Aviat WTM 4800

The new WTM 4800 from Aviat Networks is a unique and ground-breaking Multi-Band and E-Band solution in a single radio unit, delivering link capacities over a single antenna of up to 20 Gbps. Built on the market-leading WTM 4000 all-outdoor platform, the WTM 4800 leverages advanced L2 and L3 IP/MPLS capabilities to deliver ultra-high capacities, with advanced network intelligence in a single, compact solution.

The Ultimate 5G Backhaul Solution

The Aviat WTM 4800 solution provides the capacity, intelligence and flexibility that will be needed to meet the massive demands of 5G. The radio can be deployed in a single channel E- band or Multi-Band mode, supporting up to 10 Gbps link capacity, or in dual channel E-Band with up to 20 Gbps, all in a single radio unit, over a single antenna, delivering the absolute lowest TCO solution.

Unique Tri-Core Architecture

The power of the WTM 4800 architecture is its unique dual transceiver, tri-core modem design. A single radio unit can accommodate one or two transceivers, along with an E-Band and dual core microwave modem or two E-Band modems.

The only Single-Box Multi-Band Radio

With the tri-core design, in addition to an E-Band transceiver, the WTM 4800 can be fitted with a second transceiver operating in standard 18 or 23 GHz microwave bands (other bands could be supported subject to market demand). Multi-Band enables capacities up to 10 Gbps to be supported over much longer distances than standard E-Band (up 10km), where the microwave path is used as a back-up for high priority traffic when adverse conditions make the E-Band link unavailable. Traffic aggregation and prioritization are all performed seamlessly inside the WTM 4800. Multi-Band configurations are supported with a single dual-feed multi-band antenna to even further lower TCO. WTM 4800 can also support 3+0 applications, with double capacity on the microwave path, thanks to Aviat's unique A2C feature.

High Performance and Advanced Features

WTM 4800 incorporates a high capacity 50 Gbps Carrier Ethernet switch, supporting quality of service (QoS) functions, including traffic classification, traffic policing, congestion avoidance, queue scheduling, and traffic shaping, as well as advanced functions such as Ethernet OAM, and Ethernet Ring Protection (ERP). WTM 4800 also supports multiple Synchronization options IEEE 1588v2 (TC & BC) and Synchronous Ethernet (SyncE).

Integrated L3 IP/MPLS and SDN Ready

Additional advanced features, such as integrated IP/MPLS networking and NETCONF/YANG management interface for native SDN support and automation of Network deployment and operations, can be added through simple software upgrades, when and as needed.

Design Your Links in AviatCloud

Aviat Design, Aviat's cloud-based link planning application, supports WTM 4800 E-band and multiband designs. Aviatt Design is the industry's first and only integrated multiband link design solution showing combined view of availability and capacity for the link. This enables easy, fast, intuitive E-Band and Multi-Band designs (all specs included, no pathloss files to download or update, easy cloud access). Popular design tools will require 2 separate link calculations for Multi-Band, and will not result in a combined design for the link, making it virtually impossible to understand the expected link performance or capacity or estimate the proper antenna size. Aviat Design is FREE for use at **http://www.aviatcloud.com/**

Key Features

- Operating frequencies from 71-76, 81- 86 GHz (E-Band), plus optional 15, 18, 23 GHz (Multi-Band).
- Operating Modes:
  - Single Channel: 1+0 80 GHz
  - Multi-Band: 2+0 E-band and Microwave
  - Dual Channel: 2+0 80 GHz
- QPSK to 256QAM Modulation (E-Band).
- Channel sizes from 250 to 2000 MHz (E-Band).
- Single or dual core/ transceiver design.
- FDD operation.
- Zero-footprint, all-outdoor design.
- 4x user traffic ports, with electrical/PoE and optical interface options, including 1/2.5/10 GE.
- Up to 2x 10 GE interfaces supporting eCPRI transport compliant to 802.1CM profile A.
- Carrier Ethernet: 802.1q & 802.1ad (QinQ) VLAN, STP/MSTP, L2LA (802.1AX), LACP, ERP (G.8032).
- IP/MPLS:
  - IPv4
  - IPv6
  - Static and Dynamic IP Routing
  - MPLS LDP and RSVP-TE; L2 VPN (VPLS, VPWS) and L3 VPN services.
- Advanced Traffic Management:
  - L2/ L3 QoS
  - Ingress Policing
  - Shaping
  - Buffering
  - Multiple Class scheduling
  - H-QoS.
- Advanced Ethernet OAM, including:
  - IEEE 802.1ag
  - ITU-T Y.1731.
- Multiple Synchronization options IEEE 1588v2 (TC & BC) and Synchronous Ethernet (SyncE).
- End-to-end Network Management and Craft Interfaces including:
  - Aviat ProVision+
  - NETCONF/YANG
  - SDN.

General Specifications

Radio Networking

Frequency Bands	E-Band: 71-76, 81-86 GHz; Microwave: 15, 18, 23 GHz
Modulation and Coding Options	E-Band: 4, 16, 32, 64, 128, 256 QAM; Microwave: 4 to 4096 QAM; Hitless ACM
Channel Sizes Supported	E-Band: 250, 500, 750, 1000, 1500, 2000 MHz; Microwave: 7 to 112 MHz
Capacity Range	Up to 10,000 Mbit/s (1+0, Single Channel)
	Up to 10,000 Mbit/s (2+0, Multi-Band)
	Up to 10,000 Mbit/s (2+0, XPIC)
	Up to 20,000 Mbit/s (2+0, Dual Channel)
Configuration Support	1+0 & 2+0, with optional XPIC (E-Band only)
Bandwidth Acceleration	Inter-Frame Gap and Pre-Amble Suppression
Payload Encryption	AES256

Transmitter (E-Band)

Maximum Tx Power	+16.5 dBm (at QPSK)
Frequency Stability	± 10 ppm
Power Control	Fixed or Automatic Transmitter Power Control (ATPC)

Receiver (E-Band)

Frequency Stability		± 10 ppm
Receiver Overload	BER=$1x10^{-6}$	-20 dBm
		-5 dBm (no damage)
Residual (Background) Bit Error Rate		$1x10^{-13}$

User Interfaces

Traffic	2x 10/100/1000Base-T (RJ-45) fixed electrical ports (one port optional PoE)
	2x optional SFP ports – 1, 2.5 or 10GB SFP+ (optical/electrical)
DC Power Supply Input	+24/-48Vdc (SELV) wide-mouth
Console Maintenance Ports	USB
Receive Signal Indicator	dual voltmeter pins

Synchronization

Internal Stratum-3 clock	
Synchronous Ethernet	ITU-T G.8262
ESMC/SSM	ITU-T G.8264
Precision Time Protocol	IEEE 1588v2 – TC/BC

Carrier Ethernet (Layer 2) Services

Switch capability:	50 Gbps non-blocking
Quality of Service (QoS):	8 COS
	Scheduling
	Policing
	Storm Control
	Shaping
QoS Mapping:	PCP (802.1p)
	DSCP
	H-QoS
VLANs	IEEE 802.1Q
	IEEE 802.1ad (Q-in-Q)
Spanning Tree:	Rapid and multiple protocols (RSTP, MSTP)
L2 Link Aggregation	802.1AX
Ethernet OAM:	IEEE 802.1ag
	ITU-T Y.1731
Congestion Avoidance:	RED and WRED, per queue
Jumbo frames:	Up to 10k bytes

Carrier Ethernet (Layer 2) Services

Ethernet Ring Protection	G.8032v2

IP/MPLS (Layer 3) Services

IPv4 and IPv6

Unicast and Multicast routing

IS-IS, OSPF, OSPFv3 and BGP

Label Distribution Protocol (LDP)

RSVP-TE

L2 VPN (VPLS, VPWS) and L3 VPN

VRF & LSP Ping and Traceroute

Element and Network Management

Local Configuration via CLI or Web GUI

Aviat ProVision+ EMS

RMON1, RMON2, and Port Mirroring

NETCONF/YANG

SNMP v2c/ v3 MIB support (read)

HTTPS, SSH and TACACS+ client

SNTPv4, embedded real time clock

Standards Compliance

Operation:	EN 300 019 Class 4.1
EMC:	EN 301 489-1
	EN 301 489-4
Safety:	IEC/EN 60950-1
	IEC/EN 60950-22
RF Performance:	EN 302 217-2
Water Ingress:	IEC 60529, IP66
Lightning Protection (internal):	IEC-61000-4-5, Class 5

Mechanical and Environmental

Operating Temperature	Guaranteed	-40º to +55ºC (-40º to +131ºF)
	Extended	-45º to +65ºC (-49º to +149ºF)
Humidity	Guaranteed	0 to 100%, non-condensing
Altitude	Guaranteed	5000 m
Input voltage		+24/-48 Vdc (SELV), nominal
Input voltage range		+/-18 to +/- 72 Vdc
Power over Ethernet		PoE++ (proprietary)
Power consumption		65W
Size (h-w-d), including antenna interfaces:		295mm x 270mm x 95mm (11.5in x 10.5in x 4in)
Weight, including antenna interfaces:		5.5kg (12ibs)

More Information Notes

[ ] Currently no additional notes.

Disclaimer:

This material is for informational purposes only and does not constitute a legal obligation to deliver any product, feature or functionality and should not be relied upon in making purchasing decisions. All specifications are guaranteed values, at room temperature (20 to 30ºC, 68 to 86ºF), referenced to the ACU antenna port (including ACU losses) unless otherwise stated, and are subject to change without notice. The development, release and timing of any features or functionality described for our products is at Aviat Networks' sole discretion. For details of availability, please contact your Aviat Networks Sales Representative.

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