



**Tsunami Quickbridge® 825 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™ GX-800 Series**

*Carrier-class IP Ethernet bridge for voice and data backhaul for service providers and enterprise applications*

- **ORINOCO® AP 8000 Series**

*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.

## Presenting Proxim's newest compact Point-to-Point wireless backhaul solution.

Proxim Wireless is a leader and an early innovator in wireless technology providing high-speed, long-range broadband wireless solutions. Proxim introduces the Tsunami Quickbridge® 825 series, an incredibly cost-effective, non Line-of-Sight Point-to-Point (PtP) wireless backhaul solution. With this complete "Hop-in-a-Box" solution delivering up to 100 Mbps throughput, deployments of all sizes will enjoy a quick return on investment.

With excellent spectrum efficiency and a highly evolved prioritization platform tailored to deliver voice, video and data applications, the Tsunami Quickbridge® 825 series satisfies carriers, wireless service providers and Government organizations with requirements for reliable cost optimized high performance wireless backhaul.

Leveraging the advantages of OFDM and the latest MIMO radio innovations, the Tsunami Quickbridge® 825 series draws on Proxim's proprietary Wireless Outdoor Router Protocol (WORP®) to deliver an unmatched outdoor wireless performance when compared to other products in the market today.

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### World-class Performance

- Features a very small form factor and an outdoor rated IP67 Metal enclosure
- Available with 15 dBi integrated antenna
- 50 Mbps of throughput (license upgradable to 100 Mbps) with maximum data rates of 300Mbps
- Provides flexible channel planning with support for 5.150 to 5.925 GHz
- Comes with a 2x2 MIMO high power radio capable of 26 dBm transmit power
- Allows flexible bandwidth allocation for service tiers
- Spectrum analysis feature helps to study frequency bands for interference, and select a relatively low interference channel.

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### All-in-One Link with Security Features

- Built-in feature rich network protocols for Bridging and Routing
- Advanced encryption protects over-the-air transmission via AES-128
- Radio mutual authentication eliminates unauthorized use of the system by rogue End Point and man-in-the middle attacks
- MAC, Ether type, IP address packet filtering provides granular network security
- Uses Proxim's Wireless Outdoor Routing Protocol (WORP®) to prevent snooping
- Features highly-secure remote management via SSL, SSH and SNMPv3

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

- Low-cost bundle including both radio and mounting kit provides the industry's most aggressive price point, enabling any deployment to enjoy a quick return on investment
- License-free frequency bands worldwide provide reliable wireless broadband without the high cost of licensed frequencies
- Comes as a complete "Hop-In-A-Box" compact outdoor form factor offering unprecedented ease of installation
- Non Line-of-Sight capability provided by Advanced Orthogonal Frequency Division Multiplexing (OFDM) along with 2x2 MIMO eases deployment in challenging areas

<b>PRODUCT MODELS</b>	QB-825-LNK-50*				
<b>INTERFACES</b>	Tsunami® QB 825 Link , 50 Mbps (upgradable to 100 Mbps), MIMO 2x2, 15 dBi antenna (Two QB-825-EPR-50*)				
<b>WIRED ETHERNET</b>	One auto MDI-X RJ45 10/100/1000Mbps Ethernet with PoE in				
<b>WIRELESS PROTOCOL</b>	WORP® (Wireless Outdoor Router Protocol)				
<b>RADIO &amp; TX SPECS</b>					
<b>MIMO</b>	2x2 MIMO				
<b>MODULATION</b>	OFDM with BPSK, QPSK, QAM16, QAM64				
<b>FREQUENCY</b>	5.150 – 5.925 GHz (Subject to Country Regulations)				
<b>CHANNEL SIZE</b>	40 MHz, 20 MHz, 10 MHz*, 5 MHz* channel bandwidths				* Not applicable for DFS Band
<b>DATA RATE</b>	MCS 0 to 15 for High Throughput mode (6.5 – 300 Mbps) with Dynamic Data Rate Selection				
<b>TX POWER</b>	Up to 26 dBm (dual chain)				
<b>TX POWER CONTROL</b>	0 – 15 dB, in 0.5 dB steps. Automatic TPC with configurable EIRP limit				
<b>RX SENSITIVITY (BER=10<sup>-6</sup>)</b>	Channel size	40 MHz	20 MHz	10 MHz	5 MHz
	MCS 0	-88 dBm	-92 dBm	-93 dBm	-94 dBm
	MCS 7	-72 dBm	-74 dBm	-75 dBm	-77 dBm
	MCS 8	-88 dBm	-91 dBm	-93 dBm	-94 dBm
	MCS 15	-69 dBm	-71 dBm	-72 dBm	-75dBm
<b>OTHER</b>	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				
<b>ANTENNA</b>	QB-825-EPR-50*	Integrated 15 dBi dual Polarized (H+V) panel antenna (14 dBi beyond 5.850 GHz)			
<b>MANAGEMENT</b>					
<b>LOCAL</b>	RS-232 serial (RJ11 to DB-9 dongle provided)				
<b>REMOTE</b>	Telnet and SSH, Web GUI and SSL, TFTP, SNMPv3				
<b>SNMP</b>	SNMP v1-v2c-v3, RFC-1213, RFC-1215, RFC-2790, RFC-2571, RFC-3412, RFC-3414, Private MIB				
<b>OTHER</b>	Syslog, sFlow™ agent, SNMP and local time, Spectrum analyzer				
<b>SECURITY</b>					
<b>ENCRYPTION</b>	AES-CCM 128 bits				
<b>AUTHENTICATION</b>	Internal MAC Address Control List, Radius based Authentication				
<b>NETWORK</b>					
<b>MODES</b>	Bridging (support LACP through external switches), Routing (RIP v2 and IP tunneling)				
<b>IP STACK</b>	IPv4 and IPv6 simultaneously				
<b>THROUGHPUT</b>	QB-825-EPR-50*	Up to 50 Mbps (license upgradable to 100 Mbps)			
<b>GATEWAY FEATURES</b>	DHCP Server & relay, NAT with Std ALGs				
<b>QoS</b>	Asymmetric Bandwidth Control	Uplink and Downlink CIR Control "committed information rate" per service flow Uplink and Downlink MIR Control "maximum information rate" per service flow			
	Packet Classification Capabilities	802.1D/802.1Q/802.1p priority, IPTOS, VLAN ID, IP source/destination address, source/destination port, Ethernet source/destination address, IP protocol, and Ethertype			
	Scheduling	Best Effort, Real Time Polling Services			
<b>VLAN</b>	802.1Q: Management VLAN. Transparent, Access, Trunk and Mixed mode. QinQ double tagging				
<b>POWER SUPPLY</b>	Via provided PoE injector or directly from 12 VDC source through serial port				
<b>POWER CONSUMPTION</b>	6 Watt typical (15 Watt max)				
<b>ENVIRONMENTAL SPECS</b>					
<b>TEMPERATURE</b>					
<b>OPERATING</b>	-40° to 55°C (-40° to 131° Fahrenheit)				
<b>STORAGE</b>	-55° to 70°C (-67° to 158° Fahrenheit)				
<b>HUMIDITY</b>	Max 100% relative humidity (non-condensing)				
<b>WIND LOADING</b>	180 km/h (112 mph)				
<b>WATER &amp; DUST PROOF</b>	IP67				
<b>PHYSICAL SPECS</b>			<b>DIMENSIONS</b>		<b>WEIGHT</b>
<b>PACKAGED</b>	QB-825-EPR-50*				
<b>UNPACKAGED</b>	QB-825-EPR-50*	4.96 x 8.62 x 2.58 in (126 x 219 x 65.5 mm)			2.1 lbs (0.950 kg)
<b>SAFETY STANDARDS</b>	UL 60950-1/22, CAN/CSA-C22.2 No. 60950-1/22, IEC 60950-1/22, EN 60950-1/22				
<b>PACKAGE CONTENTS</b>	<ul style="list-style-type: none"> <li>■ One Tsunami® QB-825-LNK-50* with integrated antennas (Two Tsunami® QB-825-EPR-50*)</li> <li>■ Two 32 W power injector with reload button and country specific power cord</li> <li>■ Two Wall / Pole mounting kit</li> <li>■ Two Connector weatherproofing kit (Includes all recommended weatherproofing material)</li> <li>■ Two Serial (RJ-11 to DB9) dongle</li> <li>■ Two Grounding kit</li> <li>■ Two Quick Installation Guide</li> </ul>				
<b>MTBF &amp; WARRANTY</b>	>350,000 hours & 1-year on parts and labor; ServPak Extended Support available.				

## APPLICATIONS

- Last Mile Access**  
 Competitive broadband service access alternative to DSL or cable for residences and T1 or Ethernet for businesses
- Security and Surveillance**  
 High definition IP-surveillance cameras for monitoring city streets, airports, bridges, seaports, transportation hubs, offices and warehouses
- Metropolitan Area Networks**  
 Secure and reliable connectivity between city buildings
- Emergency First Responders**  
 Critical information delivery such as medical data and video feeds during in-progress events
- Enterprise Campus Connectivity**  
 Extend the main network to remote offices, warehouses or other buildings without leased lines

For detailed technical specifications, please go to <http://proxim.com/products/point-to-multipoint/tsunami-qb-820-series>

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