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
Specifications: Tsunami QuickBridge® 8200 series

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 dB 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 (802.3at pin out) & Data)
WIRELESS PROTOCOL: WORP® (Wireless Outdoor Router Protocol)

RADAR & 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: 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%):

<table>
<thead>
<tr>
<th>Channel Size</th>
<th>40 MHz</th>
<th>20 MHz</th>
<th>10 MHz</th>
<th>5 MHz</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCS 0</td>
<td>-87 dBm</td>
<td>-93 dBm</td>
<td>-95 dBm</td>
<td>-98 dBm</td>
</tr>
<tr>
<td>MCS 7</td>
<td>-71 dBm</td>
<td>-74 dBm</td>
<td>-76 dBm</td>
<td>-79 dBm</td>
</tr>
<tr>
<td>MCS 8</td>
<td>-87 dBm</td>
<td>-91 dBm</td>
<td>-93 dBm</td>
<td>-96 dBm</td>
</tr>
<tr>
<td>MCS 15</td>
<td>-68 dBm</td>
<td>-72 dBm</td>
<td>-74 dBm</td>
<td>-77 dBm</td>
</tr>
</tbody>
</table>

LATENCY
< 3 msec

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

MANAGEMENT
LOCAL: RS-232 serial (RJ11 to DB-9 dongle provided)
REMOTE: Telnet and SSH, Web GUI and SSL, TFTP, SNMPv3
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

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: Asymmetric Bandwidth Control
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

POWER CONSUMPTION
12 Watt typical (22 Watt max)

ENVIRONMENTAL SPECS
OPERATING TEMPERATURE:
-40º to 60ºC (-40º to 140º Fahrenheit) Will continue operating if temperature temporarily varies between -50º and 70ºC (-58º and 158º Fahrenheit)
-55º to 80ºC (-67º to 176º Fahrenheit)
STORAGE TEMPERATURE: -68 dBm                     -72 dBm               -74 dBm              -77 dBm
-87 dBm                      -91 dBm               -93 dBm              -96 dBm
-71 dBm                      -74 dBm               -76 dBm              -79 dBm
-87 dBm                      -93 dBm               -95 dBm              -98 dBm

PHYSICAL SPECS
DIMENSIONS (PACKAGED):
- QB-8200-EPA: 14.56 x 13.69 x 8.18 in. (370 x 348 x 208 mm)
- QB-8250-EPR: 15.94 x 15.94 x 9.21 in. (405 x 405 x 234 mm)
DIMENSIONS (UNPACKAGED):
- QB-8200-EPA: 10.79 x 11.14 x 3.38 in. (274 x 283 x 86 mm)
- QB-8250-EPR: 14.17 x 14.17 x 3.70 in. (370 x 370 x 94 mm)
WEIGHT (PACKAGED):
- QB-8200-EPA: 15 lbs (6.8 kg)
- QB-8250-EPR: 16.31 lbs (7.4 kg)
WEIGHT (UNPACKAGED):
- QB-8200-EPA: 7.7 lbs (3.5 kg)
- QB-8250-EPR: 9.0 lbs (4.1 kg)

SAFETY STANDARDS
UL 60950, CAN/CSA-C22.2 No. 60950, IEC 60950, EN 60950 (part -1 and -22)

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 23dB 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 (RS-232) 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

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