CTR 8380 ALL-OUTDOOR MICROWAVE ROUTER

A unique and powerful all-outdoor microwave networking solution that delivers all the benefits of a microwave router, for zero-footprint sites, CTR 8380 supports high capacity support up to 1 Gbit/s links with advanced Carrier Ethernet features, multiple traffic ports, and is software upgradeable to L3 IP/MPLS.

Powerful Zero-Footprint Networked Radio Solution

CTR 8380 combines high performance microwave with advanced L2 Carrier Ethernet and L3 IP/MPLS networking into a complete outdoor mounted microwave solution designed for applications where no indoor shelter or cabinet space is available for an indoor unit.

Flexible Installation Options

Unlike other all-outdoor radio solutions on the market, the CTR 8380 provides flexibility to support a wide range of configuration options. With a unique 'split' outdoor architecture, the CTR 8380 can be located either at the top of the tower, adjacent to the radio unit, or at the bottom of the tower, to allow access to additional traffic and management ports, or maintain/replace the unit, without the need to climb the tower.

Comprehensive Carrier Ethernet and IP/MPLS Networking

The CTR 8380 offers four gigabit Ethernet ports with advanced networking options and flexibility to address evolving backhaul and enterprise service needs, by combining the latest in Carrier Ethernet switching, IP routing, Multi-Protocol Label Switching (MPLS), Ethernet OAM and packet-based synchronization, to deliver a single versatile platform to support advanced network topologies and to true multi-service networks, including macro- and small-cell backhaul.

Interoperable with Aviat CTR 8300/8500 Microwave Routers

CTR 8380 is over-the-air compatible with CTR 8300 and 8500 family of microwave routers. The CTR 8380 can be deployed at an edge node, connecting to a split-mount terminal or node using the CTR 8300 or 8540, all with full compatibility at L1, L2 and L3.

High Performance Microwave Features

CTR 8380 can connect to one or two Aviat ODU600 outdoor units, to support simple non-protected links, double capacity 2+0 links, 1+0 repeater with add/drop, or 1+1 hot standby redundant links (with or without space diversity). Advanced radio features are all supported, such as highly frequency efficient 1024QAM modulation, XPIC with L1LA, to achieve link data throughputs of up to 1 Gbit/s in a single channel.

KEY FEATURES AT A GLANCE

- Compact, all-outdoor hardened design;
- 1 or 2x IF ports for connecting one or two Aviat ODU600 outdoor units;
- QPSK to 1024QAM Adaptive Modulation for maximum channel efficiency;
- Co-channel operation with XPIC for up to 1 Gbit/s capacity links;
- Up to 4x GigE user traffic ports, with electrical or optical interface options;
- Layer 2 Ethernet Services: 802.1ad (QinQ), L2 VPN, STP/MSTP, L2LA (802.1AX), LACP, ERP (G.8032);
- Comprehensive services for dynamic and static routing, plus MPLS support to the edge of the network;
- Advanced Traffic Management: L2/L3 QoS, Ingress Policing, Shaping, Buffering, Multiple Class scheduling;
- Advanced Ethernet OAM, including IEEE 802.1ag, 802.3ah and ITU-T Y.1731;
- Packet Synchronization options including IEEE 1588v2 and Synchronous Ethernet (SyncE);
- Microwave configurations supported include 1+0, 1+0 repeater, 1+1 hot standby, diversity and 2+0 with optional XPIC;
- Hardened operation -33°C to +65°C
- -48 VDC and 120V AC powered options;
- End-to-end Network Management via Aviat ProVision.

CTR 8380 Specifications

USER INTERFACES:
- 2x 10/100/1000Base-T (RJ-45) ports
- 2x 1000Base-LX / SX (LC) ports
- DC Power Supply Input, -48VDC (N-Type)
- Console Maintenance Ports (USB-Micro-B)

SYNCHRONIZATION:
- Synchronous Ethernet (ITU-T G.8262)
- ESMC/SSM (ITU-T G.8264)
- Precision Time Protocol (IEEE 1588v2)

CARRIER ETHERNET (LAYER 2) SERVICES:
- QoS: 8 COS Queues, Policing, Storm Control, Scheduling, Shaping and mapping via PCP (802.1p), DSCP, and MPLS Exp VLANs (IEEE 802.1q) and Q-in-Q (IEEE 802.1ad)
- Rapid and Multiple Spanning Tree Protocols (RSTP, MSTP)
- L2 Link Aggregation (802.1AX)
- Ethernet Ring Protection (G.8032v2)
- Ethernet Linear Protection Switching (G.8031)
- Ethernet OAM
  - 802.1ag / Y.1731 CC, LB & LT
  - 802.3ah ETH-AIS & ETH-RD
  - Y.1731 PM

IP/MPLS (LAYER 2.5/3) SERVICES:
- IPv4 unicast, TCP/IP, UDP
- L2VPN (VPWS, VPLS)
- L3VPN
- Static Routing & Static LSP
- Dynamic Routing Protocols:
  - ISIS,OSPF & BGP
  - TE Extensions for IS-IS and OSPFv2
- Dynamic Signaling Protocols:
  - LDP (PTP L2VPN) and RSVP / RSVP-TE
- MPLS OA&M:
  - LSP ping / Trace Route over LDP / TE
  - VCCV on LDP
- QoS: Exp bit remarking
- Resiliency
  - MPLS-TE Fast Re-Route 1:N
  - 1:1 RSVP-TE LSP protection
  - Bidirectional Forwarding Detection (BFD) based LSP protection

ELEMENT AND NETWORK MANAGEMENT:
- Aviat OS Software upgrade from CLI or Web Interface
- Configuration save and load
- IPv4 addressing with an In-Band Management VLAN. Telnet or SSH access
- Console access through Micro USB port for local CLI Interface
- SNMPv2c ProVision or MIB interface support
- Event and Alarm capture, time stamp and logging.
- Ethernet statistics (partial RMON 1), Radio performance statistics
- Simple Network Time Protocol (SNTP V4), embedded real time clock

RADIO NETWORKING (WITH ODU600):
- Frequency Band Options:
  - 5, L6/U6, 7, 8, 11, 13, 15, 18, 23, 26, 28, 32, 38 and 42 GHz
- Fixed or Adaptive Coding and Modulation (ACM):
  - QPSK or 16, 32, 64, 128, 256, 512, 1024QAM
- Capacity Range:
  - Airlink Capacity: 9 - 436 Mbit/s
  - Ethernet / IP Throughput: 9 - 554 Mbit/s
- Configuration Support:
  - 1+0, 1+1 Hot-Standby with optional Space Diversity
  - 2+0 Co-Channel Operation with/without XPIC
  - 2+0 Radio Channel Aggregation with Layer 1 Link Aggregation (L1LA)

OPERATING ENVIRONMENT AND POWER:
- Operating Temperature: -33º to +65ºC / -27°F to +149°F
- Humidity: 0 to 100%, non-condensing
- Altitude: 5,000 meters
- Input voltage: -48 VDC (SELV), nominal
- Input voltage range: -40.5 VDC to -60 VDC
- Input voltage 120 VAC, nominal
- Input Voltage range: 110 to 126 VAC
- Power consumption: < 30W (typical 1+0, excl. ODU)

STANDARDS COMPLIANCE:
- EMC: EN 301 489-1, EN 301 489-4, FCC Part 15, ICES-003
- Operation: EN 300 019-2-4, Class 4.1
- Transportation: EN 300 019-2-2, Class 2.3
- Safety: IEC/EN/UL 60950-1 and IEC/EN/UL 60950-22
- RF Performance: (with ODU600) EN 302 217-2, FCC Part 101
- Maximum Permissible Exposure: EN 50385
- Water Ingress: IEC 60529, IPX6
- Electric power substations: IEEE 1613 (DC model only)

DIMENSIONS:
- Chassis: 298 mm (H) x 273 mm (W) x 102 mm (D)
  11.75 in (H) x 10.75 in (W) x 4.00 in (D)
- Weight: 4.9 kg/10.85 lb

MOUNTING OPTIONS:
- “Piggy-back” mounting plate for ODU 600
- Wall and Pole mount plate

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