



## NetStream 5x10

NetStream 5x10 is a carrier-class radio that supports 4.9 to 5.9 GHz and complies with FCC, IC (Canada), MII (China), WPC (India) and Universal regulations (factory default: 5.8 GHz FCC/IC). The multi-band radio is part of the NetStream Series that delivers 10 Mbps throughput and extended range.

Packing native TDM and Ethernet over a single wireless link, NetStream 5x10 provides 10 Mbps net aggregate throughput and up to 2 E1/T1 plus Ethernet.

NetStream 5x10 comes with an integrated antenna.

### Product Highlights

- 10 Mbps Ethernet net throughput and up to 2 E1/T1 plus Ethernet (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 MIMO, OFDM and Diversity technologies
- Robust and reliable to operate in tough conditions, extreme temperatures and non line-of-sight scenarios



## Product Specifications

### Configuration

Architecture	Outdoor Unit with 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	10 Mbps net aggregate throughput (up to 2 E1/T1 plus Ethernet)
Range	Up to 120 km / 75 miles
Channel Bandwidth	Configurable: 5, 10 and 20 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 View	Supported
Max Tx Power	25 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 series; NetStream PoE device
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	Radio Compliance
<b>5.8 GHz FCC/IC*</b>	<b>5.7275 - 5.8475 GHz</b>	<b>5.725 - 5.850 GHz</b>	<b>5.725 - 5.850 GHz</b>	<b>FCC 47CFR Part 15.247; IC RSS-210</b>
4.9 GHz Universal	4.8975-4.9925	4.895-4.995	4.890-5.000	Universal
5.1 GHz Universal	5.1475-5.3375	5.145-5.340	5.140-5.345	Universal
5.4 GHz Universal	5.4725-5.7225	5.470-5.725	5.465-5.730	Universal
5.8 GHz MII	5.7375-5.8375	5.735-5.840	5.730-5.845	CMIIT RTA
5.9 GHz Universal	5.7275-5.9525	5.725-5.955	5.720-5.960	Universal
5.8 GHz WPC	5.8325-5.8675	5.830-5.870	5.825-5.875	WPC (India) G.S.R 38(E) dated 19 January. 2007 Notification
4.9 GHz FCC/IC	4.9425-4.9875	4.940-4.990	4.940-4.990	FCC 47CFR Part 90 Subpart Y; IC RSS-111
5.4 GHz FCC/IC	5.4775-5.7175	5.480-5.715	5.480-5.715	FCC 47CFR Part 15.407; IC RSS-210
5.2 GHz FCC/IC	5.2525-5.3475	5.255-5.345	5.255-5.345	FCC 47CFR Part 15.407; IC RSS-210

\*Default Band

### Mechanical

ODU Dimensions	24(w) x 20(h) x 8(d) cm
ODU Weight	1.5 kg / 3.31 lbs

### Power

Power Feeding	Power provided over ODU-IDU cable
Power Consumption	<12 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



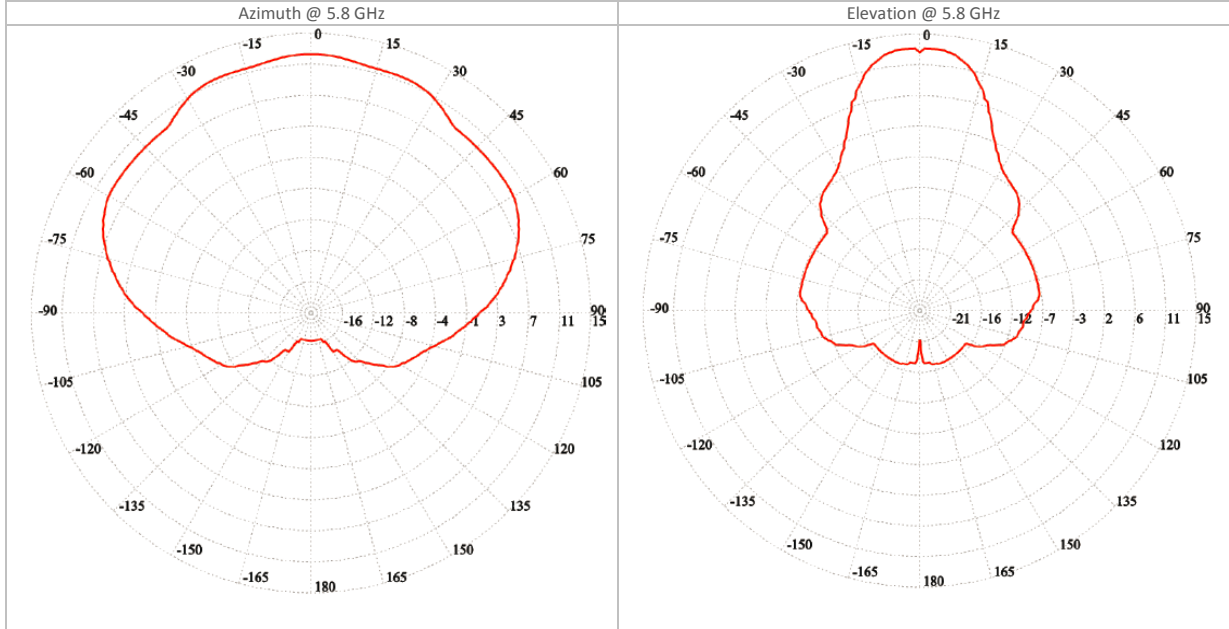
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### Integrated Antenna

Gain	15.5 dBi
VSWR	1.5 : 1 (typ)
3 dB Beam width	90° (typ)
AZ & EL Beam Squint	3° (typ)
Polarization	Dual Linear (Vertical and Horizontal)
Side lobes Level	ANEXO A RESOLUCAO N 372; DE 19 DE MAIO 2004; BRAZIL
Cross Polarization	ANEXO A RESOLUCAO N 372; DE 19 DE MAIO 2004; BRAZIL
F/B Ratio	-20 dB
Port To Port Isolation	22 dB (typ)
Lightning Protection	DC grounded

### Antenna Pattern



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