

AXS-BS-450-N

5 GHz BAND BASE STATION

Strong protection against interference

Net capacity of 140 Mbps

QoS per CPE and service

Synchronism GPS integrated

High coverage range LOS

Full-outdoor IP67

Ultra-compact and energy-efficient

4 x 10MHz carriers



PRODUCT OVERVIEW

The new AXS-BS-450-N base station has been designed to provide coverage to access networks in the 5 GHz band. It delivers up to 140Mbps by using four 10 MHz radio channels and provides equivalent to cable networks (HFC) QoS.

It is a very compact full-outdoor and low power consumption base station, with high throughput and processing capacity. The AXS-BS-450-N base station minimizes the spectral use and the investment thanks to the use of very narrow channel bandwidths.

Designed with aerDOCSIS technology, it is completely interoperable with other 802.16 implementations. This helps protect the ISP's investment, guaranteeing the best profitability for wireless access networks in the 5 GHz licensed band.

APPLICATIONS

- WISP
- Rural broadband access
- VoIP and videoconferencing
- Leased lines for corporate access
- Extension of fiber optic networks
- IPTV
- Smart-metering



RADIO PARAMETERS

| | |
|----------------------------|--|
| Frequency band | 4900-5875 MHz |
| Channel step | 1MHz |
| Net capacity | 140 Mbps |
| Channel bandwidth | 10 / 7 / 5 / 3.5 / 1.75 MHz |
| Independent radio carriers | 4 |
| Net spectral efficiency | 3,5bps/Hz |
| BPSK sensitivity | -92 dBm @ 10MHz -99 dBm @ 1.75MHz |
| 64QAM sensitivity | -74 dBm @ 10MHz -82 dBm @ 1.75MHz |
| Max. transmission power | 23 dBm per channel / 29 dBm total |
| Antenna | 4 connectors N per external antenna |
| Modulation | OFDM 256 subcarriers |
| Subcarrier modulation | Adaptive BPSK, QPSK, 16QAM y 64QAM (7 levels depending on FEC combination) |
| FEC | Yes, concatenated Reed-Solomon and convolutional code |
| DFS | Yes |
| Spectrum analyser | Yes, intelligence |
| Downlink/Uplink | From 12% to 95% |
| Access control protocol | Synchronous TDMA with hardware implementation |
| Duplexing technique | TDD (Time Domain Duplexing) |
| Synchronism TDD | GPS integrated |

QUALITY OF SERVICE (QoS)

| | |
|-------------------------|---|
| QoS control | 5 QoS levels (BE, nRTPS, eRTPS, RTPS, UGS). Separate queues per service and user |
| Max. number of services | Unlimited |
| Service differentiation | Layer 2: MAC source/destination address, EtherType, VLAN tag Layer 3: DSCP ToS, IP source/destination address, subnet, protocol Layer 4: TCP or UDP source/destination port |
| Max. CPEs per sector | Unlimited |

NETWORKING AND SECURITY

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|-----------------------|---|
| Layer 2 functionality | Bridging (IEEE 802.1) |
| VLAN | 802.1q, 802.1p, soporte q-in-q, unlimited VLANs |
| Layer 3 functionality | Dynamic/static routing, NAT, DHCP server/client |
| Encryption | AES128/256 |
| Latency | 5ms |
| X.509 certificates | Yes |
| Data interface | Gigabit Ethernet |
| Max. packet size | 2048 bytes |

MANAGEMENT

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|-------------------|--|
| Remote | Web, SSH, XML-RPL, SNMP v1, 2 & 3 |
| Advanced | SMC channel support, double IP data/management |
| User provisioning | Radius, CPS and xml local file |

PHYSICAL FEATURES

| | |
|-------------------|--|
| Dimensions | 330 x 330 x 110 mm (packaged) |
| Dimensions | 265 x 265 x 70 mm (without packaging) |
| Weight | 4,5 kg |
| PoE supply | PoE 802.3af Class 4 (60W) 48-57VDC (4 pairs) |
| Power consumption | 22W typ., 35W max (100% traffic) |
| Temperature range | From -30°C to +55°C (working environment temperature) |

STANDARDS

| | |
|-------------|---|
| Protocol | aerDOCSIS compatibility with 802.16-2012 |
| Radio | ETSI EN 301 893 V2.1.1 ETSI EN 302 502 V2.1.1 |
| Environment | IP67 (protection) ETSI EN 60951-1 (security) UNE EN 60068-1-1/2/11/14/30 (environment) ETSI EN 301 489-1 V1.9.2 (EMC) ETSI EN 301 489-17 V2.2.1 (EMC) |