Presenting a Wireless Solution that exceeds 4G Speed Requirements with 300 Mbps data rate in 5.900 – 6.425 GHz Frequency Range!

With over 20 years of wireless innovation, Proxim has been providing Point-to-Multipoint (PtMP) solutions to carriers of all sizes for many years. Leveraging the advantages of OFDM, MIMO radio innovations and Proxim’s proprietary Wireless Outdoor Routing Protocol (WORP®), the Tsunami® MP-8100 exceeds the ITU requirements for 4G throughput speeds while providing Non-Line-Of-Sight functionality with the widest range of frequencies available. With incredible channel capacity, excellent spectrum flexibility and a prioritization platform for delivering voice, video and data applications, the MP-8160 satisfies service providers and government organizations with requirements for fast and worry-free wireless connectivity.

With data rates of 300 Mbps, the Tsunami® MP-8160 is an ideal solution for everything from last mile broadband wireless access (BWA) to wireless video surveillance. As the industry’s first Point to MultiPoint product to provide dual Gigabit Ethernet ports with PoE out, the Tsunami® MP-8100 becomes the first solution capable of powering IP video cameras or additional radios for even greater ease of deployment operating in extended frequencies from 5.900 to 6.425 GHz.

Supreme Performance

- Point to Multipoint solution that can deliver 300 Mbps data rates
- Provides reliable high performance under all traffic loads using Proxim’s Wireless Outdoor Routing Protocol (WORP®)
- Dual IPv4 and IPv6 stack for transparent evolution to tomorrow networks

Non-Line-of-Sight and Advanced Features

- Non-line-of-sight capable, utilizing OFDM and 2x2 MIMO techniques to improve link performance and penetrate through or around obstructions better
- Features dual Gigabit Ethernet ports with PoE in/out to power other devices like surveillance cameras and wireless access points
- Create tiered QoS service classes with ease
- Comes packaged in a compact form factor with a set of accessories for even greater ease of installation
- BSU redundancy (500 milliseconds switch over time) and Dynamic Channel Selection to ensure continuity of services whatever the condition
- Spectrum analysis feature helps to study frequency bands for interference, and select a relatively low interference channel.

Mobile Roaming Enables New Applications

Proxim innovation delivers mobile roaming of Subscriber Units (SU) between Base Station Units (BSU). Public safety first responder networks, transportation system monitoring and telemetry, and mobile security and surveillance are now all possible with a low cost, robust system.
- Fast handoff at speeds up to 295 km per hour (185 miles per hour).
- Customizable roaming parameter maintains minimum bandwidth required for application performance

Carrier-Grade Security

- Implements tiered security layers for the most secure outdoor wireless communications in the unlicensed frequency spectrum
- Uses radio module with on board surge protection
- Utilizes Proxim’s Wireless Outdoor Routing Protocol (WORP®), which prevents snooping, and features highly-secure remote management via SSL, SSH and SNMPv3
- Provides military-grade security with AES encryption technology, prevents unsecure client-to-client communications and leverages MAC, Ethertype and IP address packet filtering for granular network security
### Tsunami® MultiPoint 8160 Series

**Technical Specifications**

**PRODUCT MODELS**
- **MP-8160-BSU**: Tsunami® MP 8160 Base Station Unit, 300 Mbps, 5.900 – 6.425 GHz, Type-N Connectors
- **MP-8160-BS9**: Tsunami® MP 8160 Base Station Unit, 300 Mbps, 5.900 – 6.425 GHz, 16 dbi, 90° sector antenna
- **MP-8160-SUA**: Tsunami® MP 8160 Subscriber Unit, 300 Mbps, 5.900 – 6.425 GHz, Type-N Connectors

**APPLICATIONS**
- Last Mile Access
  Competitive broadband service access alternative to DSL or cable for residences and T1 or Ethernet for businesses
- Security and Surveillance
  High definition IP-surveillance cameras for monitoring city streets, airports, bridges, seaports, transportation hubs, offices and warehouses
- Metropolitan Area Networks
  Secure and reliable connectivity between city buildings
- Emergency First Responders
  Critical information delivery such as medical data and video feeds during in-progress events
- Enterprise Campus Connectivity
  Extend the main network to remote offices, warehouses or other buildings without leased lines

**PACKAGE CONTENTS**
- One Tsunami® MP-8160-BSU with two N-type connectors
- One Tsunami® MP-8160-BS9 with integrated 16 dbi, 90°, dual polarized sector antenna
- One power injector and country specific power cord
- One Wall / Pole mounting kit
- One Connector weatherproofing kit (Includes all recommended weatherproofing material)
- One Serial (RS-11 to DB9) dongle
- One Grounding kit
- One Gigabit PoE Surge Arrestor
- One Quick Installation Guide

**MTBF & WARRANTY**
- 80,000 hours & 1-year on parts and labor; ServPak Extended Support available

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**INTERFACES**
- **Wired Ethernet**
  - Two auto MDI-X RJ45 10/100/1000Mbps Ethernet
  - Port #1 with PoE in & Data
  - Port #2 with PoE out (802.3af pin out) & Data

**WIRELESS PROTOCOLS**
- WORP® (Wireless Outdoor Router Protocol)

**RADIO & TX SPECS**
- 2x2 MIMO
- **Modulation**
  - DQPSK with BPSK, QPSK, QAM16, QAM64

**FREQUENCY**
- 5.900 – 6.425 GHz (Subject to Country Regulations)

**CHANNEL SIZE**
- 40 MHz, 20 MHz, 10 MHz, 5 MHz channel bandwidths with support for 1 MHz channel spacing

**DATA RATE**
- MCS 0 to 15 for High Throughput mode (6.5 – 300 Mbps) with Dynamic Data Rate Selection

**TX POWER**
- Up to 25 dBm (dual chain)

**RX SENSITIVITY**
- 0 – 25 dB, in 0.5 dB steps. Automatic TPC with configurable EIRP limit

**IP STACK**
- IPv4 and IPv6 simultaneously
- Bridging, Routing (RIPv2, OSPF), Static, Dynamic (RIPv2, OSPF), DHCP Server & relay, NAT with Std ALGs, PPPoE end point with Proxy DNS
- 802.1Q: Management VLAN. Transparent, Access, Trunk and Mixed mode. QinQ double tagging
- Best Effort, Real Time Polling Services
- 802.1D/802.1Q/802.1p priority, IPTOS, VLAN ID, IP source/destination port, Ethernet source/destination Ethertype

**SCHEDULING**
- Best Effort, Real Time Polling Services

**SECURITY**
- AES-CCM 128 bits
- Internal MAC Address Control List, Radius based Authentication (with VLAN and QoS provisioning)

**ENCRYPTION**
- AES-CCM 128 bits

**AUTHENTICATION**
- Internal MAC Address Control List, Radius based Authentication (with VLAN and QoS provisioning)

**MODELS**
- **MP-8160-BSU**: Two N-type Connectors
- **MP-8160-BS9**: Integrated 2x2 MIMO 16dBi, 90°, Dual Polarized Sector Antenna

**ANTENNA**
- **MP-8160-BSU** or **MP-8160-SUA**: Two N-type Connectors
- **MP-8160-BS9**: Integrated 2x2 MIMO 16dBi, 90°, Dual Polarized Sector Antenna

**RF SURGE**
- On board quarter wave stud

**MANAGEMENT**
- **LOCAL**
  - RS-232 serial (RJ11 to DB-9 dongle provided)
- **REMOTE**
  - Telnet and SSH, Web GUI and SSL, TFTP, SNMPv3
- **SNMP**
  - Simple Network Management Protocol
- **OTHER**
  - Dynamic Channel Selection (DCS) based on interference detection
  - Automatic Transmit Power Control (ATPC) with EIRP limit support

**TRANSMIT**
- **CHANNEL SIZE**
  - 40 MHz, 20 MHz, 10 MHz, 5 MHz channel bandwidths with support for 1 MHz channel spacing
  - MCS 0 - 15 (default = 15)

**RECEIVE**
- **Sensitivity**
  - -90 dBm
  - -92 dBm
  - -95 dBm
  - -95 dBm

**TX POWER CONTROL**
- Dynamic Transmit Power Control (ATPC) with EIRP limit support

**DATA RATE**
- MCS 0 to 15 for High Throughput mode (6.5 – 300 Mbps) with Dynamic Data Rate Selection

**TX POWER**
- Up to 25 dBm (dual chain)

**RX SENSITIVITY**
- 0 – 25 dB, in 0.5 dB steps. Automatic TPC with configurable EIRP limit

**IP STACK**
- IPv4 and IPv6 simultaneously

**THROUGHPUT**
- Up to 240 Mbps

**GATEWAY FEATURES**
- DHCP Server & relay, NAT with Std ALGs, PPPoE end point with Proxy DNS

**MIMO**
- Asymmetric Bandwidth Control
- UL and DL EIR Control "committed information rate" per service flow
- UL and DL EIR Control "maximum information rate" per service flow

**PACKAGING**
- **PACKAGE CONTENTS**
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