

As part of Alcatel's offering of end-to-end network solutions for core, edge, access, and customer premises, the Alcatel 7385 Wireless IP Solution provides broadband wireless access for voice and data services. The system includes base station site and customer premises equipment (CPE), as well as end-to-end network and service management.

A base station, consisting of digital modulation equipment and point-to-multipoint transmitters and receivers, is the central location that collects all traffic to and from customers within a given wireless coverage area. It is also the linking point between the customer and the network backbone. CPE includes a radio transceiver, network termination, and possibly in-building distribution switches or routers for multibusiness or multidwelling units.



Delivers
broadband IP
and voice
services
over the air

The Alcatel network and service management suite supports complete end-to-end management of both the wireless and wireline portions of a network, providing a full range of billing, statistics and maintenance support.

The Alcatel 7385 Wireless IP base station site equipment includes:

- ▼ Up to three Alcatel 7385 Wireless IP Digital Base Stations (DBSs), located indoors or outdoors, each serving one sector
- ▼ One outdoor Alcatel 7385 Wireless IP Antenna Unit - Radio Equipment (AURE) per sector
- ▼ An aggregation device, such as the Alcatel OmniStack, that combines all 10Base-T sector signals and functions as the network interface

Key Features

Alcatel 7385 DBS

The Alcatel DBS is the digital part of the access solution. It comprises network interfaces, radio modems and IF interfaces, and provides centralized intelligence to the whole cell organization. Connected to an Alcatel 7385 AURE, it acts as a transmitting hub for voice and high speed data services to hundreds of Alcatel Subscriber Units over a line-of-sight connection with a range of up to 15 kilometers (9 miles). To facilitate installation and minimize space requirements, the 7385 DBS can be installed indoors or in an outdoor cabinet.

The Alcatel 7385 DBS provides 3 Mb/s throughput per sector, up to 18 sectors per base station site, and one 10Base-T network interface per sector. It delivers broadcast and multicast capabilities, Dynamic Bandwidth Allocation and three level auto-adaptive modulation.

Alcatel 7385 AURE

The Alcatel 7385 AURE receives and transmits point-to-multipoint traffic to and from subscribers for one sector in a given coverage area and is the linking point between subscribers and the backbone network. The 7385 AURE is available in 2.6 or 3.5 GHz frequencies.

▼ Pole-mounted Alcatel 7385 AURE.



Technical Summary

System Parameters

Radio access method

- ▼ FH-CDMA and TDMA (FDD)

Standards compliance

- ▼ EN 301 253 (FH-CDMA)
- ▼ Reg. TP 321 ZV (TDMA)

Frequency bands

- ▼ 3.5 GHz Band
 - UL: 3,410 – 3,452 MHz;
DL: 3,510 – 3,552 MHz (A Band)
 - UL: 3,450 – 3,500 MHz;
DL: 3,550 – 3,600 MHz (B Band)
 - UL: 3,400 – 3,452 MHz;
DL: 3,500 – 3,552 MHz (A1 Band)
- ▼ 2.6 GHz Band
 - UL: 2,523 – 2,565 MHz;
DL: 2,597 – 2,639 MHz (C1 Band)
 - UL: 2,551 – 2,593 MHz;
DL: 2,625 – 2,667 MHz (C2 Band)

Bandwidth Allocation

- ▼ Up to 50 MHz (typically 10, 12, 14, 24, 28, 36 or 42 MHz RF channels)
- ▼ Channel spacing: CEPT 14.03
- ▼ Subchannel spacing: 2 MHz
- ▼ Modulation: Multilevel (2, 4 or 8) GFSK
- ▼ Physical layer: IEEE 802.11
- ▼ Throughput: Up to 3 Mb/s gross bit rate/BS-AU
- ▼ BS RX sensitivity (BER 10⁻⁶ @ 1/2/3 Mb/s): -93/-86/-77 dBm
- ▼ VLAN support: IEEE 802.1q
- ▼ Voice over IP support: ITU-T H.323 V2, G.711, G.723.1, G.729A
- ▼ Network management: SNMP V1

Radio Interfaces

- ▼ RF output power at antenna port: +27 dBm
- ▼ IF interface (BS-AU/AURE): 440 MHz (TX/RX TDD)
- ▼ Connector BS-AU (IF): TNC female 50 ohms
- ▼ Connector AURE (IF): TNC female 50 ohms
- ▼ Connector AURE (antenna): N female 50 ohms
- ▼ Maximum BS-AU/AURE cable length:
 - 30 m (100 ft.): RG-58,
 - 80 m (260 ft.): RG-213

Network Interfaces

- ▼ 1 Ethernet 10Base-T, RJ-45 (3 Mb/s maximum gross bit rate) per BS-AU
- ▼ 6 Ethernet 10Base-T, RJ-45 (18 Mb/s maximum gross bit rate) per DBS (1 layer)
- ▼ 18 Ethernet 10Base-T, RJ-45 (54 Mb/s maximum gross bit rate) per DBS (3 layers)

Antenna (sector)

- ▼ Horizontal aperture: 60°
- ▼ Gain: 17 dBi
- ▼ Connector: N female 50 ohms
- ▼ Tube diameter for mounting: 4.8 cm (1.9 in.)

Power/Environment/Mechanical Data

- ▼ Power: -48 V DC
- ▼ Operating temperature:
 - DBS (indoor equipment): 0° to 40° C (32° to 104° F)
 - AURE (outdoor equipment): -40° to 60° C (-40° to 140° F)
- ▼ Mechanical specifications (DBS): 48.3 cm (19 in.) rack, 3U, 5kg (11 lb.), fully loaded
- ▼ Mechanical specifications (AURE): 30.5 x 12 x 5 cm (11.9 x 4.7 x 2 in.), 1.5 kg (3.3 lb.)

For more information www.cid.alcatel.com

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