



## NetStream 2x50

NetStream 2x50 is a carrier-class radio that supports 2.3 to 2.4 GHz and complies with FCC/IC and Universal regulations (factory default: 2.4 GHz FCC/IC). This radio delivers high capacity and extended range for carriers' backhaul needs.

Packing native TDM and Ethernet over a single wireless link, the NetStream 2x50 provides 50 Mbps net aggregate throughput (up to 8 E1/T1 plus Ethernet) at a range of up to 120 km/75 miles.

NetStream 2x50 comes with an integrated antenna.

### Product Highlights

- 50 Mbps Ethernet net throughput and up to 8 E1s/T1s (Native TDM transport)
- Long range – up to 120 km/75 miles
- Supports intra-site and inter-site TDD synchronization to maximize network capacity
- Adaptive asymmetric throughput – dynamic allocation between uplink and downlink
- Advanced OFDM & MIMO technologies for operation in nLOS/NLOS and dense radio environments
- Robust and reliable to operate in tough conditions and extreme temperatures
- Upgradeable with a license key to 100 and 200 Mbps net aggregate throughput



## Product Specifications

### Configuration

Architecture	Outdoor Unit with an integrated antenna
PoE to ODU Interface	Outdoor CAT-5e cable; Maximum cable length: 100 m for 10/100BaseT and 75 m for 1000BaseT

### Radio

Capacity	50 Mbps net aggregate throughput (up to 8 E1s/T1s plus Ethernet); Upgradeable with a license key to 100 and 200 Mbps net aggregate throughput
Range	Up to 120 km / 75 miles
Channel Bandwidth	Configurable: 5,10, 20 and 40 MHz (for the default band)
Modulation	2x2 MIMO-OFDM (BPSK/QPSK/16QAM/64QAM)
Adaptive Modulation & Coding	Supported
Automatic Channel Selection	Supported
DFS	Not Supported (for the default band)
Diversity	Supported
Spectrum Viewer	Supported
Max EIRP	26 dBm
Duplex Technology	TDD
Error Correction	FEC k = 1/2, 2/3, 3/4, 5/6
Encryption	AES 128; FIPS 197
Supported Indoor Units	IDU-NetStream RM and DT; NetStream PoE devices
Bandwidth Allocation	Configurable: Symmetric or Asymmetric
QoS	Packet classification to 4 priority queues according to 802.1p and Diffserv
VLAN Support	802.1Q, QinQ, 4094 VLANs
Ethernet Ring Protection	Supported, including Ethernet 1+1
TDD Intra Site Synchronization	Supported
TDD Inter Site Synchronization	Supported through common GPS receiver per site
Monitored Hot Standby (MHS)	1+1 with NetStream link

### Supported Bands

Band	Channel BW 5 MHz	Channel BW 10 MHz	Channel BW 20 MHz	Channel BW 40 MHz	Radio Compliance
2.4 GHz FCC/IC*	2.4095-2.4645	2.407-2.467	2.402-2.472	2.392-2.482	FCC 47CFR Part 15.247; IC RSS-210
2.4 GHz Universal	2.3045-2.4745	2.302-2.477	2.297-2.482	2.287-2.492	Universal

\*Default Band

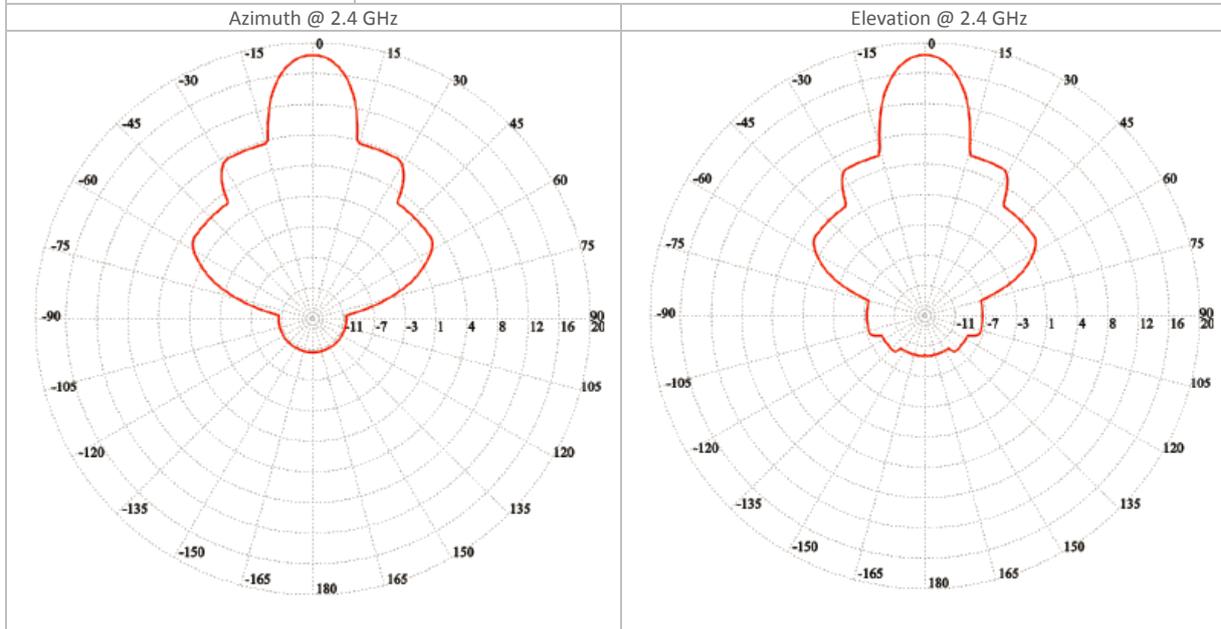
Mechanical	
ODU Dimensions	37(w) x 37(h) x 11(d) cm
ODU Weight	3.6 kg / 7.94 lbs
Power	
Power Feeding	Power provided over ODU-IDU cable
Power Consumption	<20 W
Environmental	
Operating Temperatures	-35°C to 60°C / -31°F to 140°F
Humidity	100% condensing, IP67 (totally protected against dust and against immersion up to 1 m)
Safety	
FCC/IC (cTUVus)	UL 60950-1, UL 60950-22, CAN/CSA C22.2 60950-1, CAN/CSA C22.2 60950-22
ETSI	EN/IEC 60950-1, EN/IEC 60950-22
EMC	
FCC	CFR47 Class B, Part15, Subpart B
ETSI	EN 300 386, EN 301 489-1, EN 301 489-4
CAN/CSA-CEI/IEC	CISPR 22-04 Class B



### Integrated Antenna

Gain	18 dBi
VSWR	1.5 : 1 (typ)
3 dB Beam width	16° (typ)
AZ & EL Beam Squint	Port V & Port H $\pm 2^\circ$
Polarization	Dual Linear (Vertical and Horizontal)
Side lobes Level	ETSI EN 301 525 V 1.1.1. TS3
Cross Polarization	ETSI EN 301 525 V 1.1.1. TS3
F/B Ratio	-30 dB
Port To Port Isolation	30 dB (min)
Lightning Protection	DC grounded

### Antenna Pattern



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