



Tsunami™ Multipoint Fixed Wireless Broadband Access

High-Capacity Point-To-Multipoint Wireless Connectivity

Tsunami Multipoint is a point-to-multipoint outdoor wireless system offering a high-capacity, reliable alternative to wired data networks. Using IP packet radio transmitters, standard Ethernet interfaces, and an easy-to-deploy design, the Tsunami Multipoint system enables high-speed network connections to multiple Ethernet switches, routers or PCs from a single location. The systems consist of one or more Subscriber Units (SU) that communicate with a Base Station Unit (BSU).

Applications

- High-capacity content distribution in dense RF markets
- Voice and data backhaul without wires
- Enterprise and campus building connectivity
- Reliable access for security and surveillance systems
- Large deployment Internet, voice, and video access

Features and Benefits

- Capacities from 20Mbps – 60Mbps
- 5.8 GHz license-exempt frequency band
- Patented Active Interference Rejection technology
- Base Station Unit provides 60° sector — co-locate six for 360° coverage
- Point-to-multipoint communications from less than 1 mile/kilometer to 6 miles/10 kilometers
- Quick install includes audible alignment
- VoIP priority queuing support

Improve Performance and Lower Costs

With Tsunami Multipoint, you can now avoid the delays and costs associated with wired connections such as DSL, cable modems, and leased T1/E1 lines. Eliminating wire/fiber installation costs and recurring monthly fees, Tsunami Multipoint delivers carrier-class performance at an affordable price. VoIP support enables service providers to offer both voice and data services at a competitive rate and allows enterprises to reduce the cost of expensive T1 lines across a distributed campus.

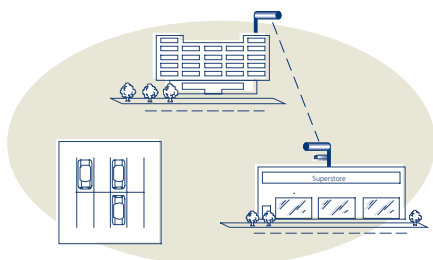
Gain Exceptional Wireless Reliability

Tsunami Multipoint has been specifically designed to counteract interference from the number of wireless devices growing in use daily. Active Interference Rejection (A.I.R.) Base Station Units ensure your wireless link remains reliable even in crowded, urban areas. By automatically finding and blocking interfering signals, service providers and enterprises can improve their customers' experience while minimizing maintenance needs.

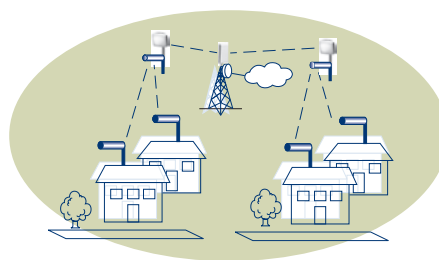
Extend or Enhance Your Network Overnight

barriers. Easy installation and operation allows network planners to quickly deploy up to 60 Mbps capacity between locations, making it the ideal solution for:

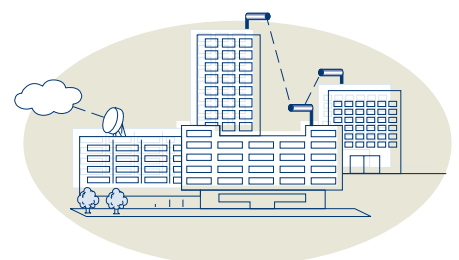
- Establishing high-speed connections between Internet Service Providers and their customers
- Organizations requiring high capacity WAN connectivity between multiple buildings or campuses
- Organizations or service providers seeking network redundancy for mission-critical wired connections



Security and Surveillance



Last Mile Access



Campus Networking

TSUNAMI Multipoint Specifications

	MODEL	MODEL NUMBER	AGGREGATE THROUGHPUT	THRESHOLD (BER=1X10 ⁻⁶)	OUTPUT EIRP	ACTIVE INTERFERENCE REJECTION (A.I.R)
Base Station Unit (BSU)	60 Mbps	301-40400-65	17, 25.5, 34, 51 Mbps	-77 dBm	36 dBm	✓ ✓
	20 Mbps	301-40400-25	17 Mbps	-89 dBm	36 dBm	
	60 Mbps	301-40400-65R	17, 25.5, 34, 51 Mbps	-77 dBm	36 dBm	
	20 Mbps	301-40400-25R	17 Mbps	-89 dBm	36 dBm	
Subscriber Unit (SU)	60 Mbps	301-40100-651/2	17, 25.5, 34, 51 Mbps	-89, -81, -77dBm	35 dBm	
	40 Mbps	301-40100-451/2	17, 25.5, 34 Mbps	-89, -81dBm	35 dBm	
	20 Mbps	301-40100-251/2	17 Mbps	-89 dBm	35 dBm	

SYSTEM

Operating Frequency Range	5725-5825 MHz
Radio Access Method	TDMA
Duplexing	Time Division Duplex (TDD)
Integrated Antenna: BSU/SU	18 dBi (60° x 6°)/20 dBi (10° x 10°)
Max Subscriber Units/BSU	1,023
Distance/Capacity Limits (clear line of site/over the air)	60 Mbps at 3 miles/5 kilometers; 40 Mbps at 4 miles/6.6 kilometers; 30 Mbps at 5 miles/8.3 kilometers; 20 Mbps at 6 miles/10 kilometers
Frequency Channels	4 non-overlapping, 6 available
Regulatory Compliance	FCC Part 15.400 (U-NII); FCC Part 15.247 (ISM) 20 Mbps only; Industry Canada RSS210

STANDARDS COMPLIANCE AND INTERFACES

Ethernet Interface	10/100BaseT
Ethernet Connector	RJ45 female
SU indoor-outdoor cable	RJ45 (outdoor) & DIN (indoor) over Category-5 cable
BSU indoor-outdoor cable	Weatherproof RJ45 connectors over Category-5 cable
Standards Compliance	IEEE 802.1d Bridging Mode; IEEE 802.1q transparent VLAN tagging

CONFIGURATION AND MANAGEMENT

Base Station Unit Configuration	Via Ethernet
Subscriber Unit Configuration	Automatic
Management	Via optional SNMP Toolkit (p/n 501-40400-ST)
Security	Authentication, IP/MAC Filtering
Software Upgrades	Over-the-air Subscriber Unit reprogramming; Downloadable Base Station Unit reprogramming

POWER/ENVIRONMENT

Electrical:	
Base Station Unit	+48 Volts DC, 1 Amp
Subscriber Unit	+28 Volts DC, 0.6 Amps
Base Station Unit Power Brick	100-240 Volts AC, 50/60 Hz
Subscriber Unit Power Brick	110 or 220 Volts AC
Operational Temperature	-33°-55° C (BSU and SU only)
Humidity	5%-100%, condensing
MTBF	Base Station Unit: 75,000 hours; Subscriber Unit: 100,000 hours
FCC	Part 15/Class B

PHYSICAL DIMENSIONS

	SIZE (W x H x D)	WEIGHT
SU (Outdoor Unit)	10.5 x 10.5 x 6.8 in/26.5 x 26.5 x 17.4 cm	10 lbs/4.5 kg
SU Power Brick (Indoor Unit)	3.6 x 5.1 x 2.6 in/9.2 x 13 x 6.7 cm	2.7 lbs/1.2 kg
BSU (Outdoor Unit)	10.2 x 24 x 6.6 in/25.9 x 61 x 16.8 cm	20 lbs/9 kg
BSU Power Brick (Indoor Unit)	3.7 x 7.1 x 2.5 in/9.5 x 18 x 6.3 cm	1.5 lbs/0.7 kg

MOUNTING (INSTALLATION)

Base Station Unit	Pole Mount, 1.75-2.75 in dia.
Subscriber Unit	Pole Mount, 1.25-1.75 in dia.

WIND LOADING

Maximum operational wind speed	50m/s (112mph)
Maximum survivable wind speed	90m/s (200mph)

WARRANTY

1-year limited parts and labor
Service Packs available for priority technical assistance

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