph) for use in mobility applications such as provision of Internet access or video surveillance on trains, trams and busses.

### High Value, Long Service Life

The combination of high reliability, license-free frequency bands, and guaranteed compatibility with past, current and future Proxim base station models, ensures a long service life, and an excellent return on investment.

- License-free frequency bands worldwide provide reliable wireless broadband without the high cost and delays associated with licensed frequencies
- Designed for harsh environments, the Tsunami® MP-826-CPE is fully IP67 rated, and will deliver years of reliable service in conditions that include, high winds, high salt, and high temperature range

### Flexible, Fast and Secure

- Designed to deliver 50 Mbps of throughput at the edge of the network.
- Provides flexible channel planning with support for 5.900 to 6.425 GHz
- Comes with a 2x2 MIMO high power radio capable of 25 dBm transmit power
- Advanced encryption protects over-the-air transmission via AES-128
- Uses Proxim's Wireless Outdoor Routing Protocol (WORP®) to prevent snooping
- Radio mutual authentication eliminates unauthorized use of the system by rogue subscriber units and man-in-the middle attacks

### All-in-One CPE and Gateway

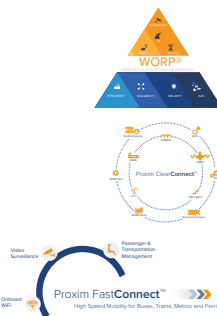
- Built-in network protocols for Bridging, Routing and Gateway functionality

- MAC, Ether type, IP address packet filtering provides granular network security
- Features highly-secure remote management via SSL, SSH and SNMPv3

### Easy to Install

- Comes ready to install with a complete "bring-your-own-pole" installation kit that includes basic pole mount and grounding kits, connector weather proofing kit and a power injector
- Non Line-of-Sight capability provided by Advanced Orthogonal Frequency Division Multiplexing (OFDM) along with 2x2 MIMO eases deployment in challenging areas
- Deployment tools include spectrum analyzer, antenna alignment and remote management configuration
- 15 dBi integrated antenna
- Connects to all existing Tsunami® 8260 series Base Stations

### 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 mph).

### 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.

**PRODUCT MODELS**

MP-826-CPE-50 Tsunami® MP 826 Customer Premise Equipment , 50 Mbps, MIMO 2x2, 15 dBi integrated antenna

**INTERFACES**

WIRED ETHERNET One auto MDI-X RJ45 10/100 Mbps Ethernet with PoE in  
 WIRELESS PROTOCOL WORP® (Wireless Outdoor Router Protocol)

**RADIO & TX SPECS**

MIMO 2x2 MIMO  
 MODULATION OFDM with BPSK, QPSK, QAM16, QAM64  
 FREQUENCY 5.900 – 6.425 GHz (Subject to Country Regulations)  
 CHANNEL SIZE 40 MHz, 20 MHz, 10 MHz, 5 MHz channel bandwidths  
 DATA RATE MCS 0 to 15 for High Throughput mode (6.5 – 300 Mbps) with Dynamic Data Rate Selection. BPSK, QPSK, 16-QAM and 64-QAM for legacy mode (6Mbps - 54Mbps)  
 TX POWER Up to 25 dBm (dual chain)  
 TX POWER CONTROL 0 – 20 dB, in 0.5 dB steps. Automatic TPC with configurable EIRP limit  
 OTHER Dynamic Channel Selection (DCS) based on interference detection, Automatic Transmit Power Control (ATPC) with EIRP limit support

RX SENSITIVITY (Per=10%)

Channel Size	40 MHZ	20 MHZ	10 MHz	5 MHz
MCS 0	-90 dBm	-93 dBm	-97 dBm	-100 dBm
MCS 7	-70 dBm	-73 dBm	-75 dBm	-78 dBm
MCS 8	-88 dBm	-91 dBm	-94 dBm	-96 dBm
MCS 15	-66 dBm	-69 dBm	-71 dBm	-74 dBm

**ANTENNA**

Integrated 15 dBi dual Polarized (H+V) panel antenna

**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

**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)  
 GATEWAY FEATURES DHCP Server & relay, NAT with Std ALGs, PPPoE end point with Proxy DNS  
 IP STACK IPv4 and IPv6 simultaneously  
 THROUGHPUT Up to 50 Mbps

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

**POWER CONSUMPTION**

6 Watt typical (15 Watt max)

**ENVIRONMENTAL SPECS**

OPERATING TEMPERATURE	STORAGE TEMPERATURE	HUMIDITY, WATER & DUST PROOF, WIND LOADING
-40° to 55°C (-40° to 131° Fahrenheit)	-55° to 70°C (-67° to 158° Fahrenheit)	Max 100% relative humidity (non-condensing), IP67, 180 km/h (112 mph)

**PHYSICAL SPECS**

DIMENSIONS (PACKAGED)	DIMENSIONS (UNPACKAGED)	WEIGHT (PACKAGED)	WEIGHT (UNPACKAGED)
13.97 x 8.86 x 3.46 in (355 x 225 x 88 mm)	4.96 x 8.62 x 2.58 in (126 x 219 x 65.5 mm)	4.9 lbs (2.225 Kg)	2.1 lbs (0.950 kg)

**SAFETY STANDARDS**

UL 60950-1/22

**PACKAGE CONTENTS**

- One Tsunami® MP-826-CPE with integrated antenna
- One 20 W power injector and country specific power cord
- One Connector weatherproofing kit (Includes all recommended weatherproofing material)
- One basic Pole mounting kit
- One Grounding kit
- One Quick Installation Guide

**MTBF & WARRANTY**

>200,000 hours & 1-year; ServPak Extended Support available.