



Tsunami™ MP.11 Wireless Ethernet System

The Most Economical Point-to-Multipoint Solution

The Tsunami MP.11 is a robust and affordable 11 Mbps wireless point-to-multipoint connectivity solution ideal for campus networking and last mile access. Easily providing an outdoor extension to your LAN, the system enables the instant creation of wireless WANs for a number of applications such as security and surveillance and portable classrooms. With Tsunami MP.11, Internet Service Providers can cost-effectively deploy last mile access networks for business and residential customers in medium-sized communities. Utilizing the new Wireless Outdoor Router Protocol (WORP), the system provides a high aggregate bandwidth for best-in-class performance and scalability.

Cost-effective, complete last mile access for community networks

Consisting of a Base Station Unit and low cost Subscriber Units, Tsunami MP.11 enables service providers to compete effectively against ADSL and Cable modem solutions. Subscriber units, available in residential and business versions, are extremely affordable and completely self-installable. The system can be managed and configured remotely – eliminating the need for truck-rolls to the customer.

Secure and reliable LAN extension for campuses

Tsunami MP.11 provides secure and reliable connectivity between campus buildings. The system easily integrates into existing networks and management systems. Quick-to-deploy and cost-effective, Tsunami MP.11 provides rapid pay-back times.

Easy-to-deploy networks for security and surveillance

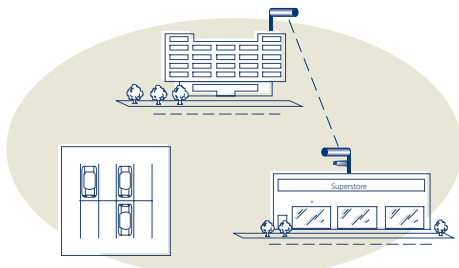
Tsunami MP.11 addresses the cost and installation challenges usually associated with deploying outdoor security networks. The system is ideal for providing surveillance in a wide range of areas including shopping mall parking lots, enterprise warehouses and university campuses. Digital cameras are simply connected to Tsunami MP.11 Subscriber Units, which transmit the high-resolution video back to a centralized Base Station in real-time.

Applications

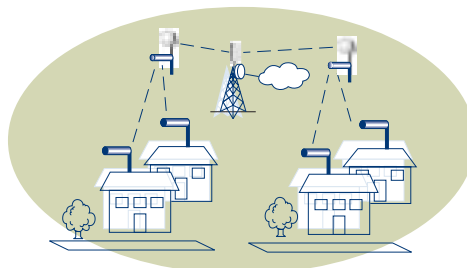
- Security and surveillance networks
- Campus networking – LAN extensions
- Broadband last mile access
- Backhaul connectivity

Features and Benefits

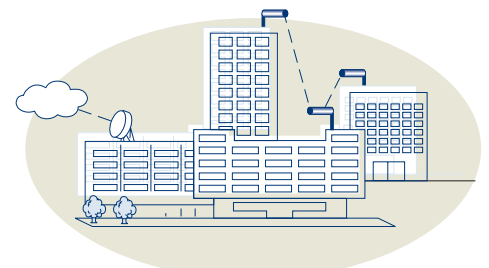
- Wireless Outdoor Router Protocol (WORP) enables high performance and scalability
- Radius-based Bandwidth Management allows ISPs to offer multiple service options
- 128 bit encryption and Access Control Filtering protects network from unauthorized access
- Broad array of management capabilities reduces management and IT expenditures (no truck rolls required)
- RADIUS Based Authentication
- Residential Subscriber Unit features all-in-one box solution and is self-installable
- Supports a broad array of antennas and flexible deployment options



Security and Surveillance



Last Mile Access



Campus Networking

TSUNAMI MP.11 Specifications

INTERFACE					
Ethernet Interface	Ethernet 10/100 Base-T (RJ-45)				
Wired LAN protocol	IEEE 802.3 (CSMA/CD)				
Wireless Interface	Standard-N Male				
RADIO CHARACTERISTICS					
Frequency Channels	2.4 – 2.497 GHz				
Modulation Technique	Direct Sequence Spread Spectrum (CCK, DQPSK, DBPSK)				
Spreading	CCK 11 – Chip Barker Sequence				
Media Access Protocol	Wireless Outdoor Router Polling (WORP)				
Nominal Output Power	8 dBm (ETSI, FR) or 15 dBm (FCC, ETSI, FR)				
Bit Error Rate (BER)	Better than 10 ⁻⁵				
Data Rate	11 Mb/s	5.5 Mb/s	2 Mb/s	1 Mb/s	
Typical Receiver	- 82 dBm	- 87 dBm	- 91 dBm	- 94 d Bm	
Delay Spread	65 ns	225 ns	400 ns	500 ns	
PHYSICAL SPECIFICATIONS					
Dimensions	261 x 185 x 50 mm (10.2 x 7.3 x 2 in)				
Weight	1.75 Kg (3.86 lb)				
ENVIRONMENTAL SPECIFICATIONS					
	TEMPERATURE		HUMIDITY		
Operating / Storage	0 – 55°C / -10 – 50°C		20 – 80 % relative humidity		
POWER SUPPLY					
Types	Australia, UK, US, Japan, Europe				
Voltages	Integrated module: Autosensing 100/240 VAC 50/60 Hz; 0.2 A, support of Power-over-Ethernet (not on RSU)				
LEDs					
4	Power, Ethernet LAN Activity, Wireless Activity				
MANAGEMENT					
Wireless Network Manager software, SNMP MIB v2c compliant					
WARRANTY					
12 months (parts and labor)					
MTBF					
150,000 hours (without wireless card), 75,000 hours (with wireless card) based on workload of 8760 hours/year continuous operation, within operating conditions					
DISTANCE FCC AND NON REGULATED CONFIGURATIONS					
Antennas	24 dBi	14 dBi	12 dBi	10 dBi	7 dBi
24 dBi	(1 Mb/s) 26.2 km / 16.3 mi (2 Mb/s) 24.5 km / 15.2 mi (5.5 Mb/s) 21.8 km / 13.5 mi (11 Mb/s) 19.4 km / 12.0 mi	19.0 km / 11.8 mi 16.9 km / 10.5 mi 14.4 km / 8.9 mi 12.8 km / 8.0 mi	17.3 km / 10.7 mi 15.4 km / 9.6 mi 13.1 km / 8.1 mi 11.2 km / 7.0 mi	15.8 km / 9.7 mi 14.1 km / 8.8 mi 12.0 km / 7.5 mi 10.2 km / 6.3 mi	14.1 km / 8.8 mi 12.0 km / 7.5 mi 10.2 km / 6.3 mi 8.7 km / 5.4 mi
14 d Bi	(1 Mb/s) N/A (2 Mb/s) N/A (5.5 Mb/s) N/A (11 Mb/s) N/A	12.0 km / 7.5 mi 10.2 km / 6.3 mi 8.7 km / 5.4 mi 7.1 km / 4.4 mi	10.9 km / 6.8 mi 9.3 km / 5.8 mi 7.6 km / 4.7 mi 6.1 km / 3.8 mi	9.5 km / 5.9 mi 8.1 km / 5.0 mi 6.6 km / 4.1 mi 5.5 km / 4.4 mi	8.1 km / 5.0 mi 6.6 km / 4.1 mi 5.5 km / 3.4 mi 4.0 km / 2.5 mi
DISTANCE ETSI AND FRANCE CONFIGURATIONS					
Antennas	24 dBi	14 dBi	12 dBi	10 dBi	7 dBi
14 dBi	(1 Mb/s) N/A (2 Mb/s) N/A (5.5 Mb/s) N/A (11 Mb/s) N/A	7.0 km / 4.3 mi 5.0 km / 3.1 mi 3.5 km / 2.2 mi 2.5 km / 1.6 mi	6.9 km / 4.3 mi 4.9 km / 3.0 mi 3.5 km / 2.2 mi 2.5 km / 1.6 mi	5.5 km / 3.4 mi 4.0 km / 2.5 mi 2.7 km / 1.7 mi 2.0 km / 1.2 mi	4.0 km / 2.5 mi 2.7 km / 1.7 mi 1.9 km / 1.2 mi 1.4 km / 0.9 mi
PRODUCT FAMILY					
Tsunami MP.11 Base Station Unit	Tsunami MP.11 Residential Subscriber Unit				
Tsunami MP.11 Subscriber Unit	Tsunami MP.11 Accessories (antenna's cables, surge arrestors)				

The distances referenced here are approximations and should be used for estimations only. Maximum ranges are based on a clearance of 10 meters, without any obstacles in the path of the antenna beam and using standard accessories, including antenna cable type (6m / 20 ft.)

Product is certified and available in the following geographies: USA, Canada, Europe, Australia, United Kingdom, Japan. To order, contact your nearest Proxim Value Added Reseller.

Proxim Corporation	tel: 800.229.1630
935 Stewart Drive	tel: 408.731.2700
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