WTM 4800

E-BAND AND MULTI-BAND RADIO PLATFORM

DATASHEET [ANSI]

The WTM 4800 is the benchmark for ultra-high capacity 4G and 5G backhaul needs, supporting a unique dual transceiver design for E-Band and Multi-Band applications up to 20 Gbps, all in a single radio unit. WTM 4800 reduces TCO by providing a compelling alternative multi-channel microwave, with fewer boxes, lower spectrum fees and seamless remote capacity upgrades.

WTM 4800 is a unique and versatile solution that can support single and dual channel 80 GHz E-Band or dual-channel Multi-Band links, with integrated XPIC and L1LA traffic aggregation, all in a compact one-box architecture.

WTM 4800 Multi-Band (MB) is a breakthrough wireless solution that enables 10 Gbps wireless connectivity between two sites, over distances up to and exceeding six miles. WTM 4800 MB combines a single 80 GHz E-Band channel with either one or two channels (using Aviat A2C+) in a traditional microwave band between 11 and 23 GHz, all contained with a single compact outdoor device.

As a part of the comprehensive WTM 4000 platform, WTM 4800 also supports Carrier Ethernet switching, Ethernet OAM and IEEE 1588v2 packet-based synchronization, AES Payload Encryption, native Netconf/Yang management interface, and is software upgradeable to support L3 IP routing and Multi-Protocol Label Switching (MPLS).

Dramatically lower your spectrum fees by moving link capacity to lower cost E-Band spectrum as an alternative to traditional microwave bands.

Reduce tower related costs with WTM 4800 single-box dual-channel E-Band and Multi-Band solutions, compared to alternatives that need multiple radios and an indoor unit.

Now with 3dB more transmit power and 512 QAM for 12.5% increased capacity, WTM 4800 enhanced design provides higher availability and/or lower costs for E-Band or Multi-Band.

PROUDLY MANUFACTURED
IN THE USA

General Specifications

Radio Networking	E-Band	Microwave (for Multi-Band)
Frequency Bands	71-76, 81-86 GHz	11, 13, 15, 18, 23 GHz
Modulation and Coding Options	QPSK to 512 QAM with Hitless ACM and adaptive bandwidth	QPSK to 4096 QAM with Hitless ACM
Channel Sizes Supported	250, 500, 750, 1000, 1500, 2000 MHz	7 to 112 MHz
Capacity Range (E-Band)		
Single Channel 1+0 Dual Channel 2+0	Up to 10 Gbit/s Up to 20 Gbit/s	
Capacity Range (Multi-Band)		
Single terminal Multi-Band Dual terminal Multi-Band	Up to 10 Gbit/s (2+0 or 3+0 with A2C+) Up to 20 Gbit/s (4+0 MB-XD)	
Bandwidth Acceleration	Inter-Frame Gap and Pre-Amble Suppression	
Payload Encryption	AES256 (up to 10 Gbps maximum)	

Transmitter	E-Band	Microwave (for Multi-Band)
Maximum Tx Power	+20.0 dBm (at QPSK)	+23 to +28 dBm (at QPSK)
Transmit Power Tolerance	± 3.0 dB	± 2.0 dB (5-28 GHz)
Frequency Stability	± 10 ppm	± 5 ppm
Power Control	Fixed or Automatic Transmitter Power Control (ATPC)	
Power Control Range	18.5 dBm	20 dBm

Receiver	E-Band	Microwave (for Multi-Band)
Frequency Stability	± 10 ppm	± 5 ppm
Receiver Overload	-20 dBm (BER = 1x 10^{-6})	
Residual (Background) BER	Better than 1x 10^{-13}	

User Interfaces	
Traffic	2x 10/100/1000Base-T (RJ-45) fixed electrical ports (one port supports PoE) 2x optional SFP+ ports – 1, 2.5 or 10 GB SFP+ (optical/electrical)
DC Power Supply Input	±24/±48 Vdc (SELV) wide-mouth
Console Maintenance Ports	USB supporting Config Backup & Restore, WiFi access
Receive Signal Indicator	Dual voltmeter pins

Synchronization	
Internal Stratum-3 clock	
Synchronous Ethernet (SyncE)	ITU-T G.8262
ESMC/SSM	ITU-T G.8264
Precision Time Protocol	IEEE 1588v2 – TC/BC ITU-T G.8271.1

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 (STP, 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
Ethernet Ring Protection	G.8032v2 with ECFM

IP / MPLS Services

IP addressing	IPv4 & IPv6
Routing type	Unicast routing with IP Static routing Equal Cost Multipath IP Routing and MPLS load sharing Segment Routing with OSPF[1] IPv6 for management (OSPFv3[1])
Gateway protocols	IS-IS, OSPF (interior) BGP with Route Reflector, iBGP, eBGP (exterior)
Signaling	Label Distribution Protocol (LDP) and T-LDP LSP protection with BFD Micro-BFD over LAG
Services supported	Layer 2 VPN services over LDP signaled tunnels (VPLS and VPWS) Layer 3 VPN services are supported using BGP
Diagnostics	TWAMP, VRF & LSP Ping and Traceroute
Traffic engineering	Supports RSVP-TE extensions [1]

Element and Network Management

Local configuration via USB	Configuration save & load, backup to memory stick Wireless dongle to support Bluetooth/Wi-Fi (optional) Aviat OS software upgrade
Event and alarm capture	Time stamp and logging
Statistics	RMON 1 Ethernet and radio performance statistics
Network management	ProVision, ProVision Plus NETCONF/Yang SNMPv2c MIB interface support, SNMPv3 option
IPv4/6 addressing with an in-band management VLAN	SSH access
Simple Network Time Protocol (SNTP V4)	Embedded real time clock
Authentication, Authorisation and Accounting (AAA)	TACACS+, RADIUS (with RadSec) [1]

Mechanical and Environmental

Operating Temperature	Guaranteed Extended	-40° to +131°F (-40° to +55°C) -49° to +149°F (-45° to +65°C)
Humidity	Guaranteed	0 to 100%, non-condensing
Altitude	Guaranteed	16404 ft (5000 m)
Input voltage		±24/±48 Vdc, wide-mouth (± 20 to ± 57 Vdc)
Power over Ethernet		IEEE 802.3at, 802.3bt
Power consumption (max)	WTM 4800 WTM 4800 Multi-Band WTM 4800 Dual Channel	65 W 95 W 125 W
Size (h-w-d), including antenna interfaces		11.5 in x 10.5 in x 4 in (295 mm x 270 mm x 95 mm)
Weight, including antenna interfaces	WTM 4800 WTM 4800 Multi-Band WTM 4800 Dual Channel	12.0 lb (5.5 kg) 17.5 lb (8 kg) 17.5 lb (8 kg)

Standards Compliance

Operation	EN 300 019 Class 4.1
EMC	EN 301 489-1 EN 301 489-4 FCC Part 15, ICES-003
Safety	UL 62368-1 CSA C22.2 No. 62368-1:19
RF Performance	EN 302 217-2 FCC CFR 47 Part 101
Ingress	IEC 60529, IP66
Lightning Protection (internal)	IEC 61000-4-5
Security	FIPS 140-3 Validated, Certificate #5107 FIPS 197, Cert #A1073

Notes:

[1]   To be confirmed in a later release

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 nominal across the rated operating temperature range, referenced to the antenna port 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.