



AVIAT NETWORKS WTM 3300

80 GHz LOW PROFILE GIGABIT MICROWAVE NETWORKING PLATFORM

The Aviat Networks WTM 3300 is an innovative microwave networking platform that introduced a new class of performance to the 80 GHz market. It delivers link capacities to urban network sites from 400 Mbps to 1 Gbps in the smallest, lightest and most aesthetically integrated package in the market. Applications include mobile backhaul (macro and small cell), fixed line access and enterprise LAN interconnect.



SMALL, FLEXIBLE AND POWERFUL

The Aviat Networks WTM 3300 offers a unique combination of high system gain, adaptive modulation techniques and capacity scalability from 400 Mbit/s to 1 Gbit/s within a standard 250 MHz channel. Suitable for urban links from 0.5 to 3 km, the WTM 3300 is the first 80 GHz product to feature an 'invisible antenna' design which drives significant TCO gains for the operator. It also means operators can now access more rooftop, wall and street level sites compared to traditional parabolic antenna systems that are often not viable due to technical, environmental or planning restrictions. For locations where higher gain is required, WTM 3300 can also be equipped with 1 ft or 2 ft parabolic antenna.

AESTHETICALLY DESIGNED AND EASY TO INSTALL

The WTM 3300's aesthetic appearance and speed of installation are enhanced by its innovative 'fast connect port' design. Traffic, management and power connections are remote from the WTM 3300 unit thereby reducing both the visual noise for street level or on-building installations and installation time. With 100% zero footprint, a completely integrated antenna and 'fast connect ports' the overall installation footprint can be <50% less than traditional 80 GHz products. To complement its physical deployment attributes, the WTM 3300 incorporates a user friendly browser-based ePortal tool for configuration and management.

NETWORKS AND APPLICATIONS

The WTM 3300 complements Aviat Network's extensive range of all-indoor, split-mount and all outdoor microwave networking solutions. It maximizes the possible gains operators can realize by using the 80 GHz band and provides an excellent alternative for operators facing the challenge of urban linking in congested radio environments where lower frequencies are scarce or no longer viable.

INTEROPERABILITY AND SECURITY

The WTM 3300 platform is designed according to Carrier Ethernet transport, networking and interoperability standards. Fully compatible with both Aviat Networks and 3rd party switches and routers, the WTM 3300 supports advanced traffic management, security and control features and can be quickly integrated in existing (deployed) IP/MPLS based networks.

KEY FEATURES

- High performance 71-76/81-86 GHz radio terminal with up to +14 dBm power output
- Highly scalable 400 Mbit/s to 1 Gbit/s capacity licenses
- Adaptive Modulation (QPSK/16QAM/64QAM)
- Zero-footprint, all-outdoor weatherproof design
- Integrated 'invisible antenna' and 'fast connect ports' generates rapid deployment times and low visual impact
- Low power consumption (<37 W typically) for maximum energy savings
- Full Carrier Ethernet feature set including Quality of Service (QoS), Traffic Policing and Scheduling, VLAN support and Ethernet OAM
- Management support by Aviat Networks ePortal for link/ terminal level access and Provision EMS for pan-network element management

WTM 3300 Specifications

General

Frequency band	Licensed	71-76 and 81-86 GHz FDD
Modulation options	Adaptive ⁽¹⁾	QPSK, 16 QAM, 64 QAM
	Fixed	QPSK
Error Correction		Convolution Turbo Coding (CTC)
Radio channel size		250 MHz
Capacity range	Ethernet/IP throughput L1/64 byte	465-1000 Mbps ⁽¹⁾
Configurations	All Outdoor	1+0 NP

Electrical and Mechanical

	WTM 3305p, WTM 3305	WTM 3310p, WTM 3310
Size/Weight	250 x 250 x 50 mm / 2.4 kg 9.8 x 9.8 x 2.0" / 5.3 lbs	280 x 280 x 80 mm / 2.5 kg 11.0 x 11.0 x 3.1" / 7.7 lbs
Power	Typical 37 W	37 W

Interfaces

Traffic and management connector	RJ-45 or RJ-45 PoE (100/1000 BaseT)
Direct Power Feed	-48 VDC, 2 mm ² (14 AWG) shielded twin cable
Local Maintenance Port (RSSI, Console)	3.5 mm stereo jack
Grounding lug	Standard, bolt size M6

RF Specifications

Transmitter/receiver source	Synthesized
Frequency stability	± 10 ppm
Transmitter mute	< -50 dBm
Rx Max Input Level	0 dB (no damage); -30 dB (Operations)
Residual (Background) Bit Error Rate	Better than 10 ⁻¹³
RSSI Accuracy (measured at RSSI port)	0-35 °C (32-95 °F) ± 3, max ± 4 dB

Encryption

Secure management	Standard encryption	AES 128/256 key ⁽¹⁾
	Centralized user accounts	RADIUS Protocol (RFC-2865) ⁽¹⁾

Environmental

Operating temperature	-40 °C to 65 °C (-27.4 °F to 131 °F)
Humidity	100%
Altitude	Operating Up to 4500 m (14763 ft)
Degree of Protection	IP66

Fault and Configuration Management

Protocol		SNMP v2c, v3 ⁽¹⁾
Secure Management Features	Encryption Standard	AES 128/256 ⁽¹⁾
	Key and Certificate Management	ITU-T X.509 ⁽¹⁾
	Centralized User Accounts	RADIUS Protocol (RFC-2865) ⁽¹⁾
	Secure WEB access	HTTPS and CLI (SSH) using TLSv1
Interface, electrical		Ethernet 100/1000 BaseT
Interface, physical		Copper RJ-45 (100 m / 328 ft)
Performance monitoring		RMON counters, ITU-T Rec. G.826 ⁽¹⁾
Element management	EM Network	Aviat Networks ProVision®
	EM Local, Browser-based	CLI / ePortal

Standards Compliance International

EMI/EMC		EN 301 489-1, EN 301 489-4, ICES-003
Operation	Storage	EN 300 019, Part 2-1, Class 1.2
	Transportation	EN 300 019, Part 2-2, Class 2.3
	Stationary use	EN 300 019, Part 2-4, Class 4.1
Safety		EN 60950-1, IEC 60950-1, EN 60950-22, IEC 60950-22
RF performance		EN 302 217-2-2
Lightning protection		Surge 5 kV - 10/700 microsec ITU-T k.45 for Ethernet Cable
RoHS / WEEE compliance		2002/96/EC, 2011/65/EU

Standards Compliance US

EMC		FCC CFR 47, Part 15 ⁽¹⁾
Safety		UL 60950-1, UL 60950-22
RF performance		FCC CFR 47, Part 101