

## Tsunami<sup>®</sup>QuickBridge.11 Series Point-to-Point Wireless Bridge Bundle



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<sup>®</sup> Cellular voice and data backhaul, up to DS3 interface
- Tsunami<sup>®</sup>.GX<sup>®</sup> Carrier-class IP Ethernet bridge for voice and data backhaul for service providers and enterprise applications
- QuickBridge® Complete "hop-in-abox" 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 to 5.95 inclusive (and to 6.08 GHz with LR)) 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)

#### 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, 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.11models support 5/ 10/ 20MHz channels designed tomitigate radio interference in unlicensed frequency spectrums.

- 5 MHz channel increases the number of non-overlapping channels from 20 to 80+ in the 5 GHz band and from 3 to 13 in the 2.4 GHz spectrums
- With the high number of non-overlapping channels, products can be used as highbandwidth 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- tomultipoint 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** 

PRODUCT MODELS	
2454-QB-XX	Tsunami QuickBridge.11 Model 2454-R Bundle
5054-QB-XX	Tsunami QuickBridge.11 Model 5054-R Bundle
5054-QB-LR	Tsunami QuickBridge.11 Model 5054-R-LR Bundle
PERFORMANCE & SCALABILITY	
INTEGRATED ANTENNA EXTREME OPERATING	Model 5054-R(-LR) includes an integrated 23-dBi antenna; Model 2454-R includes an18-dBi antenna Rated for 238 to 600 Coleius or 27 58 to 1400 Entrophoit the system can be dealeyed outdoors in bot or cold elimates
TEMPERATURE	Rated for -33º to 60º Celsius or -27.5º to 140º Fahrenheit, the system can be deployed outdoors in hot or cold climates
MOST FLEXIBLE FREQUENCY &	
CO-LOCATIONS SUPPORT	
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) 5.85 - 5.95 CIS, 5.15 - 6.08 Russia
TRI-BAND 5 GHZ SUPPORT	With software selectable frequencies, Model 5054-R can be deployed globally. Operators using 5.25 and 5.725, 5.85, 5.95 GHz
(5.25/5.47/5.725/5.85/5.95)	frequency can reduce spare inventories
5MHZ CHANNEL SUPPORT	Increase the number of non-overlapping frequency plans to 80+ in 5 GHz and 13 in 2.4 GHz
10 MHZ CHANNEL SECURE & EASY TO MANAGE	Increase the number of frequency plans to 40+ non-overlapping in 5 GHz and 13 overlapping in 2.4 GHz
HIGHLY SECURE	Unlike the 802.11a/b/g standards, as a proprietary protocol, WORP eliminates the possibilities of unauthorized snooping
COMMUNICATION	
INTER-RADIO AUTH	Mutual authentication embedded in WORP protocol mitigates man-in-the-middle attacks
STRONGEST ENCRYPTION	Over the air transmission is encrypted using 128-bit AES
	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	Unit and group statistics are available for monitoring, planning and management of a wireless network
STATISTICS	
INTERFACES WIRED ETHERNET	10/100Base-TXEthernet (RJ-45)
WIRELESS PROTOCOL	WORP
RADIO & TRANSMISSION SPECS	
MODULATION METHOD	OFDM
FREQUENCY BANDS	
MODEL 5054-R	Americas (FCC): 5.25-5.35 GHz (15 channels)
	Americas (FCC): 5.725-5.850 GHz (21 channels) Europe (ETSI): 5.47-5.725 GHz (46 channels) Europe (Russia): 5.15-5.950 GHz (82 channels) Europe (Licensed in the UK): 5.725-5.850 GHz (21 channels)
MODEL 2454-R	Americas (FCC): 2.4-2.4835 GHz (13 channels) Europe (ETSI): 2.4-2.4835 GHz (13 channels)
	Japan (MKK): 2.4-2.497 GHz (14 channels)
MODEL 5054-R-LR	Japan (MKK): 2.4-2.497 GHz (14 channels) Americas (FCC): 5.25-5.35 GHz (15 channels) Americas (FCC): 5.725-5.85 GHz (21 channels) Europe (FTSI): 5.47-5.725 GHz (46 channels) Europe (Russia): 5.15-6.08 GHz (82 channels) Europe (Russia): 5.15-6.08 GHz (82 channels) Europe (Russia): 5.15-6.08 GHz (82 channels)
	Americas (FCC): 5.25-5.35 GHz (15 channels) Americas (FCC): 5.725-5.850 GHz (21 channels) Europe (ETSI): 5.47-5.725 GHz (46 channels) Europe (Russia): 5.15-6.08 GHz (82 channels) Europe (Licensed in the UK): 5.725-5.850 GHz (21 channels)
DATA RATE	Americas (FCC): 5.25-5.35 GHz (15 channels) Americas (FCC): 5.725-5.850 GHz (21 channels) Europe (ETSI): 5.47-5.725 GHz (46 channels) Europe (Russia): 5.15-6.08 GHz (82 channels)
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DATA RATE PHYSICAL SPECS DIMENSIONS PACKAGED UNPACKAGED	Americas (FCC): 5.25-5.35 GHz (15 channels) Americas (FCC): 5.725-5.850 GHz (21 channels) Europe (RUssia): 5.15-6.08 GHz (82 channels) Europe (Russia): 5.15-6.08 GHz (82 channels) Europe (Licensed in the UK): 5.725-5.850 GHz (21 channels) 54, 48, 36, 24, 18, 12, 9, 6, 4.5, 3, 2.25, 1.5 Mbps
DATA RATE PHYSICAL SPECS DIMENSIONS PACKAGED UNPACKAGED WEIGHT	Americas (FCC): 5.25-5.35 GHz (15 channels) Americas (FCC): 5.725-5.850 GHz (21 channels) Europe (FUS): 5.47-5.725 GHz (46 channels) Europe (Russia): 5.15-6.08 GHz (82 channels) Europe (Licensed in the UK): 5.725-5.850 GHz (21 channels) 54, 48, 36, 24, 18, 12, 9, 6, 45, 3, 2.25, 1.5 Mbps 22.5 x 15.5 x 14.75 in (571 x 394 x 375 mm) 12.6 X 12.6 X 3.5 in (320 X 320 X 89 mm)
DATA RATE PHYSICAL SPECS DIMENSIONS PACKAGED UIPACKAGED WEIGHT PACKAGED	Americas (FCC): 5.25-5.35 GHz (15 channels) Americas (FCC): 5.25-5.35 GHz (15 channels) Europe (FUS): 5.47-5.25 GHz (46 channels) Europe (Russia): 5.15-6.08 GHz (82 channels) Europe (Licensed in the UK): 5.725-5.850 GHz (21 channels) 54, 48, 36, 24, 18, 12, 9, 6, 4.5, 3, 2.25, 1.5 Mbps 22.5 x 15.5 x 14.75 in (571 x 394 x 375 mm) 12.6 X 12.6 X 3.5 in (320 X 320 X 89 mm) 35 lbs (15.9 kg)
DATA RATE PHYSICAL SPECS DIMENSIONS PACKAGED UNPACKAGED WEIGHT PACKAGED UNPACKAGED	Americas (FCC): 5.25-5.35 GHz (15 channels) Americas (FCC): 5.725-5.850 GHz (21 channels) Europe (FUS): 5.47-5.725 GHz (46 channels) Europe (Russia): 5.15-6.08 GHz (82 channels) Europe (Licensed in the UK): 5.725-5.850 GHz (21 channels) 54, 48, 36, 24, 18, 12, 9, 6, 45, 3, 2.25, 1.5 Mbps 22.5 x 15.5 x 14.75 in (571 x 394 x 375 mm) 12.6 X 12.6 X 3.5 in (320 X 320 X 89 mm)
DATA RATE PHYSICAL SPECS DIMENSIONS PACKAGED UNPACKAGED WEIGHT PACKAGED UNPACKAGED ENVIRONMENTAL SPECS	Americas (FCC): 5.25-5.35 GHz (15 channels) Americas (FCC): 5.25-5.35 GHz (15 channels) Europe (FUS): 5.47-5.25 GHz (46 channels) Europe (Russia): 5.15-6.08 GHz (82 channels) Europe (Licensed in the UK): 5.725-5.850 GHz (21 channels) 54, 48, 36, 24, 18, 12, 9, 6, 4.5, 3, 2.25, 1.5 Mbps 22.5 x 15.5 x 14.75 in (571 x 394 x 375 mm) 12.6 X 12.6 X 3.5 in (320 X 320 X 89 mm) 35 lbs (15.9 kg)
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DATA RATE PHYSICAL SPECS DIMENSIONS PACKAGED UNPACKAGED UNPACKAGED UNPACKAGED ENVIRONMENTAL SPECS TEMPERATURE	Americas (FCC): 5.25-5.35 GHz (15 channels) Americas (FCC): 5.725-5.850 GHz (21 channels) Europe (FUS): 5.47-5.725 GHz (46 channels) Europe (Russia): 5.15-6.08 GHz (82 channels) Europe (Licensed in the UK): 5.725-5.850 GHz (21 channels) 54, 48, 36, 24, 18, 12, 9, 6, 45, 3, 2.25, 1.5 Mbps 22.5 x 15.5 x 14.75 in (571 x 394 x 375 mm) 12.6 X 12.6 X 3.5 in (320 X 320 X 89 mm) 35 lbs (15.9 kg) 6 lbs (2.72 kg)
DATA RATE PHYSICAL SPECS DIMENSIONS PACKAGED UNPACKAGED WEIGHT PACKAGED UNPACKAGED ENVIRONMENTAL SPECS TEMPERATURE OPERATING STORAGE	Americas (FCC): 5.25-5.35 GHz (15 channels) Americas (FCC): 5.25-5.35 GHz (12 channels) Europe (FUSSi): 5.47-5.25.580 GHz (21 channels) Europe (Russia): 5.15-6.08 GHz (82 channels) Europe (Licensed in the UK): 5.725-5.850 GHz (21 channels) 54, 48, 36, 24, 18, 12, 9, 6, 4.5, 3, 2.25, 1.5 Mbps 22.5 x 15.5 x 14.75 in (571 x 394 x 375 mm) 12.6 x 12.6 x 3.5 in (320 X 320 X 89 mm) 35 lbs (15.9 kg) 6 lbs (2.72 kg) -33° to 60°C (-27.5° to 140° Fahrenheit)
DATA RATE PHYSICAL SPECS DIMENSIONS PACKAGED UNPACKAGED WEIGHT PACKAGED UNPACKAGED ENVIRONMENTAL SPECS TEMPERATURE OPERATING STORAGE	Americas (FCC): 5.25-5.35 GHz (15 channels) Americas (FCC): 5.25-5.35 GHz (12 channels) Europe (FUSSi): 5.47-5.25.580 GHz (21 channels) Europe (Russia): 5.15-6.08 GHz (82 channels) Europe (Licensed in the UK): 5.725-5.850 GHz (21 channels) 54, 48, 36, 24, 18, 12, 9, 6, 4.5, 3, 2.25, 1.5 Mbps 22.5 x 15.5 x 14.75 in (571 x 394 x 375 mm) 12.6 x 12.6 x 3.5 in (320 X 320 X 89 mm) 35 lbs (15.9 kg) 6 lbs (2.72 kg) -33° to 60°C (-27.5° to 140° Fahrenheit)
DATA RATE PHYSICAL SPECS DIMENSIONS PACKAGED UNPACKAGED WEIGHT PACKAGED UNPACKAGED ENVIRONMENTAL SPECS TEMPERATURE OPERATING STORAGE HUMIDITY OPERATING STORAGE	Americas (FCC): 5.25-5.35 GHz (15 channels) Americas (FCC): 5.725-5.850 GHz (21 channels) Europe (Russia): 5.15-6.08 GHz (82 channels) Europe (licensed in the UK): 5.725-5.850 GHz (21 channels) 54, 48, 36, 24, 18, 12, 9, 6, 4.5, 3, 2.25, 1.5 Mbps 22.5 x 15.5 x 14.75 in (571 x 394 x 375 mm) 12.6 x 12.6 x 3.5 in (320 x 320 x 89 mm) 35 lbs (15.9 kg) 6 lbs (2.72 kg) 
DATA RATE PHYSICAL SPECS DIMENSIONS PACKAGED UNPACKAGED UNPACKAGED UNPACKAGED UNPACKAGED UNPACKAGED ENVIRONMENTAL SPECS TEMPERATURE OPERATING STORAGE HUMIDITY OPERATING STORAGE WATER AND DUST PROOF	Americas (FCC): 5.25-5.35 GHz (15 channels) Americas (FCC): 5.725-5.850 GHz (21 channels) Europe (FCC): 5.725-5.850 GHz (21 channels) Europe (Russia): 5.15-6.08 GHz (82 channels) Europe (Licensed in the UK): 5.725-5.850 GHz (21 channels) 54, 48, 36, 24, 18, 12, 9, 6, 4.5, 3, 2.25, 1.5 Mbps 22.5 x 15.5 x 14.75 in (571 x 394 x 375 mm) 12.6 X 12.6 X 3.5 in (571 x 394 x 375 mm) 12.6 X 12.6 X 3.5 in (320 X 320 X 89 mm) 35 lbs (15.9 kg) 6 lbs (15.9 kg) 6 lbs (2.72 kg) -339 to 60°C (-27.5° to 140° Fahrenheit) -55° to 80°C (-41° to 176° Fahrenheit) -55° to 80°C (-41° to 176° Fahrenheit) Max 100% relative humidity (non-condensing)
DATA RATE PHYSICAL SPECS DIMENSIONS PACKAGED UNPACKAGED UNPACKAGED UNPACKAGED UNPACKAGED UNPACKAGED ENVIRONMENTAL SPECS TEMPERATURE OPERATING STORAGE HUMIDITY OPERATING STORAGE STORAGE WATER AND DUST PROOF ELECTRICAL (POWER INJECTOR)	Americas (FCC): 5.25-5.35 GHz (15 channels) Americas (FCC): 5.725-5.850 GHz (21 channels) Europe (Russia): 5.15-6.08 GHz (82 channels) Europe (Licensed in the UK): 5.725-5.850 GHz (21 channels) 54, 48, 36, 24, 18, 12, 9, 6, 4.5, 3, 2.5, 1.5 Mbps 22.5 x 15.5 x 14.75 in (571 x 394 x 375 mm) 12.6 X 12.6 X 3.5 in (571 x 394 x 375 mm) 12.6 X 12.6 X 3.5 in (320 X 320 X 89 mm) G libs (15.9 kg) 6 libs (15.9 kg) 6 libs (2.72 kg) -33° to 60°C (-27.5° to 140° Fahrenheit) -55° to 80°C (-41° to 176° Fahrenheit) -55° to 80°C (-41° to 176° Fahrenheit) Max 100% relative humidity (non-condensing) Max 100% relative humidity (non-condensing) IP67
DATA RATE PHYSICAL SPECS DIMENSIONS PACKAGED UNPACKAGED UNPACKAGED UNPACKAGED ENVIRONMENTAL SPECS TEMPERATURE OPERATING STORAGE HUMIDITY OPERATING STORAGE STORAGE WATER AND DUST PROOF ELECTRICAL (POWER INJECTOR) INPUT	Americas (FCC): 5.25-5.35 GHz (15 channels) Americas (FCC): 5.725-5.850 GHz (21 channels) Europe (Russia): 5.15-6.08 GHz (82 channels) Europe (licensed in the UK): 5.725-5.850 GHz (21 channels) 54, 48, 36, 24, 18, 12, 9, 6, 4.5, 3, 2.25, 1.5 Mbps 22.5 x 15.5 x 14.75 in (571 x 394 x 375 mm) 12.6 x 12.6 x 3.5 in (320 x 320 x 89 mm) 35 lbs (15.9 kg) 6 lbs (2.72 kg) 
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DATA RATE PHYSICAL SPECS DIMENSIONS PACKAGED UNPACKAGED UNPACKAGED UNPACKAGED UNPACKAGED ENVIRONMENTAL SPECS TEMPERATURE OPERATING STORAGE HUMIDITY OPERATING STORAGE WATER AND DUST PROOF ELECTRICAL (POWER INJECTOR) NPUT DUTPUT POWER OVER ETHERNET MANAGEMENT	Americas (FCC): 5.25-5.35 GHz (15 channels) Americas (FCC): 5.725-5.850 GHz (21 channels) Europe (Russia): 5.15-6.08 GHz (22 channels) Europe (Russia): 5.15-6.08 GHz (22 channels) Europe (Licensed in the UK): 5.725-5.850 GHz (21 channels) 54, 48, 36, 24, 18, 12, 9, 6, 45, 3, 2.25, 1.5 Mbps 22.5 x 15.5 x 14.75 in (571 x 394 x 375 mm) 12.6 X 12.6 X 3.5 in (320 X 320 X 89 mm) 35 lbs (15.9 kg) 6 lbs (2.72 kg) 
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DATA RATE PHYSICAL SPECS DIMENSIONS PACKAGED UNPACKAGED UNPACKAGED UNPACKAGED ENVIRONMENTAL SPECS TEMPERATURE OPERATING STORAGE HUMIDITY OPERATING STORAGE WATER AND DUST PROOF ELECETICAL (POWER INJECTOR) INPUT OUTPUT POWER CONSUMPTION POWER	Americas (FCC): 5.25-5.35 GHz (15 channels)         Americas (FCC): 5.725-5.850 GHz (21 channels)         Europe (Russia): 5.15-6.08 GHz (82 channels)         Europe (Russia): 5.15-6.08 GHz (82 channels)         Europe (Licensed in the UK): 5.725-5.850 GHz (21 channels)         54, 48, 36, 24, 18, 12, 9, 6, 4.5, 3, 2.25, 1.5 Mbps         22.5 x 15.5 x 14.75 in (571 x 394 x 375 mm)         12.6 x 12.6 x 3.5 in (320 X 320 X 89 mm)         35 lbs (15.9 kg)         6 lbs (2.72 kg)         4         4.33° to 60°C (-27.5° to 140° Fahrenheit)         -55° to 80°C (-41° to 176° Fahrenheit)         -55° to 80°C (-41° to 176° Fahrenheit)         -55° to 80°C (-41° to 176° Fahrenheit)         Voltage 110 to 250 VAC         Current 420mA at 48V         Maximum 20 Watt         Via RJ-45 Ethernet interface port         RS-232 serial (RU11 and D8-9)         Telnet, Web GUI, TFTP
DATA RATE PHYSICAL SPECS DIMENSIONS PACKAGED UNPACKAGED UNPACKAGED UNPACKAGED UNPACKAGED UNPACKAGED ENVIRONMENTAL SPECS TEMPERATURE OPERATING STORAGE WATER AND DUST PROOF ELECTRICAL (POWER INJECTOR) INPUT OUTPUT POWER CONSUMPTION POWER CONSUMPTIO	Americas (FCC): 5.25-5.35 GHz (15 channels) Americas (FCC): 5.25-5.35 GHz (45 channels) Europe (Russia): 5.15-6.08 GHz (82 channels) Europe (Licensed in the UK): 5.725-5.850 GHz (21 channels) 54, 48, 36, 24, 18, 12, 9, 6, 4.5, 3, 2.25, 1.5 Mbps 22.5 x 15.5 x 14.75 in (571 x 394 x 375 mm) 12.6 X 12.6 X 3.5 in (571 x 394 x 375 mm) 12.6 X 12.6 X 3.5 in (320 X 320 X 89 mm) 35 lbs (15.9 kg) 6 lbs (15.9 kg) 6 lbs (2.72 kg)
DATA RATE  PHYSICAL SPECS  DIMENSIONS  PACKAGED UNPACKAGED UNPACKAGE UNPACKAG	Americas (FCC): 5.25-5.35 GHz (15 channels) Americas (FCC): 5.25-5.35 GHz (45 channels) Europe (Russia): 5.15-5.05 GHz (46 channels) Europe (Russia): 5.15-6.08 GHz (82 channels) Europe (Licensed in the UK): 5.725-5.850 GHz (21 channels) 54, 48, 36, 24, 18, 12, 9, 6, 4.5, 3, 2.25, 1.5 Mbps 22.5 x 15.5 x 14.75 in (571 x 394 x 375 mm) 12.6 X 12.6 X 3.5 in (571 x 394 x 375 mm) 12.6 X 12.6 X 3.5 in (571 x 394 x 375 mm) 12.6 X 12.6 X 3.5 in (320 X 320 X 89 mm) 35 lbs (15.9 kg) 6 lbs (15.9 kg) 6 lbs (15.9 kg) 6 lbs (2.72 kg)
DATA RATE  PHYSICAL SPECS  DIMENSIONS  PACKAGED UNPACKAGED UNPACKAGE UNPACKAG	Americas (FCC): 5.25-5.35 GHz (15 channels) Americas (FCC): 5.25-5.350 GHz (21 channels) Europe (RUSSia): 5.275-5.850 GHz (22 channels) Europe (RUSSia): 5.175-5.255-850 GHz (21 channels) Europe (RUSSia): 5.175-5.850 GHz (21 channels) 54, 48, 36, 24, 18, 12, 9, 6, 45, 3, 2.25, 1.5 Mbps 22.5 x 15.5 x 14.75 in (571 x 394 x 375 mm) 12.6 X 12.6 X 3.5 in (320 X 320 X 89 mm) 35 lbs (15.9 kg) 6 lbs (15.9 kg) 6 lbs (2.72 kg) -33° to 60°C (-27.5° to 140° Fahrenheit) -55° to 80°C (-41° to 176° Fahrenheit) -55° to 80°C (-41° to 176° Fahrenheit) Max 100% relative humidity (non-condensing) Max 100% relative humidity (non-condensing) IP67 Voltage 110 to 250 VAC Current 420mA at 48V Maximum 20 Watt Via RJ-45 Ethernet interface port Rs-232 serial (R111 and DB-9) Telnet, Web GUI, TFP SNMP-1/v2; MiB-II; Ethernet-like MiB; Bridge; MiB; 802.3MAU; 802.11 MiB; Private MiB; ORINGCO MiB; RFC 1157; RFC 1213; RFC 1493; RFC 1493; RFC 2668 100,000 hours; 1-year on parts and labor
DATA RATE  PHYSICAL SPECS  DIMENSIONS  PACKAGED UNPACKAGED UNPACKAGE UNPACKAG	Americas (FCC): 5.25-5.35 GHz (15 channels) Americas (FCC): 5.275-5.850 GHz (21 channels) Europe (Russia): 5.15-6.08 GHz (82 channels) Europe (Russia): 5.15-6.08 GHz (82 channels) Europe (Licensed in the UK): 5.725-5.850 GHz (21 channels) 54, 48, 36, 24, 18, 12, 9, 6, 4.5, 3, 2.25, 1.5 Mbps 22.5 x 15.5 x 14.75 in (571 x 394 x 375 mm) 12.6 X 12.6 X 3.5 in (320 X 320 X 89 mm) 35 lbs (15.9 kg) 6 lbs (15.9 kg) 6 lbs (2.72 kg) -33° to 60°C (-27.5° to 140° Fahrenheit) -55° to 80°C (-41° to 176° Fahrenheit) -55° to 80°C (-41° to 176° Fahrenheit) 1967 Voltage 110 to 250 VAC Current 420mA at 48V Maximum 20 Watt Via RJ-45 Ethernet interface port Rs-232 serial (R111 and DB-9) Telnet, Web GUI, TFTP SNMPv1/v2; MIB-II; Ethernet-like MIB; Bridge; MIB; 802.3MAU; 802.11 MiB; Private MiB; OKINOCO MIB; RFC 1157; RFC 1213; RFC 1643; RFC 1493; RFC 2668 100,000 hours; 19.4 Rode 10.5 Color - 10.5 Colo
DATA RATE  PHYSICAL SPECS  DIMENSIONS  PACKAGED UNPACKAGED UNPACKAGE UNPACKAG	Americas (FCC): 5.25-5.850 GHz (12 channels)         Europe (FUS): 5.475-7.25 GHz (146 channels)         Europe (FUS): 5.475-7.25 GHz (24 channels)         Europe (FUS): 5.725-7.850 GHz (22 channels)         Europe (FUS): 5.725-7.850 GHz (22 channels)         Europe (FUS): 5.725-7.850 GHz (22 channels)         Europe (FUS): 5.725-7.850 GHz (21 channels)         54, 48, 36, 24, 18, 12, 9, 6, 4.5, 3, 2.25, 1.5 Mbps         22.5 x 15.5 x 14.75 in (571 x 394 x 375 mm)         12.6 X 12.6 X 3.5 in (320 X 320 X 89 mm)         35 lbs (15.9 kg)         6 lbs (2.72 kg)         6 lbs (2.72 kg)         Max 100% relative humidity (non-condensing)         Max 100% relative humidity (non-condensing)         Max 100% relative humidity (non-condensing)         Voltage 110 to 250 VAC         Current 420m At 48V         Maximum 20 Watt         Via RJ-45 Ethernet Interface port         R5-232 serial (R111 and DB-9)         Telnet, Web GUI, TFP         SMNPV1/V2; MIB-II; Ethernet-like MIB; Bridge; MIB; 802.3MAU;         802.11 MiB; Private MIB; ORINOCO MIB; RFC 1157; RFC 1213;         RC 1643; RFC 1493; RFC 2668         100,000 hours; 1-year on parts and labor         Tsunami QuickBridge.11 Model 2454-R, 5054-R, or 5054-R-LR Radios with Integrated Antennas (Qty 2)         Sets of wall/ pole mounting
DATA RATE  PHYSICAL SPECS  DIMENSIONS  PACKAGED UNPACKAGED UNPACKAGE UNPACKAG	Americas (FCC): 5.25-5.850 GHz (12 channels)         Europe (FUS): 5.475-7.25 GHz (146 channels)         Europe (FUS): 5.475-7.25 GHz (12 channels)         Europe (FUS): 5.475-7.85 GHz (12 channels)         54, 48, 36, 24, 18, 12, 9, 6, 4.5, 3, 2.25, 1.5 Mbps         22.5 x 15.5 x 14.75 in (571 x 394 x 375 mm)         12.6 X 12.6 X 3.5 in (320 X 320 X 89 mm)         35 lbs (15.9 kg)         6 lbs (2.72 kg)         6 lbs (2.72 kg)         Max 100% relative humidity (non-condensing)         IP67         Voltage 110 to 250 VAC         Current 420m A at 48V         Maximum 20 Watt         Via RV-45 Ethernet interface port         Rs-232 serial (RU11 and D8-9)         Telnet, Web GUI, TFTP         SNMPV1/v2; MIB-II ; Ethernet-like MIB; Bridge; MIB; 802.3MAU;         802.11 MIB; Private MIB; ORINOCO MIB; RFC 1157; RFC 1213; RFC 1433; RFC 1433; RFC 1433; RFC 14
DATA RATE PHYSICAL SPECS DIMENSIONS PACKAGED UNPACKAGED UNPACKAGED UNPACKAGED UNPACKAGED UNPACKAGED UNPACKAGED ENVIRONMENTAL SPECS TEMPERATURE OPERATING STORAGE HUMIDITY OPERATING STORAGE WATER AND DUST PROOF ELECTRICAL (POWER INJECTOR) INPUT OUTPUT POWER CONSUMPTION POWER CO	Americas (FCC): 5.25-5.850 GHz (21 channels) Americas (FCC): 5.725-5.850 GHz (21 channels) Europe (FUsi): 5.47-5.725 GHz (46 channels) Europe (FUsi): 5.47-5.725 GHz (46 channels) Europe (FUsi): 5.47-5.725 GHz (21 channels) Europe (FUsi): 5.47-5.725 GHz (21 channels) 54, 48, 36, 24, 18, 12, 9, 6, 4.5, 3, 2.25, 1.5 Mbps 22.5 x 15.5 x 14.75 in (571 x 394 x 375 mm) 22.5 x 15.5 x 14.75 in (571 x 394 x 375 mm) 22.5 x 15.5 x 14.75 in (571 x 394 x 375 mm) 22.5 x 15.5 x 14.75 in (571 x 394 x 375 mm) 235 lbs (15.9 kg) 6 lbs (2.72 kg) 6 lbs (2.72 kg) 6 lbs (2.72 kg) 6 lbs (2.72 kg) Max 100% relative humidity (non-condensing) Max 100% relative humidity (non-condensing) FP67 Voltage 110 to 250 VAC Current 420mA at 48V Maximum 20 Watt Via PJ-45 Ethernet Interface port FS-232 serial (R111 and DB-9) Telnet, Web GUI, TFP SINNPY1/Y, NIE-11; Ethernet-like MIB; Bridge; MIB; 802.3MAU; 802.11 MIB; Private MIB; ORINOCO MIB; RFC 1157; RFC 1213; RFC 1439; RFC 1439; RFC 2468 100,000 hours; 1-year on parts and labor Tsunami QuickBridge.11 Model 2454-R, 5054-R, or 5054-R-LR Radios with Integrated Antennas (Qty 2) Sets of wall/ pole mounting brackets (Qty 2) Power Injectors for 2454-R and 5054-R (Qty 2) Ethernet Cable Weather-Proof Plugs (Qty 2)
DATA RATE PHYSICAL SPECS DIMENSIONS PACKAGED UNPACKAGED UNPACKAGED UNPACKAGED UNPACKAGED UNPACKAGED UNPACKAGED ENVIRONMENTAL SPECS TEMPERATURE OPERATING STORAGE HUMIDITY OPERATING STORAGE WATER AND DUST PROOF ELECTRICAL (POWER INJECTOR) INPUT OUTPUT POWER CONSUMPTION POWER CO	Americas (FCC): 5.25-3.5 GHz (15 channels) Americas (FCC): 5.25-3.850 GHz (21 channels) Europe (Russia): 5.15-6.08 GHz (22 channels) Europe (Russia): 5.15-6.08 GHz (23 channels) 22.5 x 15.5 x 14.75 in (571 x 394 x 375 mm) 12.6 x 12.6 x 3.5 in (320 x 320 x 89 mm) 35 lbs (15.9 kg) 6 lbs (15.9 kg) 6 lbs (15.9 kg) 6 lbs (2.72 kg) 
DATA RATE  PHYSICAL SPECS  DIMENSIONS  PACKAGED  UNPACKAGED  UNPACKAGED  UNPACKAGED  ENVIRONMENTAL SPECS  TEMPERATURE  OPERATING STORAGE HUMIDITY OPENATING STORAGE WATER AND DUST PROOF ELECTRICAL (POWER INJECTOR) INPUT OUTPUT POWER OVER ETHERNET MANAGEMENT LOCAL REMOTE SNMP  MITBF AND WARRANTY PACKAGE CONTENTS	Americas (FCC): 5:25:35:6:05 GHz (12 channels)         Europe (FTSI): 5:47:5:725:8:05 GHz (22 channels)         Europe (Russia): 5:15:6:08 GHz (22 channels)         5:4, 48, 36, 24, 18, 12, 9, 6, 4.5; 3; 2:25; 1.5 Mbps         22:5 x 15:5 x 14.75 in (571 x 394 x 375 mm)         12:6 X 12.6 X 3.5 in (320 X 320 X 89 mm)         3:5 lbs (15:9 kg)         6 lbs (2:72 kg)         6 lbs (2:72 kg)         -33* to 60%C (-27.5% to 140% Fahrenheit)         -55* to 80%C (-41* to 176* Fahrenheit)         -70%         Voltage 110 to 250 VAC         Current 420mA at 48V         Maximum 20 Watt         Via guid (R111 and DB-9)         Telenet, Web GUI, TFTP         SNMPV1/Cz, MIB-II; Ehremet-like MIB; Bridge; MIB; 802.3MAU;         8000 hours; 1-year on parts and labor         Teinet, Web GUI, TFTP         SNMPV1/Cz, MIB-II; Ehremet-like MIB; Bridge; MIB; 802.3MAU;         8000 hours; 1-year on parts and labor         Teinet, Web GUI, TFTP         SNMPV1/Cz, MIB
DATA RATE  PHYSICAL SPECS  DIMENSIONS  PACKAGED  UNPACKAGED  UNPACKAGED  ENVIRONMENTAL SPECS  TEMPERATURE  OPERATING STORAGE HUMIDITY OPERATING STORAGE WATER AND DUST PROOF ELECTRICAL (POWER INJECTOR) INPUT OUTPUT POWER CONSUMPTION POWER OVER ETHERNET MANAGEMENT LOCAL REMOTE SNMP  MTBF AND WARRANTY PACKAGE CONTENTS	Americas (FCC): 5.25-3.5 GHz (15 channels) Americas (FCC): 5.25-3.5 GHz (21 channels) Europe (Russia): 5.15-6.08 GHz (22 channels) 54, 48, 36, 24, 18, 12, 9, 6, 4.5, 3, 2.25, 1.5 Mbps 22.5 x 15.5 x 14.75 in (571 x 394 x 375 mm) 12.6 X 12.6 X 3.5 in (320 X 320 X 89 mm) 35 lbs (15.9 kg) 6 lbs (15.9 kg) 6 lbs (15.9 kg) 6 lbs (2.72 kg) -338 to 60%C (-27.5% to 140% Fahrenheit) -55% to 80%C (-41% to 176% Fahrenheit) Max 100% relative humidity (non-condensing) Max 100% relative humidity (non-condensing) Max 100% relative humidity (non-condensing) HP67 Voltage 110 to 250 VAC Current 420mA at 48V Maximum 20 Watt Via RJ-45 Ethernet interface port R5-232 serial (R111 and DB-9) Telnet, Web GUI, TFTP SMMPV1/v2; MIB-II; Ethernet-like MIB; Bridge; MIB; 802.3MAU; 802.11 MiB; ORINOCO MIB, RC 1157; RFC 1213; RFC 1643; RFC 1493; RFC 2668 100,000 hours; 1-year on parts and labor Tsusami QuickBridge; IM Model 245-4R, 505-4R, or 5054-R-LR Radios with Integrated Antennas (Qty 2) Sets of wall/ pole mounting brackets (Qty 2) Power Injectors for 245-R, B054-R, OS 504-R-LR Radios with Integrated Antennas (Qty 2) Sets of wall/ pole mounting brackets (Qty 2) Power Injectors for 245-R, B054-R, OS 504-R-LR Radios with Integrated Antennas (Qty 2) Sets of wall/ pole mounting brackets (Qty 2) Power Injectors for 245-R, B054-R, OS 5054-R-LR Radios with Integrated Antennas (Qty 2) Sets of wall/ pole R-POMS Soft-QB-LR-WS, 5054-QB-LR-WD, 5054-QB-EU, 5054-QB-EU
DATA RATE PHYSICAL SPECS DIMENSIONS PACKAGED UNPACKAGED UNPACKAGED UNPACKAGED UNPACKAGED ENVIRONMENTAL SPECS TEMPERATURE OPERATING STORAGE HUMIDITY OPERATING	Americas (FCC): 5:25:35:6:05 GHz (12 channels)         Europe (FTSI): 5:47:5:725:8:05 GHz (22 channels)         Europe (Russia): 5:15:6:08 GHz (22 channels)         5:4, 48, 36, 24, 18, 12, 9, 6, 4.5; 3; 2:25; 1.5 Mbps         22:5 x 15:5 x 14.75 in (571 x 394 x 375 mm)         12:6 X 12.6 X 3.5 in (320 X 320 X 89 mm)         3:5 lbs (15:9 kg)         6 lbs (2:72 kg)         6 lbs (2:72 kg)         -33* to 60%C (-27.5% to 140% Fahrenheit)         -55* to 80%C (-41* to 176* Fahrenheit)         -70%         Voltage 110 to 250 VAC         Current 420mA at 48V         Maximum 20 Watt         Via guid (R111 and DB-9)         Telenet, Web GUI, TFTP         SNMPV1/Cz, MIB-II; Ehremet-like MIB; Bridge; MIB; 802.3MAU;         8000 hours; 1-year on parts and labor         Teinet, Web GUI, TFTP         SNMPV1/Cz, MIB-II; Ehremet-like MIB; Bridge; MIB; 802.3MAU;         8000 hours; 1-year on parts and labor         Teinet, Web GUI, TFTP         SNMPV1/Cz, MIB

#### For detailed technical specifications, please go to http://proxim.com/products/ptpwireless-backhaul/tsunamir-quickbridge

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### 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