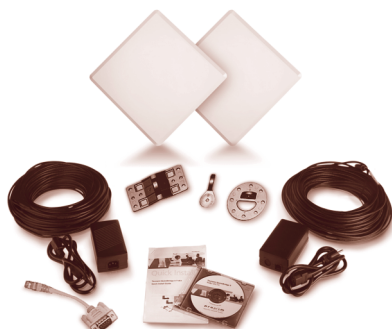




QuickBridge.11 (2454-R, 5054-R & 5054-R-LR)

## High-Capacity Wireless Backhaul

Proxim Wireless offers extremely reliable, secure and easily-deployed solutions for interconnecting corporate and telecommunications networks.

This portfolio includes:

- **Gigalink®** – Alternative to fiber, up to a Gigabit speed
- **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
- **TeraBridge™** – Ethernet backhaul or traditional telecommunications converged voice and data networks
- **QuickBridge®** – Complete “hop-in-a-box” Ethernet bridge for campus and small business networks

**Proxim Wireless** is a global provider in scalable broadband wireless networking. From Wi-Fi to wireless Gigabit Ethernet – our WLAN, mesh, point-to-multipoint and point-to-point products are available through our extensive global channel network.

## Cost Effective Solution for Quick Return on Investment

The Tsunami QuickBridge.11 family operates in the unlicensed frequency spectrums of 2.4 GHz and 5 GHz (5.15, 5.25, 5.47, and 5.725) and comes complete with a set of accessories to ease outdoor installations. As the most cost-effective point-to-point solution from Proxim, any deployment will enjoy a quick return on investment.

- Suitable for the service provider, municipal and education markets
- Certified for deployments in the Americas, Europe, Asia, and Australia
- Designed with the same high quality and reliability that are synonymous with all Proxim Tsunami wireless bridges
- High Power version for extended range (5054-R-LR-US, FCC only)

## Complete “Hop-In-A-Box” Allows Unprecedented Ease of Installation

Tsunami QuickBridge.11 bundles are the easiest-to-install family of broadband wireless bridges on the market. Requiring no training or wireless experience, they can be installed within hours. Each solution includes everything needed to set up a link right out of the box.

- Hop-in-a-box solution includes two radios with integrated antennas, outdoor-rated Ethernet cables, mounting hardware, power injectors and documentation
- Pre-configured software defaults and easy to use graphical user interface eliminate guess work during installation
- Audible tones ensure antennas are properly aligned

## Industry Leading Co-Location Capability

Expand your own service coverage area or co-locate a service within another service provider's existing area – it's never been easier. All Tsunami QuickBridge.11 models support 5/ 10/ 20 MHz channels designed to mitigate radio interference in unlicensed frequency spectrums.

- 5 MHz channel increases the number of non-overlapping channels from 20 to 80+ in the 5 GHz and from 3 to 13 in the 2.4 GHz spectrums
- With the high number of non-overlapping channels, products can be used as high-bandwidth CPE (customer premise equipment) within a limited coverage area
- Less likely to offend neighboring wireless systems

## Synergy with Tsunami MP.11 Point-to-Multipoint Systems

Maximum synergy is realized when deployed in conjunction with Tsunami MP.11 point-to-multipoint wireless systems. With the same proven platforms, both products are designed to deliver an equal experience.

- Using the integrated antennas also used in the MP.11, the QuickBridge.11 produces the same radio characteristics
- Same ruggedized enclosures allow the use of common accessories, resulting in reduced inventory and preservation of investments
- Identical CLI and graphical software interfaces reduce training costs, and accelerate installation and troubleshooting

## Advanced Security Protects Privacy

QuickBridge.11 implements tiered security layers for the most secure outdoor communication in the unlicensed frequency spectrum.

- Proxim's Wireless Outdoor Routing Protocol (WORP) prevents snooping common to Wi-Fi systems
- Advanced encryption protects over-the-air transmission via AES
- Radio mutual authentication eliminates unauthorized use of the system by rogue Subscriber Units and man-in-the middle attacks
- Password protection of all remote management methods

# Tsunami QuickBridge.11 Series

## Technical Specifications

|                                                           |                                                                                                                                                                                    |
|-----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>PRODUCT MODELS</b>                                     |                                                                                                                                                                                    |
| 2454-QB-XX                                                | Tsunami QuickBridge.11 Model 2454-R Bundle                                                                                                                                         |
| 5054-QB-XX                                                | Tsunami QuickBridge.11 Model 5054-R Bundle                                                                                                                                         |
| 5054-QB-LR-US                                             | Tsunami QuickBridge.11 Model 5054-R-LR Bundle                                                                                                                                      |
| <b>PERFORMANCE &amp; SCALABILITY</b>                      |                                                                                                                                                                                    |
| INTEGRATED ANTENNA                                        | Model 5054-R-(LR) includes an integrated 23-dBi antenna; Model 2454-R includes an 18-dBi antenna                                                                                   |
| EXTREME OPERATING TEMPERATURE                             | Rated for -33° to 60° Celsius or -27.5° to 140° Fahrenheit, the system can be deployed outdoors in hot or cold climates                                                            |
| <b>MOST FLEXIBLE FREQUENCY &amp; CO-LOCATIONS SUPPORT</b> |                                                                                                                                                                                    |
| MOST FLEXIBLE SPECTRUM SELECTION                          | 2.4 – 2.497 GHz; 5.15, 5.25 – 5.35 GHz; 5.47 – 5.725 GHz; 5.725 – 5.85 GHz (including 5.8 GHz for UK licensed spectrum)                                                            |
| TRI-BAND 5 GHZ SUPPORT (5.25/5.47/5.725)                  | With software selectable frequencies, Model 5054-R can be deployed globally. Operators using 5.25 and 5.725 GHz frequency can reduce spare inventories                             |
| 5 MHZ CHANNEL SUPPORT                                     | Increase the number of non-overlapping frequency plans to 80+ in 5 GHz and 13 in 2.4 GHz                                                                                           |
| 10 MHZ CHANNEL                                            | Increase the number of frequency plans to 40+ non-overlapping in 5 GHz and 13 overlapping in 2.4 GHz                                                                               |
| <b>SECURE &amp; EASY TO MANAGE</b>                        |                                                                                                                                                                                    |
| HIGHLY SECURE COMMUNICATION                               | Unlike the 802.11a/b/g standards, as a proprietary protocol, WOPR eliminates the possibilities of unauthorized snooping                                                            |
| INTER-RADIO AUTH                                          | Mutual authentication embedded in WOPR protocol mitigates man-in-the-middle attacks                                                                                                |
| STRONGEST ENCRYPTION                                      | Over the air transmission is encrypted using 128-bit AES                                                                                                                           |
| FLEXIBLE BANDWIDTH                                        | Bi-directional bandwidth rate limiting allows service providers to offer tiered services; service can be provisioned instantly from the central office, without costly truck rolls |
| REMOTE MANAGEMENT                                         | Supports flexible and secure remote management via Telnet, SNMP and web interfaces, with password protections                                                                      |
| ANTENNA ALIGNMENT TOOL                                    | Audible tone, visual aids via LEDs, and CLI with running statistics displaying real-time signal strength ease antenna installation                                                 |
| COMPREHENSIVE STATION STATISTICS                          | Unit and group statistics are available for monitoring, planning and management of a wireless network                                                                              |

## 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.11 link
- Repeater**  
 Extend distance or overcome path blockage by adding point to point hops
- High-bandwidth Last Mile Access**  
 Use QuickBridge.11 to deliver TLS (Transparent LAN Services) to corporate parks
- Inter-POP Redundancy**  
 Avoid downtimes caused by a wireline backhaul failure by adding a QuickBridge.11 link as inter-POP redundancy

|                                       |                                                                                                                                                                                                                                                            |                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>INTERFACES</b>                     |                                                                                                                                                                                                                                                            | <b>HUMIDITY</b>                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| WIRED ETHERNET                        | 10/100Base-TX Ethernet (RJ-45)                                                                                                                                                                                                                             | OPERATING STORAGE                  | Max 100% relative humidity (non-condensing)<br>Max 100% relative humidity (non-condensing)                                                                                                                                                                                                                                                                                                                                                                                     |
| WIRELESS PROTOCOL                     | WOPR                                                                                                                                                                                                                                                       | WATER AND DUST PROOF               | IP65                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>RADIO &amp; TRANSMISSION SPECS</b> |                                                                                                                                                                                                                                                            | <b>ELECTRICAL (POWER INJECTOR)</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| MODULATION METHOD                     | OFDM                                                                                                                                                                                                                                                       | INPUT                              | Voltage 110 to 250 VAC                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| FREQUENCY BANDS                       |                                                                                                                                                                                                                                                            | OUTPUT                             | Current 420mA at 48V                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| MODEL 5054-R                          | Americas (FCC): 5.25-5.35 GHz (15 channels)<br>Americas (FCC): 5.725-5.850 GHz (21 channels)<br>Europe (ETSI): 5.47-5.725 GHz (46 channels)<br>Europe (Russia): 5.15-5.850 GHz (82 channels)<br>Europe (Licensed in the UK): 5.725-5.850 GHz (21 channels) | POWER CONSUMPTION                  | Maximum 20 Watt                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| MODEL 2454-R                          | Americas (FCC): 2.4-2.4835 GHz (13 channels)<br>Europe (ETSI): 2.4-2.4835 GHz (13 channels)<br>Japan (MCK): 2.4-2.497 GHz (14 channels)                                                                                                                    | POWER OVER ETHERNET                | Via RJ-45 Ethernet interface port                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| MODEL 5054-R-LR                       | Americas (FCC): 5.25-5.35 GHz (15 channels)<br>Americas (FCC): 5.725-5.850 GHz (21 channels)                                                                                                                                                               | <b>MANAGEMENT</b>                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| DATA RATE                             | 54, 48, 36, 24, 18, 12, 9, 6, 4.5, 3, 2.25, 1.5 Mbps                                                                                                                                                                                                       | LOCAL                              | RS-232 serial (RJ11 and DB-9)                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>PHYSICAL SPECS</b>                 |                                                                                                                                                                                                                                                            | REMOTE                             | Telnet, Web GUI, TFTP                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| DIMENSIONS                            |                                                                                                                                                                                                                                                            | SNMP                               | SNMPv1/v2; MIB-II ; Ethernet-like MIB; Bridge; MIB; 802.3MAU; 802.11 MIB; Private MIB; ORINOCO MIB; RFC 1157; RFC 1213; RFC 1643; RFC 1493; RFC 2668                                                                                                                                                                                                                                                                                                                           |
| PACKAGED                              | 22.5 x 15.5 x 14.75 in (571 x 394 x 375 mm)                                                                                                                                                                                                                | <b>MTBF AND WARRANTY</b>           | 100,000 hours; 1-year on parts and labor                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| UNPACKAGED                            | 12.6 X 12.6 X 3.5 in (320 X 320 X 89 mm)                                                                                                                                                                                                                   | <b>PACKAGE CONTENTS</b>            | <ul style="list-style-type: none"> <li>Tsunami QuickBridge.11 Model 2454-R, 5054-R, or 5054-R-LR Radios with Integrated Antennas (Qty 2)</li> <li>50m (164 ft) Outdoor-Rated Ethernet Cables (Qty 2)</li> <li>Sets of wall/ pole mounting brackets (Qty 2)</li> <li>Power Injectors for 2454-R and 5054-R (Qty 2)</li> <li>Country Specific Power Cords (Qty 2)</li> <li>Ethernet Cable Weather-Proof Plugs (Qty 2)</li> <li>Documentation</li> <li>Software CD-ROM</li> </ul> |
| WEIGHT                                |                                                                                                                                                                                                                                                            | <b>RELATED PRODUCTS</b>            | Tsunami MP11 2454-R, 5054-R, 5054-R-LR, ORINOCO Outdoor Mesh AP-4000MR-(LR) and AP-4900MR-(LR), Power Over Ethernet (PoE) Surge Arrestor (P/N #: 70251) Spare Power DC Injector for Tsunami MP11 or QB.11 (-R model ONLY) (P/N #: 69823), ServPak for Enhanced Support (US/CAN Only), Worldwide Extended Warranty                                                                                                                                                              |
| PACKAGED (per unit)                   | 35 lbs (15.9 kg)                                                                                                                                                                                                                                           |                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| UNPACKAGED (per unit)                 | 6 lbs (2.72 kg)                                                                                                                                                                                                                                            |                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>ENVIRONMENTAL SPECS</b>            |                                                                                                                                                                                                                                                            |                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| TEMPERATURE:                          |                                                                                                                                                                                                                                                            |                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| OPERATING                             | -33° to 60°C (-27.5° to 140° Fahrenheit)                                                                                                                                                                                                                   |                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| STORAGE                               | -55° to 80°C (-41° to 176° Fahrenheit)                                                                                                                                                                                                                     |                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

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

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