5012-SUR Outdoor Subscriber Unit

*5012-SUI Indoor Subscriber Unit
(antenna not pictured)*

The industry-leading Tsunami™ MP.11 product line – providing the capabilities of fixed and mobile WiMAX for license-free frequency bands worldwide – has been extended to include an economical series of subscriber units ideal for large scale wireless deployments.

Proxim Wireless is a leader and an early innovator in wireless technology for providing high-speed, long-range broadband wireless access to complement Wi-Fi® networks. The MP.11 product line has enabled municipalities and service providers to bridge the digital divide, increase productivity, cut network costs, and create new business opportunities — all through WiMAX features for license-free frequency bands worldwide. Consisting of an indoor and outdoor form factor, the 5012 series of subscriber units is designed specifically for the residential market and accelerates the service provider's break-even point, making this product ideal for large-scale wireless deployments.

MP.11 5012 Subscriber Unit Features:

- Indoor, self-installable form factor and outdoor, ruggedized form factor
- Throughput comparable to or better than cable/DSL: 12 Mbps aggregate throughput
- Aggressive ROI and fast payback for large-scale deployments
- Power over Ethernet support
- Designed for quick and easy installation – Indoor subscriber unit bundled with 15 dBi window antenna and outdoor unit contains 18 dBi integrated antenna
- Compatible with existing MP.11 5054, 5054-R and 5054-R-LR Base Station Units

MP.11 System Features:

- License-free frequency bands worldwide: versions available for 5.15-5.35 GHz, 5.47-5.725 GHz and 5.725-5.850 GHz
- Scheduled media access controller (MAC), also known as polling: enables a base station to hear all subscriber units, preventing nodes from interfering with each other and increasing system throughput
- Orthogonal frequency division multiplexing (OFDM): enhances non-line-of-sight performance improving deployment in challenging areas
- Quality of Service (QoS): supports voice, video and data converged networking
- RADIUS-based bandwidth management: deliver multiple service plans
- Asymmetric bandwidth management: increases service provider revenue through creation of uplink bandwidth tiers
- Dynamic Data Rate Selection (DDRS): maximizes subscriber coverage by allowing each subscriber to receive the maximum data rate possible
- Dynamic Frequency Selection (DFS): prevents interference with other systems; for 5.4 GHz, MP.11 has achieved ETSI EN 301-893 v1.3.1 certification
- Security: advanced encryption with AES protects over-the-air transmission; intracell blocking forbids direct communication between subscriber units
- Deployment tools: antenna alignment and remote management and configuration eliminate the need for truck rolls

Outdoor Broadband Wireless Access

Proxim Wireless offers the industry's most complete suite of outdoor broadband wireless access products. This portfolio includes:

- **Tsunami™ MP.11 –** capabilities of fixed and mobile WiMAX for U.S. and global markets
- **Tsunami™ MP.16 –** WiMAX for the 3.5 GHz frequency band
- **ORiNOCO® Wi-Fi Mesh –** Outdoor and indoor Wi-Fi mesh for service providers and municipalities

Proxim Wireless is a global pioneer 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.

FEATURES

PERFORMANCE AND SCALABILITY

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

QUALITY OF SERVICE (QoS)

WiMAX 802.16 QoS	Supports up to 8 QoS Classes; Supports up to 8 Service Flows per class
Traffic Prioritization Parameters Supported	IP ToS (Layer 3 QoS identification), IP Protocol List, 802.1p tag (Layer 2 QoS identification), Source IP Address+Mask, Destination IP Address+Mask, Source TCP/UDP port ranges, Destination TCP/UDP port ranges, Source MAC addresses, Destination MAC address, VLAN ID, Ether type
Committed Information Rate (CIR)	Users can set CIR for each Subscriber Unit
Minimum Information Rate (MIR) Support	User defined MIR

SECURITY

Unicast, Multicast and Broadcast Storm	User definable threshold levels prevent excessive bandwidth consumptions from degrading network control performance
Packet Filtering	MAC, Ethertype, IP address filtering provides very granular network security
Intracell Blocking	Allows the BSU to act as the central policy enforcer for SU to SU communications, further enhancing subscriber units' privacy
Secure Encryption and Authentication	Support for WEP, WEP+ and AES for "over the air" encryption and Radius for user authentication
Interference Mitigation Tool	Variable Receive Threshold, Transmit Power Control 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	Provides running statistics with real time signal strength to aid antenna installation
Comprehensive Station Statistics	Unit and group statistics are available for monitoring, planning and management of a wireless network

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PRODUCT MODELS	
5012-SUI-WA	Tsunami MP.11 Model 5012 Indoor Subscriber Unit bundled with 15 dBi Window Antenna
5012-SUR	Tsunami MP.11 Model 5012 Outdoor Subscriber Unit with 18 dBi Integrated Antenna

RADIO & TRANSMISSION SPECIFICATIONS	
MODULATION METHOD	OFDM
FREQUENCY BANDS	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): 5.15-5.850 GHz (82 channels) Europe (Licensed in the UK): 5.725- 5.850 GHz (21 channels)

INTERFACES	
WIRED ETHERNET	Wired Ethernet 10/100Base-TX Ethernet (RJ-45)
ANTENNA CONNECTOR	5012-SUI: N-Male terminated pigtail; 5012-SUR: N/A
ANTENNA GAIN	5012-SUI: 15 dBi external window antenna; 5012-SUR: 18 dBi integrated antenna
DATA RATE	54, 48, 36, 24, 18, 12, 9, 6, 4.5, 3, 2.25, 1.5 Mbps
OVER-THE-AIR THROUGHPUT	Maximum 12 Mbps
TX POWER	Up to 18 dBm

UNIT PHYSICAL	5012-SUI	5012-SUR
DIMS (Unpackaged)	7.8 x 4.75 x 1.0 inches (198 x 121 x 25 mm)	4.0 x 8.5 x 10.2 inches (98 x 215 x 259 mm)
WEIGHT (Unpackaged)	0.65 lbs (0.29 kg)	2.4 lbs (1.02 kg)

ENVIRONMENTAL	5012-SUI	5012-SUR
TEMPERATURE: OPERATING STORAGE	0° to 50°C -10° to 70°C	-33° to 60°C -44° to 80°C
HUMIDITY	95% (non-condensing)	100% (non-condensing)

ELECTRICAL	
INPUT	110 to 240 VDC power 5V (SUI Only)
POWER OVER ETHERNET	Via RJ-45 Ethernet interface port 802.3af compliant

MANAGEMENT	
LOCAL	RS-232 serial (RJ11 and DB-9)
REMOTE	Telnet Web GUI, TFTP
SNMP	SNMPv1/v2; MIB-II ; Ethernet-like MIB; BridgeMIB; 802.3MAU; 802.11 MIB; Private MIB; ORiNOCO MIB; RFC 1157; RFC 1213; RFC 1643; RFC 1493; RFC 2668

LEDS	Power, Radio Activity, Ethernet Activity
MTBF & WARRANTY	>100,000 hours; 1 year parts and labor

PACKAGE CONTENTS	
5012-SUI	5012-SUI Indoor Subscriber unit, N-type Male terminated pigtail, 15 dBi window antenna, Wall Mountable DC power supply, Mounting bracket for ceiling or wall mounting, Quick Install Guide and CD with documentation and regulatory guide
5012-SUR	5012-SUR Outdoor Subscriber unit with 18 dBi integrated antenna, Band Clamps for pole mount, Quick Install Guide and CD with documentation and regulatory guide
ADDT'L ACCESSORIES	Universal Mounting Bracket for wall mounting (Part #1087-UMK), Active Ethernet Injector (4301-XX)
RELATED PRODUCTS	Tsunami MP.11 5054 Base Station (5054-BSU, 5054-BSUR or 5054-BSUR-LR), Tsunami MP.11 5054 Subscriber Station (5054-SU, 5054-SUR or 5054-SUA), 5 GHz Window or Panel Antennas, ServPak for enhanced support

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For detailed technical specifications, please go to **http://ww.proxim.com**

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