

**Tsunami™ QuickBridge 8100 Series**

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

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

The Point-to-Point portfolio includes:

- **Gigalink®** – Alternative to fiber, up to a Gigabit speed
- **Lynx.GX®** – Cellular voice and data backhaul, up to DS3 interface
- **Tsunami™.GX®** - Carrier-class IP Ethernet Bridge for voice and data backhaul for service providers and enterprise applications
- **QuickBridge®** – Complete “hop-in-a-box” Ethernet Bridge for carriers, WISPs, governments, campuses and business networks

**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.

### Presenting a Wireless Backhaul Solution that Exceeds 4G Speed Requirements with 300 Mbps Bandwidth and Up To 100Mbps TCP/UDP Throughput!

With over 20 years in wireless innovation, Proxim introduces the Tsunami QB-8100, an incredibly cost-effective, high performance 4G point-to-point wireless backhaul solution. With 300 Mbps data rates and up to 100 Mbps of real TCP/UDP throughout in a complete “Hop in a Box” solution, deployments in networks of all sizes will enjoy a quick return on investment.

The Tsunami QB-8100 bests all previously held records in the industry for outdoor wireless performance and speed. With incredible channel capacity & flexibility, excellent spectrum efficiency and a highly evolved prioritization platform tailored to deliver voice, video and data applications, the Tsunami QB-8100 satisfies carriers, wireless service providers and government customers with requirements for fast and reliable 4G wireless backhaul.

Leveraging the advantages of latest MiMO radio innovations, the Tsunami QB-8100 draws on Proxim’s proprietary Wireless Outdoor Router Protocol (WORP) to deliver wireless performance in excess of 4G products on the markets today.

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### World-class Performance

- A PtP system that delivers up to 100 Mbps of real TCP/UDP throughput at distances of over 5 miles (8km)
- Provides flexible channel planning with support for 4.9 - 6 GHz and 2.3 - 2.5 GHz frequencies
- Built-in Feature rich network protocols for bridging, routing and gateway functionality

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### Carrier Grade Advanced 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 both feature highly-secure remote management via SSL, SSH and SNMPv3
- Provides advanced AES encryption for military-grade over-the-air communications, and radio mutual authentication eliminates unauthorized use of the system by rogue subscriber units and man-in-the-middle attacks

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### Deployment Flexibility

- Operates in the licensed and unlicensed frequency spectrums and comes complete with a set of accessories to ease outdoor installations
- Non-line-of-sight capable utilizing OFDM and enhanced MIMO techniques to penetrate through obstructions better
- Features dual Gigabit Ethernet ports with PoE out to power other devices like surveillance cameras and wireless access points
- Enables packet identification to create unique and sophisticated service rules and tiered service classes with ease

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

- Complete “Hop-In-A-Box” in a compact outdoor form factor which allows unprecedented ease of Installation
- Suitable for the carrier, WISP and government markets
- Certified for deployments in the Americas, Europe and Asia
- Designed with the same high quality and reliability that are synonymous with all Proxim Tsunami wireless bridges
- The most cost-effective, high performance point-to-point solution from Proxim, enabling any deployment to enjoy a quick return on investment

<b>PRODUCT MODELS</b>																																																		
QB-8150-EPR-US	Tsunami™ QB-8150 End Point, 100 Mbps, 5 GHz, MIMO 2x2, 23 dBi Integrated antenna – US PoE																																																	
QB-8150-LNK-US	Tsunami™ QB-8150 Link, 100 Mbps, 5 GHz (Two QB-8150-EPR-US End Points)																																																	
QB-8100-EPA-US	Tsunami™ QB-8100 End Point, 100 Mbps, 2.4, 4.9 and 5 GHz, Type-N Connectors – US PoE																																																	
QB-8150-EPR-WD	Tsunami™ QB-8150 End Point, 100 Mbps, 5 GHz, MIMO 2x2, 23 dBi Integrated antenna – WD PoE																																																	
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<b>INTERFACES</b>																																																		
WIRED ETHERNET	Two Auto MDI-X RJ45 Gigabit Ethernet ports with PoE in/out																																																	
WIRELESS PROTOCOL	WORP (Wireless Outdoor Router Protocol)																																																	
<b>RADIO &amp; TX SPECS</b>																																																		
MIMO	3x3 MIMO																																																	
MODULATIONS	OFDM with BPSK, QPSK, QAM16, QAM64																																																	
FREQUENCY	2.3 - 2.5GHz 4.9 – 6.0GHz (Subject to Country Regulations)																																																	
CHANNEL SIZE	40 MHz, 20 MHz, 10 MHz*, 5 MHz*																																																	
DATA RATE	Up to 300Mbps																																																	
TX POWER	Up to 18 dBm																																																	
TX POWER CONTROL	0 – 18dB, in 1dB steps																																																	
<b>RX SENSITIVITY (BER=10<sup>-6</sup>)</b>	<table border="1"> <thead> <tr> <th rowspan="2">Channel Size</th> <th colspan="2">40 MHZ</th> <th colspan="2">20 MHZ</th> </tr> <tr> <th>2.4 GHZ</th> <th>5 GHZ</th> <th>2.4 GHZ</th> <th>5 GHZ</th> </tr> </thead> <tbody> <tr> <td>BPSK ½</td> <td>-87</td> <td>-87</td> <td>-93</td> <td>-93</td> </tr> <tr> <td>BPSK ¾</td> <td>-85</td> <td>-86</td> <td>-90</td> <td>-90</td> </tr> <tr> <td>QPSK ½</td> <td>-85</td> <td>-85</td> <td>-88</td> <td>-88</td> </tr> <tr> <td>QPSK ¾</td> <td>-81</td> <td>-82</td> <td>-85</td> <td>-85</td> </tr> <tr> <td>16-QAM ½</td> <td>-78</td> <td>-80</td> <td>-80</td> <td>-80</td> </tr> <tr> <td>16-QAM ¾</td> <td>-75</td> <td>-75</td> <td>-78</td> <td>-78</td> </tr> <tr> <td>64-QAM 2/3</td> <td>-73</td> <td>-74</td> <td>-75</td> <td>-75</td> </tr> <tr> <td>64-QAM ¾</td> <td>-71</td> <td>-71</td> <td>-75</td> <td>-75</td> </tr> </tbody> </table>	Channel Size	40 MHZ		20 MHZ		2.4 GHZ	5 GHZ	2.4 GHZ	5 GHZ	BPSK ½	-87	-87	-93	-93	BPSK ¾	-85	-86	-90	-90	QPSK ½	-85	-85	-88	-88	QPSK ¾	-81	-82	-85	-85	16-QAM ½	-78	-80	-80	-80	16-QAM ¾	-75	-75	-78	-78	64-QAM 2/3	-73	-74	-75	-75	64-QAM ¾	-71	-71	-75	-75
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LATENCY	< 5 msec (typical)																																																	
RADIO INTERFACE	3x3 MIMO, DFS and Superpacketing																																																	

## APPLICATIONS

- Backhaul to a Central POP**  
 Avoid expensive installation and recurring charge of a second wireline 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 inter-POP redundancy

<b>ANTENNA</b>	Model QB-8150-LNK and QB-8150-EPR includes an Integrated 2x2 MIMO 23.5dBi Dual Polarized Antenna Model QB-8100-EPA includes 3 N-Type Antenna Connectors with built in Surge Protection	<b>PHYSICAL SPECS</b>	
<b>MANAGEMENT</b>		<b>DIMENSIONS</b>	
LOCAL	RS-232 serial (RJ11 and DB-9)	PACKAGED	15.94 x 15.94 x 8.46 in (405 x 405 x 215 mm)
REMOTE	Telnet and SSH, Web GUI and SSL, TFTP, SNMPv3	UNPACKAGED	10.51 x 10.51 x 3.27 in (267 x 267 x 83 mm)
SNMP	SNMP v1-v2c-v3, RFC-1213, RFC-1215, RFC-2790, RFC-2571, RFC-3412, RFC-3414, Private MIB	<b>WEIGHT</b>	
<b>NETWORK</b>		PACKAGED	14.77 lbs (6.7 kg)
GATEWAY FEATURES	DHCP Server & relay, NAT with Std ALGs, Bridging, Routing, Syslog, SNTP	UNPACKAGED	7.27 lbs (3.3 kg)
QoS	Asymmetric Bandwidth Control, Packet Classification Capabilities, Scheduling	<b>PACKAGE CONTENTS</b>	<ul style="list-style-type: none"> <li>Tsunami™ QB-8100-EPA-US, QB-8100-EPA-WD, QB8150-EPR-US, QB8150-EPR-WD, QB8150-LNK-US (2 QB8150-EPR-US), QB8150-LNK-WD (2 QB8150-EPR-WD)</li> <li>PoE injector to power the unit with appropriate power cord (Qty 2 incase of QB-8150-LNK)</li> <li>Wall/Pole mounting kit (Qty 2 incase of QB-8150-LNK)</li> <li>Connector weatherproofing kit (Includes all recommended weatherproofing material) (Qty 2 incase of QB-8150-LNK)</li> <li>3 caps for N-Type connectors installed at factory (for Tsunami™ QB 8100 Connectorized EP (QB-8100-EPA) End Point Unit)</li> <li>Serial (RJ-11 to DB9) dongle (Qty 2 incase of QB-8150-LNK)</li> <li>Grounding kit (Qty 2 incase of QB-8150-LNK)</li> <li>Documentation</li> <li>Software CD-ROM</li> </ul>
VLAN	802.1Q: Management VLAN. Transparent, Access and Trunk mode	<b>MTBF</b>	>100,000 hrs
<b>ENVIRONMENTAL SPECS</b>		<b>WARRANTY</b>	1-year on parts and labor; ServPak Extended Support available.
TEMPERATURE			
OPERATING	-40° to 60°C (-40° to 140° Fahrenheit)		
STORAGE	-55° to 80°C (-41° to 176° Fahrenheit)		
HUMIDITY			
OPERATING	Max 100% relative humidity (non-condensing)		
STORAGE	Max 100% relative humidity (non-condensing)		
WIND LOADING	125 mph		
WATER & DUST PROOF	IP66		
<b>REGULATORY</b>			
CERTIFICATIONS	FCC Part 15 Rules for U-NII devices, IC - RSS-210, ETSI - EN 300 328, EN 301 489 1/17, EN 301 893 v1.5.1, EN 302 502, EN50385		

\*Available by Firmware Upgrade