



NetAstra

High capacity, Industry grade point to multi-point wireless networking solution

Product Highlights

- Supports both fixed and mobile SUs
- Up to 250 Mbps aggregated throughput
- Outstanding short and constant latency
- Support up to 32 SUs
- Long cell radius – up to 40 km/25 miles
- 90 percent of capacity available in single direction
- Excellent operation in nLOS and NLOS scenarios
- Outstanding performance with data streams with small packet size (video and voice)

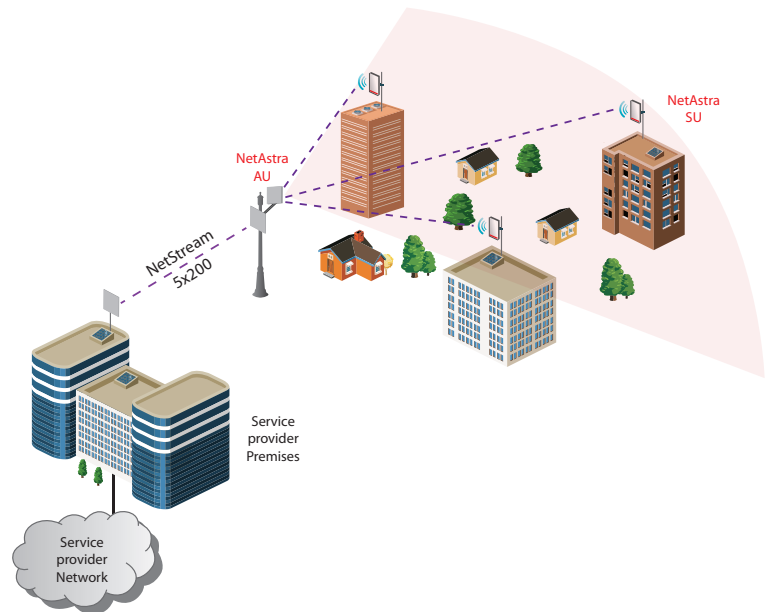


Key benefits

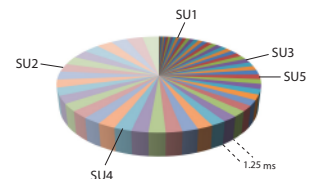
- Advanced MIMO, OFDM and Diversity technologies
- Enhanced interference mitigation capability
- Robust and reliable to operate in tough conditions, extreme temperatures
- Non contention based operation of SUs thanks to scheduled air frame
- Different SU capacities to serve customers with various capacity requirements
- Dedicated traffic resource allocation ensuring SLA & latency
- Ideal wireless network for video surveillance applications

With the ever growing need for connectivity at high speeds and the expanding enterprises, government organizations and industries using wireless broadband connectivity as their main communication platform, the need for a point to multipoint wireless networking solution is becoming obvious. The ultimate solution should be robust, reliable, efficient and expandable. Moreover the capacities delivered by point to multipoint solutions usually available in the market are not enough for today's and future demands of the end users. Adding to this complexity is the fact that due to sensitivity to interference, and the contention based nature of typical point to multipoint wireless networking solutions in the market; they can't be used in big cities, where they are really needed.

NetAstra is a high capacity point to multipoint wireless networking solution offering 250 Mbps throughput delivered to up to 32 sub stations. Thanks to its proprietary air frame, NetAstra precisely schedules the time slots allocated to each SU preventing the contention between the SUs for bandwidth.



The AU is using a 80 ms air frame which is divided to 64 time slots of 1.25 ms each. Stations are given fixed time frame and they will communicate based on the time frame given to them and not based on contention for bandwidth.



Air frame with scheduled time allocation to SUs

<p>Speed</p> <p>250 Mbps</p> <p>Net Throughput</p>	<p>Distance</p> <p>40/9 Km</p> <p>LOS/NLOS</p>	<p>Frequency</p> <p>4.9-6.0 GHz</p> <p>5-10 - 20 - 40 MHz Channels</p>	<p>Connectivity</p> <p>IP</p> <p>VLAN and QOS supported</p>	<p>Ant. Tech.</p> <p>MIMO /Diversity</p> <p>Vertical Horizontal</p>
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Specifications

Configuration

Architecture	Outdoor Unit Connectorized for External Antenna
IDU TO ODU Interface	Outdoor CAT-5e cable; Maximum cable length: 100 m

Radio

Supported Frequency band	2.3-2.4 or 2.5-2.7 or 3.3-3.8 or 4.9-6.0 or 5.9- 6.4 GHz
Capacity	125 Mbps net aggregate (@20MHz), 250 Mbps net aggregate (@40MHz)
Subscriber Units (SUs) support	Up to 32 SUs
Range	Up to 40 km / 25 miles
Channel Bandwidth	Configurable: 5, 10, 20, 40 MHz
Modulation	2x2 MIMO-OFDM (BPSK/QPSK/16QAM/64QAM)
Adaptive Modulation & Coding	Supported
Bandwidth allocation	Configurable: Symmetric or Asymmetric
DFS	Supported
End to End Latency	Supported
Spectrum Viewer	Supported
Max Tx Power	25 dBm (supported to regulation in each country)
Duplex Technology	TDD
Error Correction	FEC k = 1/2, 2/3, 3/4, 5/6
Encryption	AES 128
Ethernet Interface	10/100BaseT, 1000BaseT, (supported via indoor PoE device)
Layer 2	Bridging learning of 5K MAC addresses
Qos	Supported, Packet classification to 4 queues according to 802.1p and Diffserv
VLAN	Supported, 802.1Q, 802.1P, QinQ
TDD intra Site Synchronization	Supported
TDD inter Site Synchronization	Supported through common GPS receiver per site

Mechanical

ODU Dimensions	19.5(w) x 27.0(h) x 8.0(d) cm
ODU Weight	1.8 kg / 3.6 lbs

Power

Power Feeding	Power provided over ODU-IDU cable using PoE
Power Consumption	<25W

Environmental

Operating Temperatures	-35°C to 60°C / -31°F to 140°F
Humidity	100% condensing, IP67 (totally protected against dust and immersion up to 1m)

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	47 CFR Class B, Part15, Subpart B
ETSI	EN 300 386, EN 301 489-1, EN 301 489-4
CAN/CSA-CE/IEC	CISPR 22-04 Class B
AS/NZS	CISPR 22-2004 Class B



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