Tsunami® Multipoint 820 series

Point to Multipoint Solution for Video Protection

Presenting Proxim's next generation video protection wireless solution

Proxim Wireless is a leader and an early innovator in wireless technology providing high-speed, long-range broadband wireless solutions. Leveraging the advantages of OFDM, MIMO radio innovations along with Proxim's proprietary Wireless Outdoor Routing Protocol (WORP®), Tsunami® Multipoint 820 series is a feature rich evolving equipment specifically designed to address video protection market.

The compact and robust form factor of Tsunami® Multipoint 820 series is an ideal solution for urban wireless deployments. It is suitable for pole mounting, next to video camera, in order to ensure citizen protection.

Tsunami® Multipoint 820 series is also adapted for in vehicle mounting and supports seamless roaming at very high speed.

World Class Performance

- Features a very small form factor and an outdoor rated IP67 Metal enclosure
- Available with 15 dBi integrated antenna or N-Type connectors
- 50Mbps (license upgradable to 100Mbps) or 100 Mbps of throughput, with maximum data rates of 300Mbps
- Provides flexible channel planning with support for 5.150 to 5.925 GHz
- Comes with a 2x2 MIMO high power radio capable of 26 dBm transmit power
- Dynamic bandwidth allocation for service tiers
- Seamless roaming up to 295 km/h (185 mph)
- Powered via 802.3at PoE or directly from 12 VDC source for in-vehicle installation

Video Ready and Highly Secure

- Service flow based Quality of Service with advanced packet recognition (layer 2, 3 or 4)
- Multi-cast traffic compliant (no performance reduction) and built in IGMP snooping

- Advanced encryption protects over-the-air transmission via AES-128
- 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
- Choice of WORP® or WORP® Sync protocol based on application requirements
- Features highly-secure remote management via SSL, SSH and SNMPv3

Reducing Costs for Wireless ISPs

- License-free frequency bands worldwide provide reliable wireless broadband without the high cost of licensed frequencies
- Low-cost bundle including both radio and mounting kit provides the industry's most aggressive price point , enabling any deployment to enjoy a quick return on investment

Easy to Install

- Comes as a complete compact outdoor form factor offering unprecedented ease of installation
- Deployment tools include spectrum analyzer, antenna alignment and remote management configuration
- Non Line-of-Sight capability provided by Advanced Orthogonal Frequency Division Multiplexing (OFDM) along with 2x2 MIMO eases deployment in challenging areas
- Collocated Base Station synchronization ready
- Connects to all existing Tsunami® MP.11, Tsunami® 8100 and Tsunami® 8200

PRODUCT MODELS

MP-820-BSU-100	Tsunami® MP 820 Base Station Unit, 100 Mbps, MIMO 2x2, N-Type Connectors
MP-825-BS3-100	Tsunami® MP 825 Base Station Unit, 100 Mbps, MIMO 2x2, 15 dBi Antenna
MP-820-SUA-50+	Tsunami® MP 820 Subscriber Unit , 50 Mbps (upgradable to 100 Mbps), MIMO 2x2, N-Type Connectors
MP-820-SUA-100	Tsunami® MP 820 Subscriber Unit , 100 Mbps, MIMO 2x2, N-Type Connectors
MP-825-SUR-50+	Tsunami® MP 825 Subscriber Unit , 50 Mbps (upgradable to 100 Mbps), MIMO 2x2, 15 dBi Antenna
MP-825-SUR-100	Tsunami® MP 825 Subscriber Unit , 100 Mbps, MIMO 2x2, 15 dBi Antenna

INTERFACES

WIRED ETHERNET	One auto MDI-X RJ45 10/100/1000Mbps 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	5.150 – 5.925 GHz (Subject to Country Regulations)
CHANNEL SIZE	40 MHz, 20 MHz, 10 MHz*, 5 MHz* channel bandwidths * Not applicable for DFS Band
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 26 dBm (dual chain)
TX POWER CONTROL	0 – 15 dB, in 0.5 dB steps. Automatic TPC with configurable EIRP limit
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

RX SENSITIVITY (BER=10^{-6})

Channel Size	40 MHZ	20 MHZ	10 MHz	5 MHz
MCS 0	-88 dBm	-92 dBm	-93 dBm	-94 dBm
MCS 7	-72 dBm	-74 dBm	-75 dBm	-77 dBm
MCS 8	-88 dBm	-91 dBm	-93 dBm	-94 dBm
MCS 15	-69 dBm	-71 dBm	-72 dBm	-75 dBm

SYNCHRONIZATION

Synchronize internal clock to Pulse Per Second signal received from either GPS module connected to RJ11 serial port or Ethernet Synchronization module connected to RJ45 ethernet port

ANTENNA

MP-820-BSU-100/SUA-50+/SUA-100: Two N-type connectors
MP-825-BS3-100/SUR-50+/SUR-100: Integrated 15 dBi dual Polarized (H+V) panel antenna (14 dBi beyond 5.850 GHz)

MANAGEMENT

LOCAL	RS-232 serial (RJ11 to DB-9 dongle provided)
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	MP-820-BSU-100/SUA-100, MP-825-BS3-100/SUR-100: Up to 100 Mbps, 32 subscriber max
	MP-820-SUA-50+ or MP-825-SUR-50+ : Up to 50 Mbps (license upgradable to 100 Mbps)

QoS		
	Asymmetric Bandwidth Control	Uplink and Downlink CIR Control "committed information rate" and MIR Control "maximum information rate" per service flow
	Packet Classification Capabilities	802.1D/802.1Q/802.1p priority, IPTOS, VLAN ID, IP protocol, IP source/destination address, Ethernet source/destination address, source/destination port, and Ethertype
	Scheduling	Best Effort, Real Time Polling Services

VLAN	802.1Q: Management VLAN. Transparent, Access, Trunk and Mixed mode. QinQ double tagging

POWER SUPPLY

Via provided PoE injector or directly from 12 VDC source through serial port

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)
- MP-820-BSU-100/SUA-50+/SUA-100: 11.81x10.83x5.31 in (300x275x135 mm)
- MP-825-BS3-100/SUR-50+/SUR-100: 11.81x10.83x5.31 in (300x275x135 mm)

WEIGHT (PACKAGED)
- MP-820-BSU-100/SUA-50+/SUA-100: 7.93 lbs (3.6 kg)
- MP-825-BS3-100/SUR-50+/SUR-100: 7.27 lbs (3.3 Kg)

DIMENSIONS (UNPACKAGED)
- MP-820-BSU-100/SUA-50+/SUA-100: 5.02x8.68x2.85 in (127.5x220.5x72.5 mm)
- MP-825-BS3-100/SUR-50+/SUR-100: 4.96x8.62x2.58 in (126x219x65.5 mm)

WEIGHT (UNPACKAGED)
- MP-820-BSU-100/SUA-50+/SUA-100: 2.75 lbs (1.250 kg)
- MP-825-BS3-100/SUR-50+/SUR-100: 2.10 lbs (0.950 kg)

SAFETY STANDARDS

UL 60950-1/22, CAN/CSA-C22.2 No. 60950-1/22, IEC 60950-1/22, EN 60950-1/22

PACKAGE CONTENTS

- One Tsunami® MP-820-BSU-100 with two N-type surge protected connectors Or
  One Tsunami® MP-825-BS3-100 with 15 dBi integrated antenna Or
  One Tsunami® MP-820-SUA-50+/SUA-100 with two N-type surge protected connectors Or
  One Tsunami® MP-825-SUR-50+/SUR-100 with 15 dBi integrated antenna
- One 32 W power injector with reload button and country specific power cord
- One Grounding kit
- One Wall / Pole mounting kit
- One Connector weatherproofing kit (Includes all recommended weatherproofing material)
- One Serial (RJ-11 to DB9) dongle
- One Quick Installation Guide

MTBF & WARRANTY

>350,000 hours & 1-year; ServPak Extended Support available.