


**Tsunami® MP-8200 Series**

### End-to-End Broadband Wireless Product Portfolio

- **Tsunami®MP.11** – Our best selling Point-to- Multipoint product line
- **MeshMAX** – An all-in-one solution containing Point-to-Multipoint, Wi-Fi mesh, and Wi-Fi access point radios
- **ORINOCO® AP** - The industry's highest performance 802.11a/b/g/n access points
- **Tsunami®MP.16** – WiMAX for the 3.3 – 3.65 GHz frequency bands

**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.

**Experience superior performance with unparalleled flexibility of upto 1 Mhz channel spacing with our Tsunami® MP-8200 wireless series**

Paving a new path in the wireless industry, Proxim addresses the requirement for a versatile and a high performance wireless solution, with the Tsunami® 8200 series. The Tsunami® MP-8200 delivers data rates of 300 Mbps along with excellent spectrum flexibility of upto 1MHz channel spacing and high power radios capable of 27 dBm Tx power for extend coverage.

The Tsunami® MP-8200 features nLoS functionality and leverages the advantages of OFDM, MIMO radio innovations and Proxim's proprietary Wireless Outdoor Routing Protocol (WORP) to provide in excess of 4G speeds with QoS class of service for delivering voice, video and data applications

With supreme throughput, high power radio, flexible channel features and dual Gigabit Ethernet ports with PoE out, for powering additional devices, the Tsunami® MP-8200 series is an ideal solution for service providers and government organizations with requirements of all kinds, from last mile broadband wireless access (BWA) to wireless video surveillance and more.

### Supreme Performance

- A fixed PtMP solution that can deliver 300 Mbps data rates
- High power radio capable of up to 27 dBm Tx power to extend the range and coverage
- The only PtMP product in the market to include dual Gigabit Ethernet ports, enabling higher throughput which would otherwise be limited by the 10/100 Ethernet ports seen in other devices
- Provides reliable high performance under all traffic loads using Proxim's Wireless Outdoor Routing Protocol (WORP)

### Non-Line-of-Sight and Advanced Features

- Non-line-of-sight capable, utilizing OFDM and 2x2 MIMO techniques to improve link performance and penetrate through or around obstructions better
- Features dual Gigabit Ethernet ports with PoE in/out to power other devices like surveillance cameras and wireless access points
- Create tiered QoS service classes with ease

### Frequency Agnostic

- Operates in licensed and unlicensed frequency bands
- Flexible channel planning with 5, 10, 20 and 40MHz support with 1MHz channel spacing
- Provides support for extended frequency bands from 4.9 to 5.9 GHz

### Carrier-Grade Security

- Implements tiered security layers for the most secure outdoor wireless communications in the unlicensed frequency spectrum
- Utilizes Proxim's Wireless Outdoor Routing Protocol (WORP), which prevents snooping, and features highly-secure remote management via SSL, SSH and SNMPv3
- Provides military-grade security with AES encryption technology, prevents unsecure client-to-client communications and leverages MAC, Ethertype and IP address packet filtering for granular network security

### Product Line Compatibility

- Connects to all existing Tsunami® MP.11, Tsunami® 8100, and MeshMAX products
- Can utilize existing mounting kits of the Tsunami product line

<b>PRODUCT MODELS</b>						
MP-8200-BSU-US		Tsunami® MP 8200 Base Station Unit, 300 Mbps, MIMO 2x2, Type-N Connectors –US PoE				
MP-8250-BS9-US		Tsunami® MP 8250 Base Station Unit, 300 Mbps, MIMO 2x2, 16 dBi, 90° sector antenna – US PoE				
MP-8200-SUA-US		Tsunami® MP 8200 Subscriber Unit, 300 Mbps, MIMO 2x2, Type-N Connectors – US PoE				
MP-8250-SUR-US		Tsunami® MP 8250 Subscriber Unit, 300 Mbps, MIMO 2x2, 23 dBi, panel antenna – US PoE				
<b>INTERFACES</b>						
WIRED ETHERNET		Two auto MDI-X RJ45 10/100/1000Mbps Ethernet - Port #1 with PoE in & Data - Port #2 with PoE out (802.3af pin out) & Data				
WIRELESS PROTOCOL		WORP (Wireless Outdoor Router Protocol)				
<b>RADIO &amp; TX SPECS</b>						
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, 5MHz channel bandwidths with support for 1MHz channel spacing				
DATA RATE		MCS 0 to 15 for High Throughput mode (6.5 – 300 Mbps) BPSK, QPSK, 16-QAM and 64-QAM for legacy mode (6Mbps - 54Mbps)				
TX POWER		Up to 27dBm (two Tx chain)				
TX POWER CONTROL		0 – 25 dB, in 1dB steps				
RX SENSITIVITY (BER=10 <sup>-6</sup> )		Channel Size	40 MHz	20 MHz	10 MHz	5 MHz
		MCS 0	-87 dBm	-91 dBm	-93 dBm	-96 dBm
		MCS 7	-69 dBm	-72 dBm	-74 dBm	-76 dBm
		MCS 8	-86 dBm	-89 dBm	-91 dBm	-94 dBm
		MCS 15	-67 dBm	-69 dBm	-72 dBm	-74 dBm
<b>ANTENNA</b>		Model MP-8200-BSU and MP-8200-SUA include two N-type Connectors with built-in Surge Protection Model MP-8250-BS9 includes an integrated 2x2 MIMO 16 dBi Dual Polarized 90° sector Antenna Model MP-8250-SUR includes an integrated 2x2 MIMO 23 dBi Dual Polarized panel Antenna				
<b>MANAGEMENT</b>						
LOCAL		RS-232 serial (RJ11 to DB-9 dongle provided)				
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				
<b>NETWORK</b>						
GATEWAY FEATURES		DHCP Server & relay, NAT with Std ALGs, Bridging, Routing, Syslog, SNTP				
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 and Trunk mode				
<b>ENVIRONMENTAL SPECS</b>						
TEMPERATURE						
OPERATING		-40° to 60°C (-40° to 140° Fahrenheit)				
STORAGE		-55° to 80°C (-67° to 176° Fahrenheit)				
HUMIDITY		Max 100% relative humidity (non-condensing)				
<b>PHYSICAL SPECS</b>						
<b>DIMENSIONS</b>						
CONNECTORIZED (LxWxH)		PACKAGED 14.56 x 13.69 x 8.18 in. (370 x 348 x 208 mm)				
		UNPACKAGED 10.79 x 11.14 x 3.38 in (274 x 283 x 86 mm)				
INTEGRATED ANTENNA (LxWxH)		PACKAGED 15.94 x 15.94 x 8.46 in (405 x 405 x 215 mm)				
		UNPACKAGED 14.57 x 14.57 x 4.47 in (370 x 370 x 113.5 mm)				
<b>WEIGHT</b>						
CONNECTORIZED		PACKAGED 15 lbs (6.8 kg)				
		UNPACKAGED 7.7 lbs (3.5 kg)				
INTEGRATED ANTENNA		PACKAGED 16.53 lbs (7.5 kg)				
		UNPACKAGED 9.26 lbs (4.2 kg)				
IP RATING		IP67				
SAFETY STANDARDS		UL 60950, CAN/CSA-C22.2 No. 60950, IEC 60950, EN 60950				
PACKAGE CONTENTS		<ul style="list-style-type: none"><li>One Tsunami® MP 8200-BSU with two N-type surge protected connectors, or One Tsunami® MP-8250-BS9 with an integrated 16 dBi dual polarized 90° sector Antenna or One Tsunami® MP 8200-SUA with two N-type surge protected connectors, or One Tsunami® MP-8250-SUR with an integrated 23dBi dual polarized panel antenna</li><li>One power injector and country specific power cord</li><li>One Wall/Pole mounting kit</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 Gigabit PoE Surge Arrestor</li><li>One Quick Installation Guide</li></ul>				
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

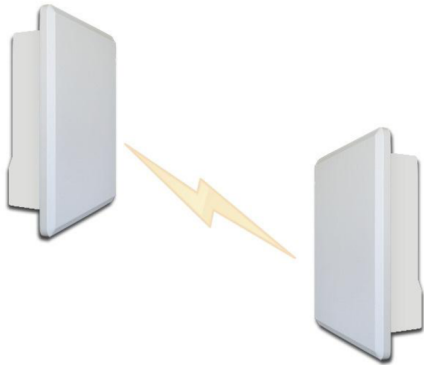
For detailed technical specifications, please go to <http://proxim.com/products/point-to-multipoint/tsunamir-mp-8200-series>

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Proxim Wireless Corporation  
[www.proxim.com](http://www.proxim.com)



## Tsunami® QuickBridge 8200 Series

### End-to-End Broadband Wireless Product Portfolio

Proxim Wireless offers extremely reliable, secure and easily-deployed solutions for interconnecting corporate and telecommunications networks. This portfolio includes:

- **Tsunami® GX-** Carrier-class IP Ethernet Bridge for voice and data backhaul for service providers and enterprise applications
- **Lynx.GX®** – Cellular voice and data backhaul, up to DS3 interface
- **QuickBridge®** – Easiest-to-install “Hop-in a- box” complete kit Ethernet Bridge for campus and small business networks

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

### Presenting a Dual radio Wireless Backhaul Solution that Exceeds 4G Speed Requirements with supreme flexibility of 1MHz channel spacing

The Tsunami® QB-8200, is a high power, extremely reliable and a cost-effective, non-line-of-sight 4G point-to-point (PtP) wireless backhaul solution. The Tsunami® QB-8200 delivers data rates of 300 Mbps plus, along with excellent spectrum flexibility of upto 1MHz channel spacing and high power radios capable of 27 dBm Tx power for extend coverage.

With its incredible channel capacity & flexibility, excellent spectrum efficiency and a highly evolved prioritization platform tailored to deliver voice, video and data applications, the Tsunami® QB-8200 satisfies carriers, wireless service providers and Government organizations with requirements for fast and reliable wireless backhaul.

The Tsunami® QB-8200 leverages the advantages of OFDM, MIMO radio innovations and Proxim’s proprietary Wireless Outdoor Routing Protocol (WORP) to provide wireless performance in excess of 4G products on the markets today.

### Superior Performance

- High power radio capable of up to 27 dBm Tx power to extend the range and coverage
- Includes dual Gigabit Ethernet ports, enabling higher throughput which would otherwise be limited by the 10/100 Ethernet ports seen in other devices throughout the market
- Reliable & high performance under all traffic loads using Proxim’s Wireless Outdoor Routing Protocol (WORP) Built-in feature rich network protocols for bridging, routing and gateway functionality

### Non-Line-of-Sight and Advanced Features

- Non-line-of-sight capable, utilizing OFDM and 2x2 MIMO techniques to improve link performance and penetrate through or around obstructions better
- Features dual Gigabit Ethernet ports with PoE in/out to power other devices like surveillance cameras and wireless access points
- Create tiered QoS service classes with ease

### Frequency Agnostic

- Operates in licensed and unlicensed frequency bands
- Flexible channel planning with 5, 10, 20 and 40MHz support with 1MHz channel spacing
- Provides support for extended frequency bands from 4.900 to 5.925 GHz

### Carrier-Grade Security

- Implements tiered security layers for the most secure outdoor wireless communications in the unlicensed frequency spectrum
- Utilizes Proxim’s Wireless Outdoor Routing Protocol (WORP), which prevents snooping, and features highly-secure remote management via SSL, SSH and SNMPv3
- Provides military-grade security with AES encryption technology, prevents unsecure client-to-client communications and leverages MAC, Ethertype and IP address packet filtering for granular network security

### Product Line Compatibility

- Connects to existing Tsunami® QB 8100
- Can utilize existing mounting kits of the Tsunami product line

# Tsunami® QuickBridge 8200 Series

## Technical Specifications

PRODUCT MODELS					
QB-8200-LNK-WD	Tsunami QB 8200 Link, 300 Mbps, MIMO 2x2, Type-N Connectors (Two QB-8200-EPA-WD)				
QB-8250-LNK-WD	Tsunami QB 8250 Link, 300 Mbps, MIMO 2x2, 23 dBi, panel antenna (Two QB-8250-EPR-WD)				
QB-8200-LNK-US	Tsunami QB 8200 Link, 300 Mbps, MIMO 2x2, Type-N Connectors (Two QB-8200-EPA-US)				
QB-8250-LNK-US	Tsunami QB 8250 Link, 300 Mbps, MIMO 2x2, 23 dBi panel antenna (Two QB-8250-EPR-US)				
INTERFACES					
WIRED ETHERNET	Two auto MDI-X RJ45 10/100/1000Mbps Ethernet - Port #1 with PoE in & Data - Port #2 with PoE out (802.3af pin out) & Data				
WIRELESS PROTOCOL	WORP (Wireless Outdoor Router Protocol)				
RADIO & TX SPECS					
MIMO	2x2MIMO				
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 with support for 1MHz channel spacing				
DATA RATE	MCS 0 to 15 for High Throughput mode (6.5 – 300 Mbps) BPSK, QPSK, 16-QAM and 64-QAM for legacy mode (6Mbps - 54Mbps)				
TX POWER	Up to 27dBm (two Tx chain)				
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RX SENSITIVITY (BER=10 <sup>-6</sup> )	Channel Size	40 MHz	20 MHz	10 MHz	5 MHz
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	MCS 7	-69 dBm	-72 dBm	-74 dBm	-76 dBm
	MCS 8	-86 dBm	-89 dBm	-91 dBm	-94 dBm
	MCS 15	-67 dBm	-69 dBm	-72 dBm	-74 dBm
LATENCY					
< 3 msec					
ANTENNA					
Model QB-8250-LNK includes an Integrated 2x2 MIMO 23dBi Dual Polarized Antenna Model QB-8200-LNK includes two N-Type Antenna Connectors with built in Surge Protection					
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				
NETWORK					
GATEWAY FEATURES	DHCP Server & relay, NAT with Std ALGs, Bridging, Routing, Syslog, SNTP				
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 and Trunk mode				
ENVIRONMENTAL SPECS					
TEMPERATURE					
OPERATING	-40° to 60°C (-40° to 140° Fahrenheit)				
STORAGE	-55° to 80°C (-67° to 176° Fahrenheit)				
HUMIDITY	Max 100% relative humidity (non-condensing)				
WIND LOADING	125 mph				
WATER & DUST PROOF	IP67				
SAFETY STANDARDS	UL 60950, CAN/CSA-C22.2 No. 60950, IEC 60950, EN 60950				
PHYSICAL SPECS					
DIMENSIONS					
CONNECTORIZED (LxWxH)	PACKAGED 14.56 x 13.7 x 8.19 in (370 x 348 x 208 mm) UNPACKAGED 10.79 x 11.14 x 3.38 in (274 x 283 x 86 mm)				
	PACKAGED 15.94 x 15.94 x 8.46 in (405 x 405 x 215 mm) UNPACKAGED 14.57 x 14.57 x 4.47 in (370 x 370 x 113.5 mm)				
INTEGRATED ANTENNA (LxWxH)					
WEIGHT					
CONNECTORIZED	PACKAGED 15 lbs (6.8 kg) UNPACKAGED 7.7 lbs (3.5 kg)				
	INTEGRATED ANTENNA				
INTEGRATED ANTENNA	PACKAGED 16.53 lbs (7.5 kg) UNPACKAGED 9.26 lbs (4.2 kg)				
	PACKAGE CONTENTS				
<div><div></div><div>One Tsunami® QB-8200-LNK based on two QB-8200-EPA with two N-type surge protected connectors or One Tsunami® QB-8250-LNK based on two QB-8250-EPR with an integrated 23dBi dual polarized panel antenna</div><div></div><div>Two power injector and country specific power cord</div><div></div><div>Two Wall / Pole mounting kit</div><div></div><div>Two Connector weatherproofing kit (Includes all recommended weatherproofing material)</div><div></div><div>Two Serial (RJ-11 to DB9) dongle</div><div></div><div>Two Grounding kit</div><div></div><div>Two Gigabit PoE Surge Arrestor</div><div></div><div>One Quick Installation Guide</div></div>					
WARRANTY	1-year on parts and labor; ServPak Extended Support available.				

## APPLICATIONS

- Backhaul to a Central POP**  
 Avoid expensive installation and recurring charge of a second wire line backhaul to a remote virtual POP
- Leased Line Redundancy**  
 Eliminate recurring DS-3 leased line charges with one time installation charge of a QuickBridge link
- Repeater**  
 Extend distance or overcome path blockage by adding point-to-point hops
- High-bandwidth Last Mile Access**  
 Use QuickBridge to deliver TLS (Transparent LAN Services) to corporate parks
- Inter-POP Redundancy**  
 Avoid downtimes caused by a wireline backhaul failure by adding a QuickBridge link as an inter-POP redundancy

For detailed technical specifications, please go to <http://www.proxim.com/products/ptpwireless-backhaul/tsunamir-qb-8200-series>

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