



Rugged Outdoor Point-to-Multipoint CPE for Last-Mile Access and Mobility Applications

The Tsunami[®] Multipoint 835 CPE is an ideal solution for large-scale wireless deployments and provides an excellent value proposition to WISPs planning wireless broadband last-mile access deployments.

The MP-835-CPE enables seamless 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.

This CPE also features a carrier-grade prioritization platform supporting multiple service classes and able to prioritize voice, video and data applications to enable granular management of customer service features.

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.

- Designed for harsh environments, the Tsunami[®] MP-835-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

- Allows flexible bandwidth allocation for service tiers
- Field upgradable 10, 25, 50 or 100 Mbps of throughput with maximum data rates of 300 Mbps
- Provides flexible channel planning with support for 4.900 - 5.000 GHz (L mask) and 5.150 - 5.925 GHz
- Comes with a 2x2 MIMO high power radio capable of 26 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
- Supports either WORP[®] or WORP[®] sync to adapt to RF condition and deliver optimum performance.

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[®] MP.11 5054, Tsunami[®] 8100 and Tsunami[®] 8200, but also to all new Tsunami 10100 and 10200 series

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.

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)

Specifications

PRODUCT MODELS		PART NUMBERS			
MP-835-CPE-10	Tsunami® MP 835 Customer Premise Equipment, 10 Mbps, MIMO 2x2, 15 dBi integrated antenna	901-00203	MP-835-CPE-10-US		
MP-835-CPE-25	Tsunami® MP 835 Customer Premise Equipment, 25 Mbps, MIMO 2x2, 15 dBi integrated antenna	901-00206	MP-835-CPE-10-WD		
MP-835-CPE-50	Tsunami® MP 835 Customer Premise Equipment, 50 Mbps, MIMO 2x2, 15 dBi integrated antenna	901-00204	MP-835-CPE-25-US		
MP-835-CPE-100	Tsunami® MP 835 Customer Premise Equipment, 100 Mbps, MIMO 2x2, 15 dBi integrated antenna	901-00207	MP-835-CPE-25-WD		
MP-835-CPE-10-25-UPG	Tsunami® MP 835 Customer Premise Equipment, 10 to 25 Mbps license upgrade	901-00201	MP-835-CPE-50-WD		
MP-835-CPE-10-50-UPG	Tsunami® MP 835 Customer Premise Equipment, 10 to 50 Mbps license upgrade	901-00208	MP-835-CPE-100-WD		
MP-835-CPE-10-100-UPG	Tsunami® MP 835 Customer Premise Equipment, 10 to 100 Mbps license upgrade	997-00016	MP-835-CPE-10-25-UPG		
MP-835-CPE-25-50-UPG	Tsunami® MP 835 Customer Premise Equipment, 25 to 50 Mbps license upgrade	997-00017	MP-835-CPE-10-50-UPG		
MP-835-CPE-25-100-UPG	Tsunami® MP 835 Customer Premise Equipment, 25 to 100 Mbps license upgrade	997-00018	MP-835-CPE-10-100-UPG		
MP-835-CPE-50-100-UPG	Tsunami® MP 835 Customer Premise Equipment, 50 to 100 Mbps license upgrade	997-00019	MP-835-CPE-25-50-UPG		
		997-00020	MP-835-CPE-25-100-UPG		
		997-00021	MP-835-CPE-50-100-UPG		
INTERFACES					
WIRED ETHERNET	One auto MDI-X RJ45 10/100 Mbps Ethernet with PoE in				
WIRELESS PROTOCOL	WORP® (Wireless Outdoor Router Protocol) or WORP sync				
RADIO & TX SPECS					
MIMO	2x2 MIMO				
MODULATION	OFDM with BPSK, QPSK, QAM16, QAM64				
FREQUENCY	4.900 - 5.925 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. * Not applicable for DFS Band				
TX POWER	BPSK, QPSK, 16-QAM and 64-QAM for legacy mode (6Mbps - 54Mbps)				
TX POWER CONTROL	Up to 26 dBm (dual chain)				
	0 – 15 dB, in 0.5 dB steps. Automatic TPC with configurable EIRP limit				
	Channel Size	40 MHz	20 MHz	10 MHz	5 MHz
TX POWER	MCS 0	-88 dBm	-92 dBm	-93 dBm	-94 dBm
	MCS 7	-72 dBm	-74 dBm	-75 dBm	-77 dBm
RX SENSITIVITY (Per=10%)	MCS 8	-88 dBm	-91 dBm	-93 dBm	-94 dBm
	MCS 15	-69 dBm	-71 dBm	-72 dBm	-75 dBm
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					
	Integrated 15 dBi dual Polarized (H+V) panel antenna (12 dBi before 5.000 GHz and 14 dBi beyond 5.850 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				

SECURITY				
ENCRYPTION	AES-CCM 128 bits			
AUTHENTICATION	Internal MAC Address Control List, Radius based Authentication (with VLAN and QoS provisioning)			
QoS				
Asymmetric Bandwidth Control	Uplink and Downlink CIR Control "committed information rate" per service flow			
Packet Classification	Uplink and Downlink MIR Control "maximum information rate" per service flow			
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			
NETWORK				
MODES	Bridging, Routing (RIP v2 and IP tunneling)			
THROUGHPUT	MP-835-CPE-10	Up to 10 Mbps		
	MP-835-CPE-25	Up to 25 Mbps		
	MP-835-CPE-50	Up to 50 Mbps		
	MP-835-CPE-100	Up to 100 Mbps		
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 CONSUMPTION				
	6 Watt typical			
ENVIRONMENTAL SPECS	OPERATING TEMPERATURE	STORAGE TEMPERATURE	HUMIDITY - IP RATING	WIND LOADING
	-30° to 50°C (-22° to 122° Fahrenheit) Cold start at -20°C (-4° 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				
	<ul style="list-style-type: none"> One Tsunami® MP-835-CPE-10/25/50/100 with integrated antenna One 20 W power injector and country specific power cord One Connector weatherproofing kit (Includes all recommended weatherproofing material) One Grounding kit One basic Pole mounting kit One Quick Installation Guide 			
MTBF & WARRANTY				
	> 350,000 hours & 1-year; ServPak Extended Support available.			