

WTM 4500

The WTM 4500 microwave solution from Aviat Networks is a super-compact, high capacity radio with integrated Space Diversity capability in a single unit, enabling ultra-reliable links over the longest and toughest paths and capacities up to 1.25 Gbps in a single channel. WTM 4500 can also be combined with a compact OBU to support 10 Gbps link capacities in a zero-footprint, all-outdoor architecture, for lowest possible OPEX alternative to fiber.



Highlights

The WTM 4500 is the first microwave solution on the market that combines the convenience of an all-outdoor design with an integrated space diversity receiver, to enable a single box terminal solution for long and difficult microwave paths. WTM 4500 also includes all the WTM 4000 platform features, including ultra-high capacity, advanced Carrier Ethernet Networking, SDN-readiness, and upgradeability to IP/MPLS.

Ultra-High, 5G-Ready Capacity

The WTM 4500 is a new configuration option for Aviat's market leading WTM 4000 all-outdoor, high capacity microwave platform. It specifically addresses applications that require ultra-reliable links over long and difficult paths, such as over flat desert terrains or over large bodies of water, where highly reflective conditions can play havoc with a microwave link that can lead to extended outages.

High Performance over tough paths, with Integrated Space Diversity

WTM 4500 makes use of the platform dual transceiver architecture to support a complete space diversity terminal in a single radio unit. This enables ultra-high capacity, space diversity links to be deployed in the toughest conditions, with up to 1.25 Gbps of capacity or more, thanks to the combination of wide 112 MHz channels, 4096QAM, and multi-layer header compression. And by adding a second WTM 4500, you can easily the double capacity of your diversity link up to 2.5 Gbps.

10 Gbps All-Outdoor Trunking

WTM 4500 also enables the next generation of split-mount and even all-outdoor trunking applications, where up to four WTM 4500's can be combined onto a single antenna port using an Outdoor Branching Unit (OBU), supporting up to 5 Gbps of link capacity with integrated diversity. Adding a second OBU arrangement provides the capability of up to 10 Gbps capacities, giving operators a viable choice to having to deploy fiber for long haul backbone paths, with lowest possible CAPEX and OPEX.

Key Features at a Glance

- Operating frequencies from 6 to 11 GHz;
- Up to 1.25 Gbps capacity per RF channel;
- QPSK to 4096QAM Adaptive Modulation;
- Channel sizes up to 112 MHz;
- Integrated Space Diversity receiver;
- Zero-footprint, all-outdoor design;
- Up to 10 Gbps link capacities, with space diversity, when used with Outdoor Branching Unit;
- 4x user traffic ports, with electrical/PoE and optical interface options, including 1/2.5/10 GE;
- Layer 2 Ethernet Services: 802.1ad (QinQ), L2 VPN, STP/MSTP, L2LA (802.1AX), LACP, ERP (G.8032);
- Advanced Ethernet OAM, including IEEE 802.1ag, 802.3ah and ITU-TY.1731; SDN-ready: built-in NETCONF interfaces and support for evolving standard YANG data models;
- Packet Synchronization options including IEEE 1588v2 and Synchronous Ethernet (SyncE);
- End-to-end Network Management via Aviat ProVision

DATASHEET

Aviat WTM 4500 ETSI

GENERAL SPECIFICATIONS

System

	L6/U6 GHz	7 GHz	8 GHz	11 GHz
Frequency Range (GHz)	5.927-6.420 - 6.425-7.11	7.125-7.7	7.7-8.5	10.7-11.7
TR-Spacings Supported (MHz)	240, 252.04, 266	150, 154, 161, 168, 175, 196, 245,300	119, 126, 151.614, 195, 208, 266, 300, 310, 311.32, 305.56, 360	490, 500, 520, 530

General

Frequency Bands	6 - 11 GHz
Physical Configurations	1+0, 2+0, Space Diversity (with XPIC)
Modulation and Coding	Fixed or Adaptive QPSK to 4096 QAM / Hitless AM
Channel Sizes	27.5/28, 40, 55/56, 80, 110/112 MHz
Capacity (standard single channel)	Airlink Capacity up to 1062 Mbit/s*

Power Supply

Voltage	Standard	Direct -48 VDC (-40 to -57Vdc)
Consumption (Typical)		51 Watts (Typical)

Physical

Size (h-w-d), including antenna interfaces	295mm x 270mm x 95mm (11.5in x 10.5in x 4in)
Weight, including antenna interfaces	5.5 kg (12lbs)
Operating Temperature	Guaranteed -33° to +55°C Extended -45° to +65°C
Humidity	Guaranteed 100%
Altitude	Guaranteed 4500m

Standards Compliance

EMC	EN 301 489-1, EN 301 489-4
Operation	EN 300 019-2-4, Class 4.1
Safety	IEC/EN 60950-1, IEC/EN 60950-22
RF Performance	EN 302 217-2
Maximum Permissible Exposure	EN 50385
Water Ingress	IEC 60529, IPX6
Lightning Protection	Internal, compliant to IEC-61000-4-5, Class 5

Interfaces

Traffic	2x fixed RJ45 2x optional SFP	10/100/1000BT Electrical 1, 2.5 & 10Gbps speeds, both Optical (Single and Multi-mode) and Electrical
Power	Direct	24Vdc or 48 Vdc
USB support	Management	Local setup, sw/fw upgrade, config backup
Wireless connection		via Wifi
RSSI		Dual voltmeter pins

Management

Local Management	via USB	Configuration save & load Wireless dongle to support Wifi Aviat OS software upgrade
Event Capture		Event and Alarm capture, time stamp and logging
Statistics		RMON 1 Ethernet and radio performance statistics
Network Management		SNMPv2c ProVision or MIB interface support IPv4 addressing with an In-Band Management VLAN. Telnet or SSH access Aviat Cloud – Manage Advanced
Clock		Simple Network Time Protocol (SNTP V4), embedded real time clock



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