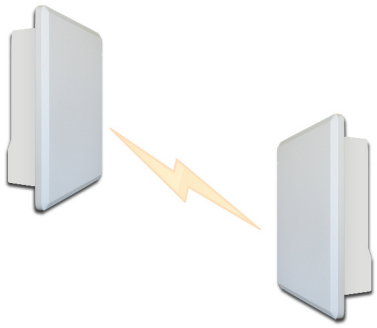
Tsunami™ QuickBridge 8100 Series

High Speed Point-to-Point Wireless Bridge Bundle



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 !

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 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.

World-class Performance

- A Point-to-Point system that delivers a 300 Mbps data rate link 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

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

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

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

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

Tsunami™ QB-8100 Series

Technical Specifications

PRODUCT MODELS	
QB-8150-LNK-US	Tsunami™ QB-8150 Link, 300 Mbps, 5.8 GHz (Two QB-8150-EPR-US)
QB-8150-EPR-US	Tsunami™ QB-8150 End Point, 300 Mbps, 5.8 GHz, MIMO 2x2, 23 dBi Integrated antenna - US PoE
QB-8100-EPA-US	Tsunami™ QB-8100 End Point, 300 Mbps, 2.4 and 5.8 GHz, Type-N Connectors - US PoE
QB-8150-LNK-WD	Tsunami™ QB-8150 Link, 300 Mbps, 5 GHz (Two QB-8150-EPR-WD)
QB-8150-EPR-WD	Tsunami™ QB-8150 End Point, 300 Mbps, 5 GHz, MIMO 2x2, 23 dBi Integrated antenna - WD PoE
QB-8100-EPA-WD	Tsunami™ QB-8100 End Point, End Point, 300 Mbps, 2.4 and 5 GHz, Type-N Connectors - WD PoE
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
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^{-6})

Channel Size	*40 MHZ*		*20 MHZ*	
Frequency	*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

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

ANTENNA	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
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
NETWORK	
GATEWAY FEATURES	DHCP Server & relay, NAT with Std ALGs, Bridging, Routing, Syslog, SNTP
QoS	Asymmetric Bandwidth Control, Packet Classification Capabilities, Scheduling
VLAN	802.1Q: Management VLAN. Transparent, Access and Trunk mode
ENVIRONMENTAL SPECS	
TEMPERATURE	
OPERATING	-40° to 60°C (-40° to 140° 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
REGULATORY	
SAFETY STANDARDS	UL 60950, CAN/CSA-C22.2 No. 60950, IEC 60950, EN 60950

PHYSICAL SPECS	
DIMENSIONS	
PACKAGED	15.94 x 15.94 x 8.46 in (405 x 405 x 215 mm)
UNPACKAGED	10.51 x 10.51 x 3.27 in (267 x 267 x 83 mm)
WEIGHT	
PACKAGED	14.77 lbs (6.7 kg)
UNPACKAGED	7.27 lbs (3.3 kg)
PACKAGE CONTENTS	• 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 • One power injector and country specific power cord • One Wall/Pole mounting kit • One Connector weatherproofing kit (Includes all recommended weatherproofing material) • Three N-connector weather proofing caps installed at factory (for Connectorized Version Only) • One Serial (RJ-11 to DB9) dongle • One Grounding kit • One Gigabit PoE Surge Arrestor • One Documentation • Software CD-ROM Note: For QB-8100-LNK Model two sets of the above accessories are included in the package.
WARRANTY	1-year on parts and labor; ServPak Extended Support available.

**Available by Firmware Upgrade*

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

DS_0809_QB8100_US

Proxim Wireless Corporation
www.proxim.com