

# Tsunami<sup>®</sup> QB-10100 series

## Very High throughput Point-to-Point Wireless Bridge Bundle



### Proxim introduces the all new Tsunami Quickbridge<sup>®</sup> 10100 wireless backhaul solution that delivers over 600 Mbps throughput

Proxim Wireless is a leader and an early innovator in wireless technology providing high-speed, long-range broadband wireless solutions. Proxim introduces the Tsunami<sup>®</sup> QB-10100, a very high throughput, high power, extremely reliable and cost-effective, near-line-of-sight point-to-point (PtP) wireless backhaul solution.

Tsunami<sup>®</sup> QB-10100 can rely on the following features to satisfy carriers, wireless service providers and Government organizations that need very high-speed carrier class wireless backhaul:

- Proxim WORP<sup>®</sup>, a highly evolved prioritization platform tailored to deliver voice, video and data applications
- Proxim ClearConnect™, a suite of over 13 different techniques all working together to ensure robust and reliable radio communications in noisy deployments

### World Class Performance

- Point-to-Point system that delivers 866 Mbps data rate at distances of over 7.5 miles (12 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

### Frequency Agnostic

- Operates in unlicensed bands from 5.150 to 5.925 GHz
- Flexible RF planning with 20, 40 and 80 MHz channel size

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

- Near-line-of-sight capable, utilizing OFDM and enhanced 2x2 MIMO techniques for better RF propagation
- 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

### Carrier-Grade Backhaul

- Implements AES encryption and Radius authentication for the most secure outdoor wireless communications in the unlicensed frequency spectrum
- Utilizes Proxim's Wireless Outdoor Routing Protocol (WORP<sup>®</sup>), which prevents snooping, and features highly-secure remote management via SSL, SSH and SNMPv3
- Features Ethernet ports with pass-through IEEE 1588v2 synchronization and support for Jumbo frame

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

- Suitable for Service Providers, Enterprises and Governments
- Certified for deployments in the Americas, Europe and Asia
- The most cost-effective, very high performance point-to-point solution from Proxim, enabling any deployment to enjoy a quick return on investment

PRODUCT MODELS		PART NUMBERS			
QB-10100-LNK	Tsunami® QB 10100 Link, single radio, 867 Mbps, MIMO 2x2, Type-N Connectors	902-00769	QB-10100-LNK-US	902-00771	QB-10100-LNK-WD
QB-10150-LNK	Tsunami® QB 10150 Link, single radio, 867 Mbps, MIMO 2x2, 22 dBi integrated antenna	902-00773	QB-10150-LNK-US	902-00775	QB-10150-LNK-WD
QB-10150-LKL	Tsunami® QB 10150 Link Long-range, single radio, 867 Mbps, MIMO 2x2, 28 dBi integrated antenna	902-00779	QB-10150-LNL-US	902-00780	QB-10150-LNL-WD
INTERFACES					
WIRED ETHERNET	Two auto MDI-X RJ45 10/100/1000Mbps Ethernet (Port #1 with PoE in & Data, Port #2 with PoE out & Data)				
WIRELESS PROTOCOL	WORP® (Wireless Outdoor Router Protocol)				
RADIO & TX SPECS					
MIMO	2x2:2				
MODULATION	OFDM with BPSK, QPSK, QAM16, QAM64, QAM256				
FREQUENCY	5.150 – 5.925 GHz (Subject to Country Regulations)				
CHANNEL SIZE	80 MHz, 40 MHz and 20 MHz				
DATA RATE	MCS 0 to 9 with Dynamic Data Rate Selection				
TX POWER	Up to 28 dBm (dual chain)				
TX POWER CONTROL	0 - 27 dB, in 1 dB steps. Automatic TPC with configurable EIRP limit				
TX POWER	80 MHz	40 MHz	20 MHz		
	MCS0: 28	MCS0: 28	MCS0: 29		
	MCS9: 21	MCS9: 22	MCS8: 25		
RX SENSITIVITY (Per=10%)	MCS0: -89	MCS0: -93	MCS0: -94		
	MCS9: -68	MCS9: -71	MCS8: -74		
THROUGHPUT	Up to 633 Mbps	Up to 324 Mbps	Up to 137 Mbps		
OTHER	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				
ANTENNA					
	QB-10100-EPA	Two N-type Connectors with built-in Surge Protection			
	QB-10150-EPR	Integrated 2x2 MIMO 22dBi Dual Polarized 1 foot Panel Antenna			
	QB-10150-EPL	Integrated 2x2 MIMO 28dBi Dual Polarized 2 feet Panel Antenna			
MANAGEMENT					
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				
SYNCHRONIZATION					
	Pass-through IEEE 1588v2 Ethernet Synchronization				
SECURITY					
ENCRYPTION	AES 128				
AUTHENTICATION	Internal MAC Address Control List, Radius based Authentication (with VLAN and QoS provisioning)				
QoS					
	Asymmetric Bandwidth Control	Asymmetric UL/DL committed and maximum information rate per service flow			
	Packet Classification Capabilities	802.1p priority, IPTOS, VLAN ID, IP addresses, ports, Ethernet addresses, IP protocol, and EtherType			
	Scheduling	Best Effort, Real Time Polling Services			
NETWORK					
MODES	Bridging (support LACP through external switches), Routing (RIP v2 and IP tunneling)				
IP STACK	IPv4 and IPv6 simultaneously				
GATEWAY FEATURES	DHCP Server & relay, NAT with Std ALGs, PPPoE end point with Proxy DNS				
VLAN	802.1Q: Management VLAN. Transparent, Access, Trunk and Mixed mode. QinQ double tagging				
POWER		INPUT	OUTPUT		
		36 to 57 VDC via Ethernet port1 (Power over Ethernet) 12 VDC via Access port Power should not be provided simultaneously on both ports.	48 to 57 VDC – 25 Watt on Ethernet port2 (PoE – software controlled) 12 VDC on Access port		
POWER CONSUMPTION					
	17 Watt typical				
ENVIRONMENTAL SPECS					
	OPERATING TEMPERATURE	STORAGE TEMPERATURE	HUMIDITY, IP RATING, WIND LOADING		
	• -40° to 60°C (-40° to 140° Fahrenheit)	• -50° to 70°C (-58° to 158° Fahrenheit)	• 100% relative humidity, IP67, 180 km/h (112.5 mph)		
PHYSICAL SPECS					
	PRODUCT MODELS	DIMENSIONS PACKAGED (per unit)	DIMENSIONS UNPACKAGED (per unit)	WEIGHT (PACKAGED)	WEIGHT (UNPACKAGED)
	• QB-10100-EPA	• 14.56 x 13.0 x 7.87 in (370 x 331 x 200 mm)	• 9.84 x 8.66 x 2.83 in (250 x 220 x 72 mm)	• 9.92 lbs (4.5 kg)	• 4.20 lbs (1.9 kg)
	• QB-10150-EPR	• 14.56 x 13.0 x 7.87 in (370 x 331 x 200 mm)	• 12 x 12 x 3.40 in (305 x 305 x 85 mm)	• 10.91 lbs (4.95 kg)	• 5.30 lbs (2.4 kg)
	• QB-10150-EPL	• TBD	• 23.5 x 23.5 x 3.70 in (600 x 600 x 90 mm)	• TBD	• 14.33 lbs (6.5 kg)
SAFETY STANDARDS					
	UL 60950, CAN/CSA-C22.2 No. 60950, IEC 60950, EN 60950 (part -1 and -22)				
PACKAGE CONTENTS					
	<ul style="list-style-type: none"> <li>One Tsunami® QB-10100-LNK with two N-type surge protected connectors (Two QB-10100-EPA)</li> <li>Or One Tsunami® QB-10150-LNK with integrated 22 dBi dual polarized antenna (Two QB-10150-EPR)</li> <li>Or One Tsunami® QB-10150-LKL with integrated 28 dBi dual polarized antenna (Two QB-10150-EPL)</li> </ul>		<ul style="list-style-type: none"> <li>Two Wall / Pole mounting kit</li> <li>Two Antenna alignment (RJ11) dongle</li> <li>Two Grounding kit</li> <li>Two Quick Installation Guide</li> </ul>		
	<ul style="list-style-type: none"> <li>Two power injector and country specific power cord</li> <li>Two Connector weatherproofing kit (Includes all recommended weatherproofing material)</li> </ul>				
MTBF & WARRANTY					
	MTBF over 250 000 hours & 2-year warranty with ServPak Extended Support available.				