Tsunami MP.11 Model 5054-R
Wireless Point-to-Multipoint System

The Next-Generation Broadband Wireless Access Solution
Like its predecessor, the 5054-R continues to offer a comprehensive feature set to future-proof wireless networks.

- With a Peltier heating and cooling technology inside a rugggedized enclosure, the 5054-R can be deployed in extreme weather conditions
- Support for three 5 GHz bands - 5.25, 5.47 and 5.725 GHz, 20 total non-overlapping channels and performance that scales from 6 to 36 Mbps, all selectable via simple user interfaces
- Advanced revenue-enhancing features are standard - including flexible bandwidth provisioning for DSL, T1 or Ethernet-like tiered services as well as NAT and DHCP for IP-based storage and e-mail hosting

Mobile Roaming Enables New Applications
Proxim innovation delivers another wireless industry first - mobile roaming of Subscriber Units (SU) between Base Station Units (BSU). Public safety first responder networks, transportation system monitoring and telemetry and mobile security and surveillance are now all possible with a low cost, robust system.

- Fast handoff at speeds up to 200 km per hour (120 miles per hour)
- Customizable roaming parameter maintains minimum bandwidth required for application performance

Adaptive Wireless Network Optimizes Performance

- WORP adapts to avoid collisions and maximizes data content with each transmission
- Dynamic Data Rate Selection automatically compensates for temporary link degradation maintaining robust connectivity and mitigating service calls

Applications

- Emergency First Responders
  Critical information delivery such as medical data and video feeds during in-progress events

- Enterprise Campus Connectivity
  Extend main network to remote branch offices, warehouses or other out buildings without leased line

- Mobile Hot Spot
  On-demand entertainment and broadband access solutions for ferry, transit busses and railway system commuters

Paving the Path to WiMAX Today
Drawing on Proxim’s leadership in the WiMAX arena, the 5054-R has been developed as a platform to enable WiMAX applications. By deploying the 5054-R today, businesses are assured of a smooth transition to the WiMAX family of products.

- Equipped with software features to address the WiMAX markets such as: mobile hot-spot, MAN, cost-effective last mile access, security and surveillance
- Migration plan to support future WiMAX customers allowing business growth and network scalability
- Investment protection through common concept of network design and software feature sets, which includes mobile roaming, rich management capabilities, most advanced encryption with AES and authentication via RADIUS, antenna alignment utility, and revenue-enhancing services with bandwidth control, NAT/ DHCP

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Security and Surveillance
Wireless solutions for bandwidth-intensive and high-definition IP-surveillance cameras located at important city and transportation infrastructure such as airports, bridges and trains.

Business and Residential Last Mile Access
Competitive broadband service alternative to DSL or cable modems for residences and T1 or Ethernet for businesses.

Metropolitan Area Networks
Secure and reliable connectivity between city buildings.

Advanced Security Protects Privacy
Multiple security mechanisms protect operator, residential customer and enterprise privacy.

- Weatherized enclosure allows colocation on rooftops – limiting physical access
- Proxim’s Wireless Outdoor Routing Protocol (WORP) prevents snooping common to Wi-Fi systems
- Advanced encryption protects over-the-air transmission
- Intracell blocking forbids direct communication between Subscriber Units
- BSU and SU mutual authentication eliminates unauthorized use of system by rogue SUs and man-in-the-middle attacks
- Password protection of all remote management methods

Designed for Fast Installation and Lower Maintenance Cost
The 5054-R incorporates hardware and software features that reduce labor costs associated with initial deployment and post-sales maintenance.

- Decrease Subscriber Unit configuration time with integrated and dual-polarized 23-dBi antennas
- Eliminate guess work in locating the remote antennas with audible tone and real-time signal strength measurements
- Support for both local and remote management, removing the need for expensive on-site supports

Investment Protection for Current Tsunami MP.11 Model 5054 (MP.11a) customers
Both the 5054 and the 5054-R can be deployed together with full interoperability and backward compatibility.

- No new training required with identical software and user interfaces
- Common accessories such as antennas, cables and surge arrestors reduce spare inventory
- Expanding a 5054 network by adding new 5054-Rs can be done incrementally and non-disruptively

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Proxim Wireless Networks
Tsunami MP.11 Model 5054-R Specifications

**PERFORMANCE AND SCALABILITY**

Best-in-class performance with WORP: By eliminating in-the-air collisions and maximizing data content for each transmission, WORP (Wireless Outdoor Router Protocol) significantly improves performance.

Near line of sight capable: Line of sight and near line of sight connectivity extends deployment flexibility in rural as well as high-density urban areas.

Highest performance per cell: Supports 6 sectors per cell with an aggregate data rate of 216 Mbps and throughput of 144 Mbps.

Dense subscriber support per cell: Supports up to 1,500 subscribers with 6 sectors.

Guaranteed data rate while roaming: Allows bandwidth-intensive applications, such as high-definition video streaming, in mobile environments.

**SECURITY**

Unicast, multicast and broadcast storm control: User definable threshold levels prevent excessive bandwidth consumptions from degrading network performance.

Packet filtering: MAC, Ethertype, IP address filtering provides very granular networks security.

Intracell blocking: Allows the BSU to act as the central policy enforcer for SU to SU communications, further enhancing subscriber units’ privacy.

WORP as a secure protocol: Unbreakable by wireless decryptors, WORP is preferred for security and surveillance deployments.

802.1x authentication: Supports include PEAP, EAP-TLS, EAP-TTLS, EAP-MD5, and EAP-MD5 to yield mutual authentication and dynamic, per-user, per-session encryption keys.

Secure encryption technology: Supports for WEP, WEP+ and AES with TKIP encryption enhancements including key hashing (per-packet keying), message integrity check (MIC) and broadcast key rotation via WPA TKIP.

Interference mitigation tool: Variable Receive Threshold, Transmit Power Control, 20 non-overlapping channels and Dynamic Frequency Selection.

**LOWER COST OF OWNERSHIP**

Dynamic Data Rate Selection (DDRS): Automatically optimizes throughput as link conditions change or as subscribers roam. Connectivity is automatically maintained when link quality degrades.

Flexible and secure remote management: Supports remote management via Telnet, SNMP and web interfaces with password protections.

Antenna alignment tool: Audible tone and CLI with running statistics displaying real-time signal strength ease antenna system installation.

Comprehensive station statistics: Unit and group statistics are available for monitoring, planning and management of a wireless network.

Lower recurring lease cost: Co-locating unit on rooftops with plenty of available space, lowers lease cost.

Options for subscriber units with type-N or integrated antenna: Subscriber unit with type-N connector supports a broad selection of standard-based external antennas and subscriber unit with integrated antennas supports dual polarizations, vertical and horizontal, to minimize installation time.

Extreme Operating Temperature: Rated for –33º to 60º Celsius, 5054-R can be deployed in hot or cold outdoor climates.

Fast boot-up in cold climate: Sophisticated heating technology automatically heats the system to shorten boot-up time.

Remote Reboot: System reboot or reset to factory default can be performed remotely via a power injector button.

**PRODUCT MODELS**

5054-BSUR: Tsunami MP.11 Model 5054-R Base Station Unit with Type-N Connector

5054-SUA: Tsunami MP.11 Model 5054-R Subscriber Unit with Type-N Connector

5054-SUR: Tsunami MP.11 Model 5054-R Subscriber Unit with Integrated 23-dBi Antenna

**INTERFACES**

Wired Ethernet: 10/100Base-TX Ethernet (RJ-45)

Wireless Protocol: WORP

Antenna Connector: Standard-N male (only for BSU and SU with Type-N connector)

**RADIO AND TRANSMISSION SPECIFICATIONS**

Modulation Method: OFDM

Unlicensed Frequencies: Americas (FCC): 5.25 to 5.35 GHz (3 channels), 5.725 to 5.850 GHz (5 channels)

Europe (ETSI): 5.47 to 5.725 GHz (11 channels)

Licensed Frequency: UK: 5.725 - 5.850 GHz (4 channels)

Data Rate: 6, 9, 12, 18, 24, 36 Mbps

**UNIT PHYSICAL SPECIFICATIONS**

Dimension:

- Packaged: 14.57 x 13.70 x 8.19 in (370 x 348 x 208 mm)
- Unpackaged: 10.5 x 10.5 x 3.25 in (267 x 267 x 83 mm)
- Unpackaged (SUR): 12.60 x 12.60 x 3.50 in (320 x 320 x 89 mm)

Weight:

- Packaged (BSUR and SUA): 9.2 lbs (4.2 kg)
- Unpackaged weight (BSUR and SUA): 5.5 lbs (2.49 kg)
- Unpackaged weight (SUR): 10.1 lbs (4.6 kg)
- Unpackaged weight (SUR): 6.0 lbs (2.72 kg)

**ENVIRONMENTAL SPECIFICATIONS**

Temperature:

- Operating: -33º to 60ºC (-27.5º to 140º Fahrenheit)
- Storage: -55º to 85ºC (-41º to 195º Fahrenheit)

Humidity:

- Operating: Max 95% relative humidity (non-condensing)
- Storage: Max 95% relative humidity (non-condensing)

Water and Dust Proof: IP65

**ELECTRICAL**

Power Injector:

- Input: 42 to 60 VDC
- Output: 48 VDC
- Power Consumption: Maximum 20 Watt

**MANAGEMENT**

Local Management: RS-232 serial (RJ11 and DB-9)

Remote Management: Telnet, Web GUI, TFTP

SNMP: SNMPv1/v2; MIB-II; Ethernet-like MIB; Bridge MIB; 802.3 MAU, 802.11 MIB, Private MIB, 802.11e MIB

**MTBF AND WARRANTY**

100,000 hours; 1-year on parts and labor

**PACKAGE CONTENTS**

- Tsunami MP.11 Model 5054-R Base Station or Subscriber Unit, wall/pole mounting bracket, power injector for5054-R, country specific power cord, Ethernet cable weather-proof plug, Documentation and Software CD-ROM

For detailed technical specifications, please go to http://www.proxim.com/products/bwa/multipoint/5054-Rtechspecs.html

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