



Tsunami<sup>®</sup> Multipoint 820系列产品简洁而坚固的外形为城市无线部署提供了理想的解决方案。它非常适合在城市街道中进行分立安装，并为视频监控、交通监控和交通灯管理系统的连接提供高可靠性。

Tsunami<sup>®</sup> Multipoint 820系列产品还适用于车载安装，并支持移动数据的透明漫游。

## 高性能

- 820系列产品采用高达26 dBm的功率发射器和2x2 MIMO技术，即使在恶劣的条件下也能提供出色的连接。
- 820系列产品的非视距 (NLOS) 性能使其能够在恶劣的环境中安装。

## 简洁、快速、易于安装

虽然设计的外形小巧，但820产品包装非常有吸引力，并随时可以安装一个完整的“自带杆”安装套件：其中包括基本的杆式安装和接地套件，连接器防风雨套件和馈电器，板载信号强度指示器，使安装非常简单、不麻烦。

## 移动性

Multipoint 820系列产品借助Proxim的漫游-快速连接技术，建立的切换时间前所未有，并支持延迟敏感的多媒体应用，即使在高达285 km/h (196 mph) 的速度下移动也是如此。

## 专为极端环境而设计

820产品铝制外壳经过严格筛选，包括跌落、冲击、盐雾、高温和可靠性测试。此外，外壳的防护等级为IP 67，确保820产品即使在恶劣的天气条件下也能保持高性能，同时将停机时间降至最低。

## 由WORP<sup>®</sup>提供支持

每个Tsunami<sup>®</sup> 820产品的核心是Proxim专有的无线室外路由协议-WORP<sup>®</sup>，这是一种可靠、安全和高效的协议，可优化多播室外无线点对点 and 点对多点链路的性能。

## 兼容性

连接所有Tsunami<sup>®</sup> MP-10200, MP10100, MP-8200, MP-820和MP-830系列产品。我们连接到所有版本的声明并不准确

## 关于Proxim Wireless

Proxim Wireless是全球先进的Wi-Fi、点对点、点对多点户外无线系统的先驱和领头羊，该系统用于建立关重要任务和高度可用性通信。

Proxim公司拥有超过30年的无线电方面的经验，以其无与伦比的可靠性，卓越的性能和创新动力而闻名。

## 规格

PRODUCT MODELS		PART NUMBERS				
MP-820-BSU-100	Tsunami® MP 820 Base Station Unit, 100 Mbps, MIMO 2x2, N-Type Connectors	901-00135	MP-820-BSU-100-US			
MP-825-BS3-100	Tsunami® MP 825 Base Station Unit, 100 Mbps, MIMO 2x2, 15 dBi Antenna	901-00133	MP-820-BSU-100-WD			
MP-820-SUA-50*	Tsunami® MP 820 Subscriber Unit, 50 Mbps (upgradable to 100 Mbps), MIMO 2x2, N-Type Connectors	901-00185	MP-825-BS3-100-US			
MP-820-SUA-100	Tsunami® MP 820 Subscriber Unit, 100 Mbps, MIMO 2x2, N-Type Connectors	901-00184	MP-825-BS3-100-WD			
MP-825-SUR-50*	Tsunami® MP 825 Subscriber Unit, 50 Mbps (upgradable to 100 Mbps), MIMO 2x2, 15 dBi Antenna	901-00136	MP-820-SUA-50*-US			
MP-825-SUR-100	Tsunami® MP 825 Subscriber Unit, 100 Mbps, MIMO 2x2, 15 dBi Antenna	901-00134	MP-820-SUA-50*-WD			
		901-00174	MP-820-SUA-100-US			
		901-00173	MP-820-SUA-100-WD			
		901-00176	MP-825-SUR-50*-US			
		901-00175	MP-825-SUR-50*-WD			
		901-00195	MP-825-SUR-100-US			
		901-00212	MP-825-SUR-100-WD			
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	2x2:2					
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 * DFS availability is country dependent, check the User Guide					
DATA RATE	MCS 0 to 15 for High Throughput mode (6.5 – 300 Mbps) with Dynamic Data Rate Selection					
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	
RX SENSITIVITY (PER=10%)	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	
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-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 (12 dBi before 5.000 GHz and 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					
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					
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 protocol, IP source/destination address, Ethernet source/destination address, source/destination port, and Ethertype					
Scheduling	Best Effort, Real Time Polling Services					

NETWORK				
MODES IP STACK THROUGHPUT	Bridging, Routing (RIP v2 and IP tunneling) IPv4 and IPv6 simultaneously			
	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)		
GATEWAY FEATURES VLAN	DHCP Server & relay, NAT with Std ALGs, PPPoE end point with Proxy DNS 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 - IP RATING	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)
MP-820-BSU-100/SUA-50+/ SUA-100	11.81x10.83x5.31 in (300x275x135 mm)	5.02x8.68x2.85 in (127.5x220.5x72.5 mm)	7.93 lbs (2.7 kg)	2.75 lbs (1.250 kg)
MP-825-BS3-100/SUR-50+/ SUR-100	11.81x10.83x5.31 in (300x275x135 mm)	4.96x8.62x2.58 in (126x219x65.5 mm)	7.27 lbs (3.3 Kg)	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				
	<ul style="list-style-type: none"> <li>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</li> <li>One 32 W power injector with country specific power cord</li> <li>One Wall / Pole mounting kit (Tsunami MP-825-BS3/SUR) Or One Pole mounting Kit (Tsunami MP-820-BSU/SUA)</li> <li>One Connector weatherproofing kit (Includes all recommended weatherproofing material)</li> <li>One Serial (RJ-11 to DB9) dongle</li> <li>One Grounding kit</li> <li>One Quick Installation Guide</li> </ul>			
MTBF & WARRANTY				
	MTBF over 350,000 hours & 2-year warranty with ServPak Extended Support available			