



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

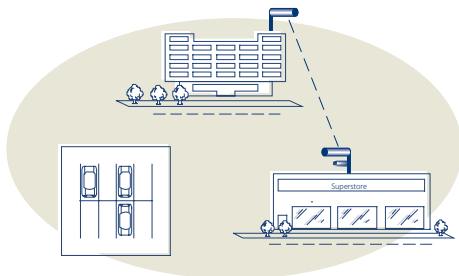
Tsunami MP.11 addresses the cost and installation challenges usually associated with deploying outdoor security networks. The system is ideal for providing surveillance in a wide range of areas including shopping mall parking lots, enterprise warehouses and university campuses. Digital cameras are simply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

Applications

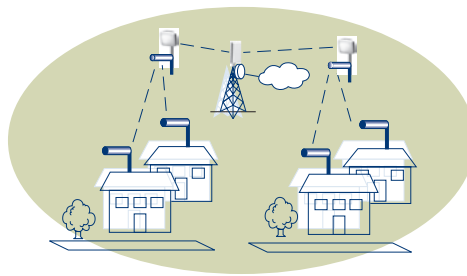
- Security and surveillance networks
- Campus networking – LAN extensions
- Broadband last mile access
- Backhaul connectivity

Features and Benefits

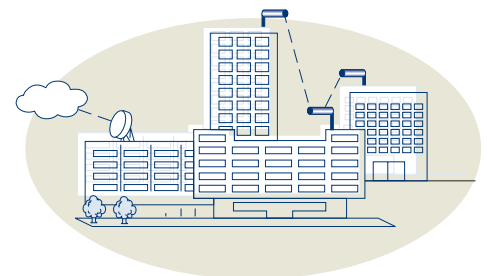
- Wireless Outdoor Router Protocol (WORP) enables high performance and scalability
- Radius-based Bandwidth Management allows ISPs to offer multiple service options
- 128 bit encryption and Access Control Filtering protects network from unauthorized access
- Broad array of management capabilities reduces 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



Metropolitan Area 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	ETSI	2400-2483.5 MHz; 13 channels; Output Power 8 or 15 dBm		
	FCC	2400-2483.5 MHz; 11 channels; Output Power 15 dBm		
	MKK	2400-2497 MHz; 14 channels; Output Power 15 dBm		
Modulation Technique	Direct Sequence Spread Spectrum (CCK, DQPSK, DBPSK)			
Spreading	CCK 11 – Chip Barker Sequence			
Media Access Protocol	Wireless Outdoor Router Polling (WORP)			
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 dBm
Delay Spread	65 ns	225 ns	400 ns	500 ns

PHYSICAL SPECIFICATIONS	
Dimensions	215 mm x 175 mm x 40 mm (8.46 in x 6.89 in x 1.57 in)
Weight	1080 g (2.38 lb)

ENVIRONMENTAL SPECIFICATIONS	TEMPERATURE	HUMIDITY
Operating / Storage	0 – 55°C / -20 to 75°C	Max 95% relative humidity (non-condensing)

POWER SUPPLY
Wall unit, autosensing, 100/240 VAC; 50/60 Hz, output 12V DC, 1.5A; Active Ethernet (Power Over Ethernet) - IEEE 802.3af compliant (not on RSU)

LEDs
3 Power, Ethernet LAN Activity, Wireless Activity

MANAGEMENT
SNMP MIB v2c compliant, TFTP and Telnet CLI

WARRANTY
12 months (parts and labor)

MTBF
150,000 hours

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	19.0 km / 11.8 mi	17.3 km / 10.7 mi	15.8 km / 9.7 mi	14.1 km / 8.8 mi
	(2 Mb/s)	24.5 km / 15.2 mi	16.9 km / 10.5 mi	15.4 km / 9.6 mi	14.1 km / 8.8 mi	12.0 km / 7.5 mi
	(5.5 Mb/s)	21.8 km / 13.5 mi	14.4 km / 8.9 mi	13.1 km / 8.1 mi	12.0 km / 7.5 mi	10.2 km / 6.3 mi
	(11 Mb/s)	19.4 km / 12.0 mi	12.8 km / 8.0 mi	11.2 km / 7.0 mi	10.2 km / 6.3 mi	8.7 km / 5.4 mi
14 dBi	(1 Mb/s)	N/A	12.0 km / 7.5 mi	10.9 km / 6.8 mi	9.5 km / 5.9 mi	8.1 km / 5.0 mi
	(2 Mb/s)	N/A	10.2 km / 6.3 mi	9.3 km / 5.8 mi	8.1 km / 5.0 mi	6.6 km / 4.1 mi
	(5.5 Mb/s)	N/A	8.7 km / 5.4 mi	7.6 km / 4.7 mi	6.6 km / 4.1 mi	5.5 km / 3.4 mi
	(11 Mb/s)	N/A	7.1 km / 4.4 mi	6.1 km / 3.8 mi	5.5 km / 4.4 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	7.0 km / 4.3 mi	6.9 km / 4.3 mi	5.5 km / 3.4 mi	4.0 km / 2.5 mi
	(2 Mb/s)	N/A	5.0 km / 3.1 mi	4.9 km / 3.0 mi	4.0 km / 2.5 mi	2.7 km / 1.7 mi
	(5.5 Mb/s)	N/A	3.5 km / 2.2 mi	3.5 km / 2.2 mi	2.7 km / 1.7 mi	1.9 km / 1.2 mi
	(11 Mb/s)	N/A	2.5 km / 1.6 mi	2.5 km / 1.6 mi	2.0 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.

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