

**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 with an indoor subscriber unit ideal for the residential market!**



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. The 5012 subscriber unit is designed specifically for the residential market and accelerates the service provider's break-even point, making this product ideal for large-scale deployments.

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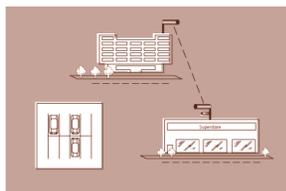
**MP.11 5012 Subscriber Unit Features:**

- Indoor, self-installable form factor
- Throughput comparable to or better than cable/DSL: based on 12 Mbps aggregate throughput
- Priced for fast payback on large-scale deployments
- Includes 15 dBi Window Antenna for quick installation

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**MP.11 System Features:**

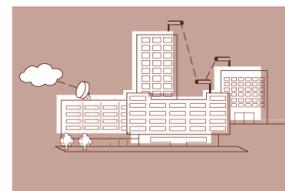
- License-free frequency bands worldwide: versions available for 5.15-5.35 GHz, 5.47-5.725 GHz and 5.725-5.850 GHz
- Scheduled media access controller (MAC), also known as polling: enables a base station to hear all subscriber units, preventing nodes from interfering with each other and increasing system 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.



Security and Surveillance



Last Mile Access



Metropolitan Area Networking

## 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

<b>PRODUCT MODELS</b>		<b>ENVIRONMENTAL SPECIFICATIONS</b>	
5012-SUI-WA-US	Tsunami MP.11 Model 5012 Indoor Subscriber Unit with 15 dBi Window Antenna, US/CAN PSU	TEMPERATURE: OPERATING	0° to 50°C
5012-SUI-WA-EU	Tsunami MP.11 Model 5012 Indoor Subscriber Unit with 15 dBi Window Antenna, EU PSU	STORAGE	-10° to 70° C
5012-SUI-WA-UK	Tsunami MP.11 Model 5012 Indoor Subscriber Unit with 15 dBi Window Antenna, UK PSU	HUMIDITY: OPERATING	95% (non-condensing)
<b>INTERFACES</b>		STORAGE	95% (non-condensing)
WIRED ETHERNET	Wired Ethernet 10/100Base-TX Ethernet (RJ-45)	<b>ELECTRICAL</b>	
ANTENNA CONNECTOR	N-Male terminated pigtail	INPUT	110 to 240 VDC power 5V
ANTENNA GAIN	15 dBi	POWER OVER ETHERNET	Via RJ-45 Ethernet interface port
<b>RADIO &amp; TRANSMISSION SPECIFICATIONS</b>		<b>MANAGEMENT</b>	
MODULATION METHOD	OFDM	LOCAL	RS-232 serial (RU11 and DB-9)
UNLICENSED FREQUENCIES	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)	REMOTE	Telnet Web GUI, TFTP
DATA RATE	54, 48, 36, 24, 18, 12, 9, 6, 4.5, 3, 2.25, 1.5 Mbps	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
TX POWER	Up to 18 dBm	<b>MTBF &amp; WARRANTY</b>	177,000 hours; 1 year parts and labor
<b>UNIT PHYSICAL SPECIFICATIONS</b>		<b>LEDS</b>	Power, Radio Activity, Ethernet Activity
DIMENSIONS (Packaged)	14.3 x 7.6 x 4.4 inches (364 x 194 x 112 mm)	<b>PACKAGE CONTENTS</b>	5012-SUI Indoor Subscriber unit, N-type Male terminated pigtail adapter cable, 15 dBi Window Antenna, Quick Installation Guide, CD with documentation and regulatory guide, Wall Mountable DC power supply, Mounting bracket for ceiling or wall mounting
WEIGHT (Packaged)	3.52 lbs (1.6 kg)	<b>RELATED PRODUCTS</b>	Tsunami MP.11 5054 Base Station (5054-BSU), Tsunami MP.11 5054 Subscriber Station (5054-SU), 5 GHz Window or Panel Antennas, Active Ethernet injector (4301-XX), ServPak