



MP.11 Subscriber Unit

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.

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 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:

- 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 – Unit contains 18 dBi integrated antenna
- Compatible with existing MP.11 5054, 5054-R, and 5054-R-LR Base Station Units. Use the 5054-R-LR for extended frequencies above 5.95 GHz

MP.11 System Features:

- License-free and licensed frequency bands worldwide: supports 5.15-5.35 GHz, 5.47-5.725 GHz, 5.725-6.08 GHz frequency bands.
- 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

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, Ether type, 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
WORP as a Secure Protocol	Un-snoop able by wireless decryptors, WORP provides critical feature support for secure long-range wireless deployments in unlicensed frequency spectrum
Secure Encryption and Authentication	Supports for WEP, WEP+ and AES 128 bit 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	Audible tone and CLI with running statistics displaying real-time signal strength ease antenna system installation
Comprehensive Station Statistics network	Unit and group statistics are available for monitoring, planning and management of a wireless

PRODUCT MODELS		ENVIRONMENTAL	
5012-SUR-XX	Tsunami MP.11 Model 5012 Outdoor Subscriber Unit with 18 dBi Integrated Antenna	TEMP: STORAGE	-33° to 60°C
		OPERATING	-44° to 80°C
RADIO & TRANSMISSION SPECIFICATIONS		HUMIDITY	100% (non-condensing)
MODULATION METHOD	OFDM	ELECTRICAL	
	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 (185 channels) Europe (Licensed in the UK): 5.725- 5.850 GHz (21 channels)	INPUT	110 to 240 VDC power 5V (SUI Only)
FREQUENCY BANDS		POWER OVER ETHERNET	Via RJ-45 Ethernet interface port 802.3af compliant
INTERFACES		MANAGEMENT	
WIRED ETHERNET	Wired Ethernet 10/100Base-TX Ethernet (RJ-45)	LOCAL	RS-232 serial (RJ11 and DB-9)
ANTENNA CONNECTOR	N/A	REMOTE	Telnet Web GUI, TFTP
ANTENNA GAIN	5012-SUR: 18 dBi integrated antenna	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
	54, 48, 36, 24, 18, 12, 9, 6, 4.5, 3, 2.25, 1.5 Mbps	LEDS	Power, Radio Activity, Ethernet Activity
DATA RATE		MTBF & WARRANTY	>100,000 hours; 1 year parts and labor
OVER-THE-AIR THROUGHPUT	Maximum 12 Mbps	PACKAGE CONTENTS	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
TX POWER	Up to 18 dBm	ADD'T'L ACCESSORIES	Universal Mount Bracket for wall mount(1087-UMK), Active Ethernet Injector (4301-XX)
UNIT PHYSICAL		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, ProximVision® NMS
DIMS:			
PACKAGED	13.9 x 11.1 x 6.1 in (353 x 282 x 155 mm)		
UNPACKAGED	4.0 x 8.5 x 10.2 in (98 x 215 x 259 mm)		
WEIGHT:			
PACKAGED	3.3 lbs (1.5 kg)		
UNPACKAGED	2.4 lbs (1.02 kg)		

For detailed technical specifications, please go to <http://proxim.com/products/point-to-multipoint/tsunamir-mp11-5012>

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