



WTM 4400

ALL-OUTDOOR, QUAD-CARRIER RADIO

[DATASHEET \[ETSI\]](#)



The WTM 4400 delivers unparalleled quad-carrier capacity in a compact, dual-transceiver architecture optimized for all-outdoor applications. With aggregate throughput of up to 5 Gbit/s in a single unit, it combines advanced microwave networking capabilities with flexible deployment options for next-generation backhaul and transport networks.

The WTM 4400 combines two microwave transceivers in a compact quad-carrier all-outdoor platform. It supports multi-channel operation, an integrated high-speed Ethernet switch, and advanced radio capabilities including XPIC operation, and radio link bonding (L1LA). Advanced networking options include Carrier Ethernet switching, Ethernet OAM, packet-based synchronization, and SDN.

With a self-contained architecture, integrated high speed Ethernet switch, and optimized for full-outdoor implementation, WTM 4400 also supports split-mount applications used with Aviat's CTR 8000 Transport Switch/Router.

The WTM 4400 delivers best-in-class system gain performance for longer reach, smaller antennas, improved link availability, and lower total cost of ownership. Its networking capabilities include Carrier Ethernet switching, Ethernet OAM, packet-based synchronization, and SDN, with support for L3 IP/MPLS and a comprehensive suite of high-security features.

The WTM 4400 supports maximum capacities of up to 2.5 Gbit/s per microwave link across bands from 5 to 42 GHz, with aggregate throughput of up to 5 Gbit/s in full quad-carrier configuration.

The WTM 4400 supports Aviat's Adaptive Dual Carrier (A2C+) capability, enabling quad-carrier operation with Power Boost technology.

The WTM 4400 provides a powerful microwave networking solution with transparent connectivity, comprehensive Carrier Ethernet operation, or IP/MPLS operation.

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General Specifications

General		
Frequency bands		5, L6/U6, 7, 8, 10, 11, 13, 15, 18, 23, 26, 28, 32, 38, 42 GHz
Modulation and coding options	Fixed and Adaptive	QPSK, 16, 32, 64, 128, 256, 512, 1024, 2048, 4096 QAM
Channel sizes supported		27.5/28, 40, 55/56, 80, 112 MHz
Capacity range	Airlink Capacity	Up to 2.1 Gbit/s (dual-channel operation) or 4.2 Gbit/s (quad-carrier operation)
	Ethernet / IP Throughput (with IFG/PA Suppression)	Up to 5 Gbit/s (quad-carrier operation, actual throughput dependent upon traffic/frame size mix)
Configuration options		4+0 or 8+0 Co-Channel Operation with XPIC and integrated Layer 1 Link Aggregation (L1LA) 2+2 or 4+4 Hardware Protection with optional SD ^[1]
Transmitter		
High power		up to +30 dBm
Frequency stability		± 5 ppm
Manual transmitter power control range		0-20 dB
Automatic Transmitter Power Control (ATPC)	Range	Configurable over the full manual attenuation range
Transmitter mute		> 50 dB
Receiver		
Frequency stability		± 5 ppm
Receiver overload	BER=1x10 ⁻⁶	20 dBm
Max receiver input level	BER=1x10 ⁻³	0 dBm
Residual (Background) Bit Error Rate		1x10 ⁻¹³
User Interfaces		
Traffic	2x 10/100/1000Base-T (RJ-45) fixed electrical ports 2x optional SFP+ ports – 1, 2.5 or 10 GB SFP+ (optical/electrical)	
DC power supply input	±48 Vdc (SELV) wide-mouth	
Console maintenance ports	USB	
Receive signal indicator	Dual voltmeter pins	
Synchronization		
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

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Carrier Ethernet / L2 Services

Non-blocking switch

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 protocols	STP, RSTP, MSTP
L2 link aggregation	802.1AX
Ethernet ring protection	ITU-T G.8032v2
Ethernet OAM	IEEE 802.1ag, ITU-T Y.1731 ^[1]
Congestion avoidance	RED & WRED
Jumbo frames	to 10 KB

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]

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Mechanical and Environmental		
Operating temperature	Guaranteed Extended	-33° to +55°C (-27° to +131°F) -45° to +65°C (-49° to +149°F)
Humidity	Guaranteed	0 to 100%, non-condensing
Altitude	Guaranteed	4500 m (14,763 ft)
Input voltage		±48 Vdc (±40 to ±60Vdc)
Power consumption		110-130 W nominal, 140 W maximum
Size (h-w-d), including built-in coupler/OMT		345 mm x 270 mm x 95 mm (13.6 in x 10.6 in x 3.75 in)
Weight, including built-in coupler/OMT		8.5 kg (19 lb)
Standards Compliance		
Security		FIPS 197, Certificate #A980 AES Payload Encryption
EMC		EN 301 489-1 EN 301 489-4
Operation		EN 300 019 Class 4.1
Safety		IEC/EN/UL 62368-1 IEC/EN 62368-3
RF performance		EN 302 217-2
Water ingress		IEC 60529, IP66
Lightning protection (internal)		IEC 61000-4-5

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.