

# Tsunami QuickBridge® 8200 series

## High Power Point-to-Point Wireless Bridge Bundle



### Next generation of field-proven Tsunami QuickBridge® 8200 wireless backhaul solution that exceeds 4G speed requirements with 300 Mbps data rate!

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. It delivers data rates of 300 Mbps, along with excellent spectrum and 25.8 dBm high power radios 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, Tsunami® QB-8200 satisfies carriers, wireless service providers and Government organizations with requirements for fast and reliable wireless backhaul.

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.

### World Class Performance

- Point-to-Point system that delivers 300 Mbps data rate at distances of over 5 miles (8 km)
- Very low latency of 2 to 3 ms to support voice and video applications over long distances
- Dual IPv4 and IPv6 stack for transparent evolution to tomorrow networks
- 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 enhanced 3x3 MIMO techniques to better penetrate through obstructions
- Features dual Gigabit Ethernet ports with PoE out to power other devices like surveillance cameras or additional radios
- Enables packet identification to create unique and sophisticated service rules and tiered service classes with ease
- Compatibility with LACP switches for link aggregation
- Spectrum analyzer to help study frequency bands for interference, and select a relatively low interference channel

### Frequency Agnostic

- Operates in licensed and unlicensed frequency bands
- Flexible channel planning with 5, 10, 20 and 40MHz size
- 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, Ether type and IP address packet filtering for granular network security

### Cost Effective and Ease of Use for Quick Return on Investment

- Suitable for the carriers, WISP and Government markets
- Certified for deployments in the Americas, Europe and Asia
- The most cost-effective, high performance point-to-point solution from Proxim, enabling any deployment to enjoy a quick return on investment

### Product Line Compatibility

- Connects to existing Tsunami® QB-8100

## PRODUCT MODELS

QB-8200-LNK	Tsunami® QB 8200 Link, 300 Mbps, MIMO 3x3, Type-N Connectors (Two QB-8200-EPA)
QB-8250-LNK	Tsunami® QB 8250 Link, 300 Mbps, MIMO 2x2, 23 dBi Integrated Antenna (Two QB-8250-EPR)

## 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	3x3 MIMO with 2 data streams
MODULATION	OFDM
FREQUENCY	4.900 – 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
TX POWER	Up to 25.8 dBm (Triple chain)
TX POWER CONTROL	0 – 25 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 (Per=10%)

Channel Size	40 MHz	20 MHz	10 MHz	5 MHz
MCS 0	-87 dBm	-93 dBm	-95 dBm	-98 dBm
MCS 7	-71 dBm	-74 dBm	-76 dBm	-79 dBm
MCS 8	-87 dBm	-91 dBm	-93 dBm	-96 dBm
MCS 15	-68 dBm	-72 dBm	-74 dBm	-77 dBm

## LATENCY

< 3 msec

## ANTENNA

QB-8200-EPA	Three N-type Connectors with built-in Surge Protection
QB-8250-EPR	Integrated 2x2 MIMO 23dBi Dual Polarized Antenna

## 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, SNMP and local time, Spectrum analyzer

## SECURITY

ENCRYPTION	AES-CCM 128 bits
AUTHENTICATION	Internal MAC Address Control List, Radius based Authentication

## NETWORK

MODES	Bridging (support LACP through external switches), Routing (RIP v2 and IP tunneling)						
GATEWAY FEATURES	DHCP Server & relay, NAT with Std ALGs						
IP STACK	IPv4 and IPv6 simultaneously						
THROUGHPUT	Up to 246 Mbps						
QoS	<table border="1"> <tr> <td>Asymmetric Bandwidth Control</td> <td>UL and DL CIR Control "committed information rate" per service flow UL and DL MIR Control "maximum information rate" per service flow</td> </tr> <tr> <td>Packet Classification Capabilities</td> <td>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</td> </tr> <tr> <td>Scheduling</td> <td>Best Effort, Real Time Polling Services</td> </tr> </table>	Asymmetric Bandwidth Control	UL and DL CIR Control "committed information rate" per service flow UL and DL 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
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Scheduling	Best Effort, Real Time Polling Services						
VLAN	802.1Q: Management VLAN. Transparent, Access, Trunk and Mixed mode. QinQ double tagging						

## POWER CONSUMPTION

12 Watt typical (22 Watt max)

## ENVIRONMENTAL SPECS

OPERATING TEMPERATURE	STORAGE TEMPERATURE	HUMIDITY, IP RATING, WIND LOADING
-40° to 60°C (-40° to 140° Fahrenheit) Will continue operating if temperature temporarily varies between -50° and 70°C (-58° and 158° Fahrenheit)	-55° to 80°C (-67° to 176° Fahrenheit)	100% relative humidity - IP67, 200 km/h (125 mph)

## PHYSICAL SPECS

DIMENSIONS (PACKAGED)	DIMENSIONS (UNPACKAGED)	WEIGHT (PACKAGED)	WEIGHT (UNPACKAGED)
<ul style="list-style-type: none"> <li>QB-8200-EPA: 14.56 x 13.69 x 8.18 in. (370 x 348 x 208 mm)</li> <li>QB-8250-EPR: 15.94 x 15.94 x 9.21 in. (405 x 405 x 234 mm)</li> </ul>	<ul style="list-style-type: none"> <li>QB-8200-EPA: 10.79 x 11.14 x 3.38 in. (274 x 283 x 86 mm)</li> <li>QB-8250-EPR: 14.17 x 14.17 x 3.70 in. (370 x 370 x 94 mm)</li> </ul>	<ul style="list-style-type: none"> <li>QB-8200-EPA: 15 lbs (6.8 kg)</li> <li>QB-8250-EPR: 16.31 lbs (7.4 kg)</li> </ul>	<ul style="list-style-type: none"> <li>QB-8200-EPA: 7.7 lbs (3.5 kg)</li> <li>QB-8250-EPR: 9.0 lbs (4.1 kg)</li> </ul>

## SAFETY STANDARDS

UL 60950, CAN/CSA-C22.2 No. 60950, IEC 60950, EN 60950 (part -1 and -2)

## PACKAGE CONTENTS

- One Tsunami® QB-8200-LNK based on two QB-8200-EPA with three 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
- Two power injector and country specific power cord
- Two Wall / Pole mounting kit
- Two Connector weatherproofing kit (Includes all recommended weatherproofing material)
- Two Serial (RJ-11 to DB9) dongle
- Two Grounding kit
- Two Gigabit PoE Surge Arrestor
- One Quick Installation Guide

## MTBF & WARRANTY

>250,000 hours & 1-year on parts and labor; ServPak Extended Support available