Tsunami™ MP.11a
Wireless OFDM Point-to-Multipoint System

Affordable high performance broadband wireless solution

The Tsunami MP.11a is a robust and affordable 5 GHz wireless point-to-multipoint connectivity solution ideal for metropolitan area networking (MAN) and data backhaul. 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, enterprise backbone networks and broadband wireless access. With Tsunami MP.11a, Internet Service Providers can cost-effectively deploy business-class last mile access networks offering a variety of service levels using asymmetric and symmetric bandwidth control. Utilizing the new Wireless Outdoor Router Protocol (WORP), the system provides a high aggregate bandwidth for best-in-class performance and scalability.

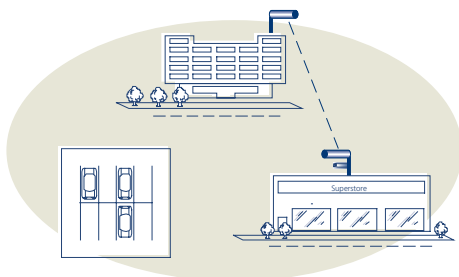### Cost effective, complete business class last mile access networks

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

Secure and reliable LAN extension for metropolitan networks
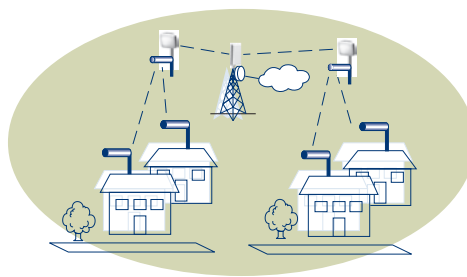
Designed to operate in non-line-of-sight conditions, Tsunami MP.11a provides secure and reliable connectivity between city buildings. The system easily integrates into existing networks and management systems. Quick-to-deploy and cost-effective, Tsunami MP.11a provides rapid pay-back times.

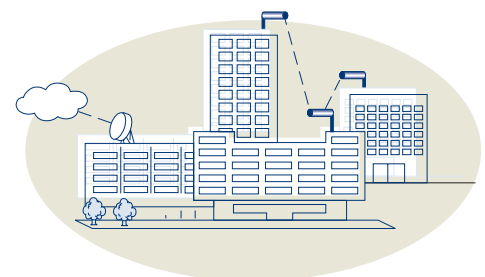### Easy-to-deploy multi camera networks for security and surveillance

Tsunami MP.11a addresses the cost and installation challenges usually associated with deploying outdoor surveillance 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.11a Subscriber Units, which transmit the high-resolution video back to a centralized Base Station Unit in real-time.

Applications

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

Features and Benefits

- OFDM allows support for applications in metropolitan areas with high building densities
- Wireless Outdoor Router Protocol (WORP) enables high performance and scalability
- Radius-based Bandwidth Management allows ISPs to offer multiple service options
- AES 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 that's easily installable
- Supports a broad array of antennas and flexible deployment options

Security and Surveillance

Last Mile Access

Metropolitan Area Networking

proXim
WIRELESS NETWORKS

Take your network further

Tsunami MP.11a 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	5.25-5.35 GHz; 4 channels, 5.47-5.725 GHz; 11 channels, 5.725-5.850 GHz; 5 channels
Channel Width	20 MHz
Modulation Technique	OFDM
Media Access Protocol	Wireless Outdoor Router Protocol (WORP)
Bit Error Rate (BER)	Better than 10^{-5}

OUTPUT POWER

Output power @ St-N connector (Channels)	36 Mbps	6-24 Mbps
5.25-5.35 GHz (56 and 60)	17.4 dBm	17.4 dBm
5.25-5.35 GHz (64)	12.5 dBm	12.5 dBm
5.47-5.725 GHz (100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140)	17.5 dBm	17.5 dBm
5.725-5.850 GHz (149, 153, 157, 161)	17.5 dBm	18.5 dBm
5.725-5.850 GHz (165)	17.5 dBm	17.5 dBm

Receiver Sensitivity (10% PER with 1000 byte packets)

Normal Mode (Sensitivity)	36 Mbps (- 76 dBm); 24 Mbps (- 80 dBm);18 Mbps (- 83 dBm); 12 Mbps (- 85 dBm); 9 Mbps (- 86 dBm); 6 Mbps (- 87 dBm)

Receiver Sensitivity (FCC only)

Turbo Mode (Sensitivity)	72 Mbps (- 73 dBm); 48 Mbps (- 77 dBm); 36 Mbps (- 80 dBm); 24 Mbps (- 82 dBm); 18 Mbps (- 83 dBm); 12 Mbps (- 84 dBm)

Transmit Power Setting - Steps (Output Power Reduction)

Max (0 dB); One Half (-3 dB); One Quarter (-6 dB); One Eighth (-9 dB); Minimum (-10 dB)

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

ENVIRONMENTAL SPECIFICATIONS	TEMPERATURE	HUMIDITY
Operating / Storage	0 – 55℃ / -20 to 75℃	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 available on RSU)

LEDs

3 - Power, Ethernet LAN Activity, Wireless Activity

MANAGEMENT

SNMP MIB v2c compliant, TFTP, Telnet CLI and HTTP, web-based GUI

WARRANTY

12 months (parts and labor)

MTBF

50,000 hours

DISTANCE

5.725 - 5.850 GHz Point-to-Multipoint

2.9 miles at peak performance, up to 11.5 miles maximum

5.47 - 5.725 GHz Point-to-Multipoint

0.75 miles at peak performance, up to 2.6 maximum

5.25 - 5.35 GHz Point-to-Multipoint

0.8 miles at peak performance, up to 2.8 miles maximum

PRODUCT FAMILY

Tsunami MP.11a Base Station Unit	Tsunami MP.11a Residential Subscriber Unit
Tsunami MP.11a Subscriber Unit	Tsunami MP.11a Accessories (antennas, cables, surge arrestors)

The distances referenced here are approximations and should be used for estimations only. Maximum ranges are based on a clear line of sight, without any obstacles in the path of the antenna beam and using standard accessories, including antenna cable type LMR-400 (6 m/20 ft.)

Predicting the performance of non-line-of-sight implementations is generally not possible. The non-line-of-sight capabilities of this system improve coverage compared to systems without non-line-of-sight capabilities.

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

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