

**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. This portfolio includes:

- **Gigalink®** – Carrier-class alternative to fiber, up to 1.25Gbps
- **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®** – 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 Wireless Backhaul Solution that Exceeds 4G Speed Requirements with 300Mbps 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 and non-line-of-sight 4G point-to-point (PtP) wireless backhaul solution. With 300 Mbps data rates and up to 100 Mbps of real TCP/UDP throughput in a complete “Hop-in-a-Box” solution, deployments in networks of all sizes will enjoy a quick return on investment.

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 organizations with requirements for fast and reliable 4G wireless backhaul.

Leveraging the advantages of OFDM and the 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 Point-to-Point system that delivers up to 100 Mbps of real TCP/UDP throughput at distances of over 5 miles (8 km)
- Very low latency of the order of 2 to 3 ms to support voice and video applications over long distances
- Built-in feature rich network protocols for bridging, routing and gateway functionality

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

- 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 additional radios
- Enables packet identification to create unique and sophisticated service rules and tiered service classes with ease

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#### Widest Range of Frequencies

- Provides flexible channel planning with support for 4.9 - 6.0 GHz and 2.3 - 2.5 GHz frequencies
- Operates in licensed and unlicensed frequency spectrums and comes as a complete “Hop-In-A-Box” with a set of accessories for even greater ease of installation

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

- Complete “Hop-In-A-Box” compact outdoor form factor allows unprecedented ease of installation
- 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

<b>PRODUCT MODELS</b>																																																		
QB-8150-LNK-US	Tsunami™ QB-8150 Link, 100 Mbps, 5 GHz (Two QB-8150-EPR-US)																																																	
QB-8150-EPR-US	Tsunami™ QB-8150 End Point, 100 Mbps, 5 GHz, MIMO 2x2, 23 dBi Integrated antenna - US PoE																																																	
QB-8100-EPA-US	Tsunami™ QB-8100 End Point, 100 Mbps, 2.4 and 5 GHz, Type-N Connectors - US PoE																																																	
QB-8150-LNK-WD	Tsunami™ QB-8150 Link, 100 Mbps, 5 GHz (Two QB-8150-EPR-WD)																																																	
QB-8150-EPR-WD	Tsunami™ QB-8150 End Point, 100 Mbps, 5 GHz, MIMO 2x2, 23 dBi Integrated antenna - WD PoE																																																	
QB-8100-EPA-WD	Tsunami™ QB-8100 End Point, 100 Mbps, 2.4 and 5 GHz, Type-N Connectors - WD PoE																																																	
<b>INTERFACES</b>																																																		
WIRED ETHERNET	Two auto MDI-X RJ45 Gigabit 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	3x3 MIMO																																																	
MODULATIONS	OFDM with BPSK, QPSK, QAM16, QAM64																																																	
FREQUENCY	2.3 – 2.5 GHz 4.9 – 6.0 GHz (Subject to Country Regulations)																																																	
CHANNEL SIZE	40 MHz, 20 MHz, 10 MHz*, 5 MHz*																																																	
DATA RATE	Up to 300Mbps																																																	
TX POWER	Up to 18dBm (at antenna port)																																																	
TX POWER CONTROL	0 – 18dB, in 1dB steps																																																	
RX SENSITIVITY (BER=10 <sup>-6</sup> )	<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	< 3 msec																																																	
RADIO INTERFACE	3x3 MIMO, DFS and Superframing																																																	

### 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 an inter-POP redundancy

<b>ANTENNA</b>	Model QB-8150-LNK and QB-8150-EPR includes an Integrated 2x2 MIMO 23dBi Dual Polarized Antenna Model QB-8100-EPA includes three N-Type Antenna Connectors with built in Surge Protection	<b>PHYSICAL SPECS</b>	
<b>MANAGEMENT</b>		<b>DIMENSIONS</b>	
LOCAL	RS-232 serial (RJ11 to DB-9 dongle provided)	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>One Tsunami™ QB-8100-EPA with three N-type surge protected connectors or One Tsunami™ QB8150-EPR with 5 GHz dual polarity 23dBi Integrated 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>Three N-connector weather proofing caps installed at factory (for Connectorized Version Only)</li> <li>One Serial (RJ-11 to DB9) dongle</li> <li>One Grounding kit</li> <li>One Gigabit PoE Surge Arrestor</li> <li>One Documentation</li> <li>Software CD-ROM</li> </ul>
VLAN	802.1Q: Management VLAN. Transparent, Access and Trunk mode		Note: For QB-8100-LNK Model two sets of the above accessories are included in the package.
<b>ENVIRONMENTAL SPECS</b>		<b>WARRANTY</b>	1-year on parts and labor; ServPak Extended Support available.
TEMPERATURE			
OPERATING	-55° to 80°C (-41° to 176° Fahrenheit)		
STORAGE	-55° to 80°C (-67° 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	IP67		
<b>REGULATORY</b>			
SAFETY STANDARDS	UL 60950, CAN/CSA-C22.2 No. 60950, IEC 60950, EN 60950		

\*Available by Firmware Upgrade

For detailed technical specifications, please go to <http://www.proxim.com/products/bwa/point/>

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