

# Tsunami® QB-10100 Series

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



### Proxim introduces the Tsunami Quickbridge® 10100 wireless backhaul solution that delivers over 630 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® 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® QB-10100 supports the following key features that are critical for carriers, wireless service providers and Government organizations that need very high-speed carrier class wireless backhaul:



Proxim WORP®, a highly evolved QoS 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 up to 866 Mbps data rate and covers distances up to 25 miles (40 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 4.900 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
- Built in 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®), which prevents snooping, and features highly-secure remote management via SSL/TLS1.2, SSH and SNMPv3
- Features Ethernet ports with pass-through IEEE 1588v2 synchronization and support for 9k Jumbo frame

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

- Suitable for Service Providers, Enterprises and Governments
- Fully integrates within ProximVision® Advanced Cloud Based Carrier Management System and Controller
- 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, 866 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, 866 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, 866 Mbps, MIMO 2x2, 28 dBi integrated antenna	902-00779 QB-10150-LKL-US	902-00780 QB-10150-LKL-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	4.900 – 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	<table border="1"> <tr> <td>80 MHz</td> <td>40 MHz</td> <td>20 MHz</td> </tr> <tr> <td>MCS0: 28</td> <td>MCS0: 28</td> <td>MCS0: 29</td> </tr> <tr> <td>MCS9: 21</td> <td>MCS9: 22</td> <td>MCS8: 25</td> </tr> </table>	80 MHz	40 MHz	20 MHz	MCS0: 28	MCS0: 28	MCS0: 29	MCS9: 21	MCS9: 22	MCS8: 25
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RX SENSITIVITY (Per=10%)	<table border="1"> <tr> <td>MCS0: -89</td> <td>MCS0: -93</td> <td>MCS0: -94</td> </tr> <tr> <td>MCS9: -68</td> <td>MCS9: -71</td> <td>MCS8: -74</td> </tr> </table>	MCS0: -89	MCS0: -93	MCS0: -94	MCS9: -68	MCS9: -71	MCS8: -74			
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THROUGHPUT	<table border="1"> <tr> <td>Up to 633 Mbps</td> <td>Up to 324 Mbps</td> <td>Up to 137 Mbps</td> </tr> </table>	Up to 633 Mbps	Up to 324 Mbps	Up to 137 Mbps						
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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/TLS, 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
-40° to 60°C (-40° to 140° Fahrenheit)	-50° to 70°C (-58° to 158° Fahrenheit)	100% relative humidity, IP67

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	27.55 x 6.85 x 27.55 in (700 x 174 x 700 mm)	23.62 x 23.62 x 3.85 in (600 x 600 x 92 mm)	23.15 lbs (10.5 kg)	14.33 lbs (6.5 kg)

WIND LOADING	
QB-101x0-EPA/EPR	200 km/h (125 mph)
QB-10150-EPL	180 km/h (112.5 mph)

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> <li>Two power injector and country specific power cord</li> <li>Two Connector weatherproofing kit (Includes all recommended weatherproofing material)</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>

MTBF & WARRANTY	
	MTBF over 250 000 hours & 2-year warranty with ServPak Extended Support available.