Aastra DECT Base Stations

On-site mobility for professionals

The Aastra BS300 range of base stations offers a variety of coverage patterns to suit different situations. By choosing the right mix of base stations and the appropriate antennas you can ensure quality coverage and sufficient traffic capacity exactly where you need it.

Based on the GAP/CAP standard, the base stations deliver high quality telephony, messaging and alarm handling through out the entire system. All Aastra BS300 base stations are compact, lightweight and easy to install in small as well as very large systems.

BS332 Base Station

The BS332 is the standard solution for most business premises. Although typical indoor coverage is 30 m, actual coverage depends on factors such as the spacing of walls and the building materials used. The BS332 supports up to 8 simultaneous speech calls per base station. Remaining signaling capacity is reserved for DECT SMS messaging and alarm handling. Whilst the BS332 is primarily designed for indoor coverage, an outdoor housing is available for outdoor applications. Outdoor coverage is up to 300 m.

The basic function of the base station is the transmission and reception of DECT radio signals. To this end, the base station is equipped with a radio, capable of accessing a spectrum of 120 radio channels. The base station is controlled and powered from the radio exchange board via two twisted pairs. Extra power pairs can be used to increase the powering range of the base station. The base station can also be powered using a local AC adapter. This base station is compatible with the integrated cordless solutions of the MX-ONE, BusinessPhone and MD Evolution telephony systems.

Antennas

The BS332 has two internal antennas. At any time during the transmission or reception cycle only one antenna is active. However, fading of the radio signal is corrected by switching to the other antenna for transmission and reception. This switching, also called spatial and polarization diversity, can be done per time slot and results in a more stable radio performance and hence better speech quality.

Interface

The connection between the base station and the radio exchange is established via two proprietary U-interfaces using 2B+D. Each U-interface uses one twisted pair. The two bi-directional U-interfaces provide a data rate of 128 kbits/s for each speech channel, which is sufficient for a total of 8 simultaneous calls.

Connectors

Two RJ45 modular jacks type connectors for data and power connection are located on the rear of the base station. The connectors are interconnected inside the base station. This arrangement allows an easy connection of extra power to the base station.

Distances

The maximum length of the cable between the exchange and the base station depends on the supply voltage, the wire thickness of the twisted pair cables and the number of extra power pairs used. The length of the cable between the telephony system and base stations can be up to 1.9 km. The radio coverage radius of the base station depends on the propagation characteristics and varies between 20 - 300 m.

BS300 Base Stations

Easy software upgrade

The software of this base station resides in programmable non-volatile memory. Loading and managing of the base station's software can be done via the call server's radio board. To further simplify operation of the DECT infrastructure, all configuration of the base station is done through the call server.

Power

When powering the base station from the call server, the voltage offered to the base station may vary, depending on the distance between base stations and exchange (i.e. power supply). The base station requires a minimum voltage of 21 V DC and maximum input voltage to the base station is 56 V DC.

Mounting

The BS332 can be mounted on a wall, ceiling, pole or beam, using the same type of mounting bracket as used for BS342. The bracket shall be secured first and thereafter the base station can be easily fixed on to it. This makes mounting and exchanging of the base station relatively simple.

BS342 Base Station

The BS342 shares the basic characteristics of the BS332, but comes with two external omnidirectional dipole antennas. These default antennas provide a spherical coverage pattern, other antennas are available as alternatives. The directional antennas radiate more in certain directions than in others. The benefit with the alternative antennas is the ability to direct coverage exactly where you need it, reducing overall cost in cases where the ideal coverage shape is not a sphere.

Any combination of external antennas on one base station must cover/face the same area.

Versions

The GAP/CAP based base station is available in two versions:

- 80E00014AAA-A, internal antennas
- 80E00015AAA-A, external antennas

To support various markets, the base station is equipped with a DIP switch where support for the following spectrums can be set:

- 1880-1900 MHz Std./EU
- 1910-1930 MHz Latin America
- 1920-1930 MHz North America

Antennas for BS342

Outdoor Housing

General

Typical applications for outdoor housing are base station coverage of car-parks, storage areas and large factory areas where physical and environmental protection is a necessity. The door and housing have a solid all-round construction and are made of light-grey fiberglass reinforced polyester, suitable for over painting. The housing has rain protection strips over and under the door. The door itself has double sealing on the top and bottom containing double closing-locks.

On the bottom of the housing there are two feed-through holes for data cable and power cable (if needed). An external power indicator, also on the bottom, can be connected to the base station to give the same indications as the built-in LED. Local power adapter, as well as some directional antennas can be located inside the housing.

The outdoor housing can be mounted directly on walls and flat surfaces. It can also, with the optional pool mounting kit, easily be mounted on pools and similar construction items.

Note, the outdoor housing provides neither heating nor lightning protection for the base stations.

Outdoor housing for BS300 and IPBS400

Versions

- SDC 905 04/1 Outdoor housing
- NTM 501 04 Pool mounting kit (for SDC 905 04/1)

Specifications	BS332	BS342
Physical		
Dimensions (mm):	170 (w) x 170 (d) x 38 (h)	170 (w) x 170 (d) x 38 (h)
Ext. antennas' dimension	NA	107 (l) x 8.5 (d) mm
Weight (grams):	400	432 (incl. standard ext. antennas)
Material:	ABS molded plastic	ABS molded plastic
Color:	White (NCS S 0502-B)	White (NCS S 0502-B)
Environmental		
Operating temperature	-10 to +55 °C	-10 to +55 °C
Storage temperature	-25 to +55 °C	-25 to +55 °C
Rel. operating humidity	15 to 90 %, non condensing	15 to 90 %, non condensing
Rel. storage humidity	5 to 95 %, non condensing	5 to 95 %, non condensing
Functional		
Supported systems	MX-ONE, BusinessPhone, MD Evolution	MX-ONE, BusinessPhone, MD Evolution
Operating voltage	21 to 56 V DC	21 to 56 V DC
Power consumption	1.3 - 2.0 W	1.3 - 2.0 W
RF carriers	Standard, LA, CN, US	Standard
RF output power (US/EU)	19 / 24 dBm	19 / 24 dBm
Center frequency stability	+/- 25 ppm	+/- 25 ppm
Modulation method	Gaussian Filtered Frequency Shift Keying (GFSK)	Gaussian Filtered Frequency Shift Keying (GFSK)
Typical RF output impedance	50 Ohms	50 Ohms
Receiver sensitivity	At least -86 dBm at B.E.R. = 10^{-3}	At least -86 dBm at B.E.R. = 10^{-3}
Input compression	Better then -30 dBm at -1 dB compression point	Better then -30 dBm at -1 dB compression point
Connectors	2 RJ45	2 RJ45 2 MCX SMT (female)
DECT GAP/CAP interface	Yes	Yes
Broadcast and multicast messaging	Yes	Yes
Non-blocked alarm channels	Yes	Yes
Nr. of simultaneous calls	8	8
External LED indication	Yes	Yes
External antennas	No	Yes
Distance between the radio board and BS	Max. 1.9 km	Max. 1.9 km
Compliance to European regulations		
Radio and Telecom. Terminal Equipment	1999/5/EC	1999/5/EEC
Low Voltage Directive (LVD)	73/23/EC	73/23/EC
Electromagnetic Compatibility Directive (EMC)	89/336/EEC	89/336/EEC
Standards		
EMC	EN 301489-1 v1.4.1; EN 301489-6 v1.2.1	EN 301489-1 v1.4.1; EN 301489-6 v1.2.1
Safety	EN 60950-1: 2001	EN 60950-1: 2001
Radio	EN 301406 v1.4.1; TBR 022	EN 301406 v1.4.1; TBR 022

Specifications	Outdoor Housing
Physical	
Size (mm):	300 (w) x 200 (d) x 400 (h)
Weight (kg):	5.4 (base station not included)
Material/color (housing and door)	Fiberglass-reinforced unsaturated polyester, self-extinguishing, light grey close to RAL 7035
Mounting plate	Zinc-plated steel
Environmental	
Withstanding temperature	-30 to +80 °C
Protection category	IP 66
Impact protection	Fully insulated to VDE 100 § 7, of 2.5 to 3.5
Pool mounting kit	
Material	Stainless steel and zinc coated metal
DECT GAP/CAP interface	Flexible mounting strip enables mounting on pool with diameter up to ~19 cm

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