



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 40 km/25 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 40 km / 25 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 |
|------------------------|----------------------------|--------------------------|--------------------------|---|
| 5.8 GHz FCC/IC* | 5.7275 - 5.8475 GHz | 5.725 - 5.850 GHz | 5.725 - 5.850 GHz | FCC 47CFR Part 15.247; IC RSS-210 |
| 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

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|-------------------|-----------------------------------|
| 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 |



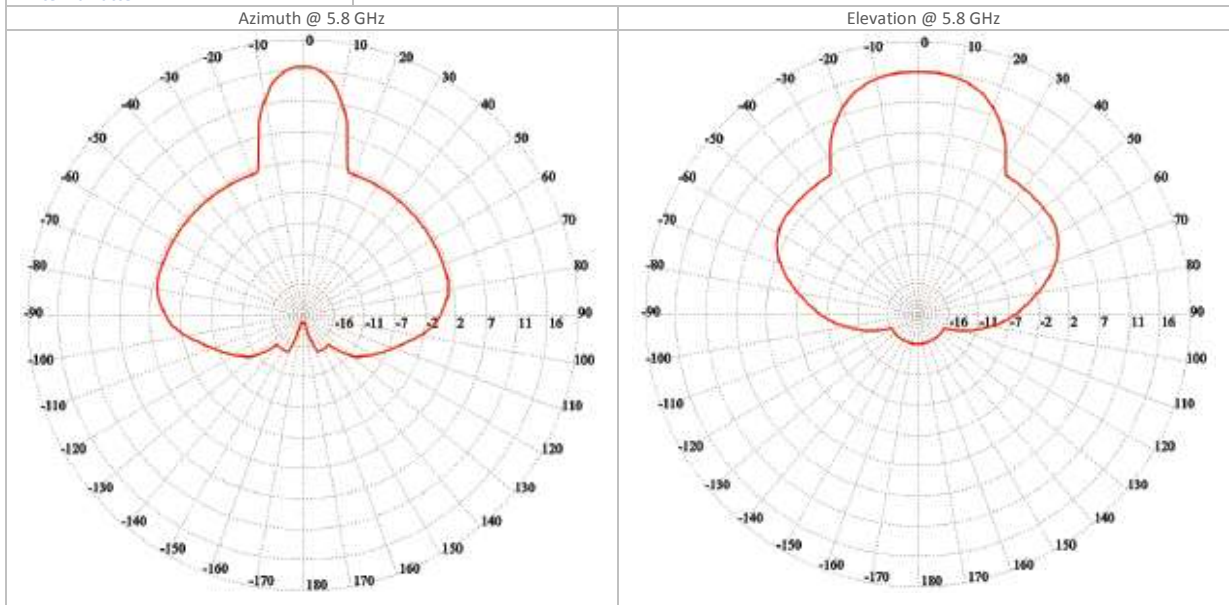
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Integrated Antenna

| | |
|------------------------|---|
| Gain | 15 dBi |
| VSWR | 1.5 : 1 (typ) |
| 3 dB Beam width | 15° (typ) |
| AZ & EL Beam Squint | 5° (typ) |
| Polarization | Dual Linear (Vertical and Horizontal) |
| Side lobes Level | ETSI EN 302 326-3 V 1.1.2 (2006-03) DN1 |
| Cross Polarization | ETSI EN 302 326-3 V 1.1.2 (2006-03) DN2 |
| F/B Ratio | -25 dB |
| Port To Port Isolation | 20 dB (typ) |
| Lightning Protection | DC grounded |

Antenna Pattern



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