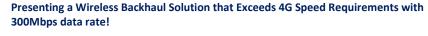


# Tsunami® QuickBridge 8100 Series

High Speed Point-to-Point Wireless Bridge Bundle



With over 20 years in wireless innovation, Proxim introduces the Tsunami® QB-8100, an incredibly costeffective, high performance and non-line-of-sight 4G point-to-point (PtP) wireless backhaul solution. With 300Mbps data rates in a complete "Hop-in-a-Box" solution, deployments in networks of all sizeswill 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 proprietaryWireless Outdoor Router Protocol (WORP®) to deliver wireless performance in excess of 4G products on the markets today.

#### World-class Performance

- Point-to-Point system that delivers a 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
- 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
- Spectrum analyzer feature helps to study frequency bands for interference, and select a relatively low interference channel.

#### Widest Range of Frequencies

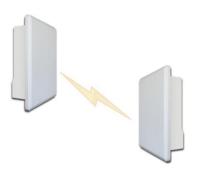
- Provides flexible channel planning with support for 4.9 6.0 GHz and 2.3 2.5 GHz frequencies
- Operates in licensed and unlicensed frequency spectrums and comes as a complete "Hop-In-A-Box" with a set of accessories for even greater ease of installation

#### **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® QuickBridge 8100 Series

#### **Wireless Product Portfolio**

- Tsunami® 8000 Series PtP & PtMP product line delivering 300 Mbps plus data rate
- Tsunami® .11 Series Our best selling Point-to-point and multipoint product line
- Tsunami® GX800— Carrier-class IP Ethernet bridge for voice and data backhaul for service providers and enterprise applications
- Tsunami® QB 62000— High capacity, small footprint PtP backhaul solution with 1Gbps throughput
- ORINOCO® AP The industry's highest performance 802.11a/b/g/n access points

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.

Proxim recommends 60W PoE (not supplied in standard package) when the second Ethernet Port (Ethernet 2) is utilized for power applications

<sup>48</sup> VDC (15 W average) is tolerable on the second Ethernet port (Ethernet 2). Ensure connected device can support the same voltage Use PoE Splitter (not supplied in standard package) when the second Ethernet port is utilized for data applications

PRODUCT MODELS						
QB-8100-LNK	Tsunami QB 8100 Link. 3	00 Mbps, MIMO 3x3. Tv	pe-N Connectors	(Two QB-8100-F	PA)	
QB-8150-LNK	Tsunami QB 8100 Link, 300 Mbps, MIMO 3x3, Type-N Connectors (Two QB-8100-EPA)  Tsunami QB 8150 Link, 300 Mbps, MIMO 2x2, 23 dBi integrated antenna (Two QB-8150-EPR)					
INTERFACES	,,,				,	
WIRED ETHERNET	Two auto MDI-X RJ45 10	/100/1000Mbps Ethern	et			
WINED ETHERWET	- Port #1 with PoE in & D					
	- Port #2 with PoE out (802.3af pin out) & Data					
WIRELSS PROTOCOL	WORP®(Wireless Outdoor Router Protocol)					
RADIO & TX SPECS						
MIMO	3x3 MIMO					
MODULATION	OFDM					
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* 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 21dBm (two Tx chain)					
TX POWER CONTROL	0 – 25 dB, in 0.5 dB steps. Automatic TPC with configurable EIRP limit					
RX SENSITIVITY	Channel Size	40 MHz	20 MHz	10 MHz	5 MHz	
	MCS 0	-87 dBm	-93 dBm	-94 dBm	-96 dBm	
	MCS 7	-71 dBm	-75 dBm	-78 dBm	-81 dBm	
	MCS 8	-87 dBm	-93 dBm	-94 dBm	-95 dBm	
	MCS 15	-69 dBm	-71 dBm	-74 dBm	-77 dBm	
LATENCY		<3 msec				
ANTENNA	Model QB-8100-EPA includes three N-Type Antenna Connectors with built in Surge Protection					
	Model QB-8150-EPR includes an Integrated 2x2 MIMO 23dBi Dual Polarized Antenna					
MANAGEMENT			505. 500		-	
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, Spectrum analyzer					
SECURITY	Sysiog, show agent, sixtr and local time, spectrum analyzer					
ENCRYPTION	AES-CCM 128 bits					
AUTHENTICATION	Internal MAC Address Control List, Radius based Authentication					
NETWORK	internal wiac Address Control List, radius based Adthentication					
MODES	Bridging/support LACD through external switches) Pouting (PID v2 and ID tunneling)					
THROUGHPUT	Bridging(support LACP through external switches), Routing (RIP v2 and IP tunneling)  Model QB-8100-EPA and QB-8150-EPR up to 200 Mbps					
GATEWAY FEATURES						
QoS QoS	DHCP Server & relay, NAT with Std ALGs  Asymmetric Uplink and Downlink CIR Control "committed information rate" per					
	Bandwidth Control Service flow Uplink and Downlink MIR Control "maximum information rate" per service flow					
	Packet Classification 802.1D/802.1Q/802.1p priority, IPTOS, VLAN ID, IP source/destination					
		Capabilities address, source/destination port, Ethernet source/destination address,				
	IP protocol, and Ethertype					
	Scheduling Best Effort, Real Time Polling Services					
VLAN				ed mode. QinQ do	ouble tagging	
POWER CONSUMPTION	802.1Q: Management VLAN. Transparent, Access, Trunk and Mixed mode. QinQ double tagging 7 Watt typical (17 Watt max)					
ENVIRONMENTAL SPECS	Control of the second of the s					
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-8100-EPA: 14.	56 x 13.69 x 8.18 in. (37	70 x 348 x 208 mm	n)		
UNPACKAGED	Model QB-8150-EPR: 15.94 x 15.94 x 9.21 in. (405 x 405 x 234 mm)					
		Model QB-8100-EPA: 10.5 x 10.5 x 3.38 in (267 x 267 x 86 mm)				
	Model QB-8150-EPR: 14.17 x 14.17 x 3.70 in (370 x 370 x 94 mm)					
WEIGHT		. (	,			
PACKAGED	Model QB-8100-EPA: 15	lbs (6.8 kg)				
	Model QB-8150-EPR: 16.31 lbs (7.4 kg)					
UNPACKAGED	Model QB-8100-EPA: 7.7					
	Model QB-8150-EPR: 9.0					
SAFETY STANDARDS	UL 60950, CAN/CSA-C22.2 No. 60950, IEC 60950, EN 60950					
PACKAGE CONTENTS	One Tsunami® QB-8100-LNK based on two QB-8100-EPA with three N-type surge protected					
The state of the s		sunami® QB-8150-LNK				
			basea on two QB	OTOGET IV MITTE		
	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				
		. DS/ doi.g.c				
	Two Grounding kit					
	<ul><li>Two Grounding kit</li><li>Two Gigabit PoE Surg</li></ul>	e Arrestor				
MTBF and WARRANTY	Two Grounding kit	e Arrestor n Guide				

#### **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

For detailed technical specifications, please go to <a href="https://proxim.com/products/ptpwireless-backhaul/tsunamir-qb-8100-series/tsunamir-qb-8100">https://proxim.com/products/ptpwireless-backhaul/tsunamir-qb-8100-series/tsunamir-qb-8100</a>

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