Tsunami® QuickBridge 8200 Series

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

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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.

PRODUCT MODELS	
QB-8200-LNK	Tsunami QB 8200 Link, 300 Mbps, MIMO 2x2, Type-N Connectors (Two QB-8200-EPA)
QB-8250-LNK	Tsunami QB 8250 Link, 300 Mbps, MIMO 2x2, 23 dBi panel 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
WIRELSS PROTOCOL	WORP (Wireless Outdoor Router Protocol)
RADIO & TX SPECS	
MIMO	2x2MIMO
MODULATION	OFDM
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) with Dynamic Data Rate Selection
TX POWER	Up to 27dBm (two Tx chain)
TX POWER CONTROL	0 – 25 dB, in 0.5 dB steps. Automatic TPC with configurable EIRP limit

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

LATENCY	< 3 msec
ANTENNA	Model QB-8200-EPA includes two N-Type Antenna Connectors with built in Surge Protection Model QB-8250-EPR includes an 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, SNTP and local time
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

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, Trunk and Mixed mode. QinQ double tagging
ENVIRONMENTAL SPECS	
TEMPERATURE	
OPERATING	-40º to 60ºC (-40º to 140º Fahrenheit)
STORAGE	-55º to 80ºC (-67º to 176º Fahrenheit)
HUMIDITY	Max 100% relative humidity (non-condensing)
IP RATING	IP67
WIND LOADING	125 mph
PHYSICAL SPECS	
DIMENSIONS	
PACKAGED	Model QB-8200-EPA: 14.56 x 13.69 x 8.18 in. (370 x 348 x 208 mm) Model QB-8250-EPR: 15.94 x 15.94 x 9.21 in. (405 x 405 x 234 mm)
UNPACKAGED	Model QB-8200-EPA: 10.5 x 10.5 x 3.38 in (267 x 267 x 86 mm) Model QB-8250-EPR: 14.17 x 14.17 x 3.70 in (370 x 370 x 94 mm)
WEIGHT	
PACKAGED	Model QB-8200-EPA: 16.75 lbs (7.6 kg) Model QB-8250-EPR: 18.30 lbs (8.3 kg)
UNPACKAGED	Model QB-8200-EPA: 7.27 lbs (3.3 kg) Model QB-8250-EPR: 9.26 lbs (4.2 kg)
SAFETY STANDARDS	UL 60950, CAN/CSA-C22.2 No. 60950, IEC 60950, EN 60950

PACKAGE CONTENTS	■ 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
	■ 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

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

Proxim Wireless Corporation
www.proxim.com