



Cordless voice communication  
over IP networks

DECT over SIP™

**A**STRA



### Voice over IP - voice in data networks

#### Advantages of using Voice over IP (VoIP):

- » Using the same infrastructure for voice and data facilitates considerably the installation and management of communication networks.
- » A workstation with PC and telephone requires only one network connection.
- » You only need to plug the PC and telephone into another socket if you have to relocate your workstation. Additional work may not be necessary on the telephone network.
- » Distributed corporate structures with remote sites and home-based workstations can be organised economically.

Until now, it has been rather difficult to combine technologies from various manufacturers in a VoIP environment due to proprietary solutions. With the introduction of Session Initiation Protocol (SIP) the interoperability of VoIP solutions has been established and has gained wide acceptance. Thus, SIP is for VoIP what Euro ISDN is for ISDN. VoIP has not only gained access into private homes in form of internet telephony, it is also the basis for business solutions.

As one of the leading manufacturers, Aastra has taken up the challenges of the market in terms of open standards. The experience gained from decades of voice and data-oriented development efforts has influenced the development of our mainly SIP-oriented products.

The result is the DECT over SIP™ solution which uses the IP network for mobile communication.

#### Further advantages inherent in the use of DECT over SIP™:

- » Your SIP-capable communication system can be completed and expanded at the same time with a mobility solution.
- » Your employees can easily be equipped with handsets as in-house solution, with cost transparency and no mobile telephony fees.
- » You have optimum voice quality.

*SIP is a standardised internet protocol for establishing, terminating and managing a communication session between two or more participants.*



### The new freedom: mobility on IP-based networks

DECT is the worldwide leading technology used in building a multi-cellular radio network for voice communication. With DECT over SIP™ Aastra has sensibly combined the already mature and professional DECT technology with the SIP innovation.

The patented solution brings in the comfort of mobility to VoIP networks, based on two technologies:

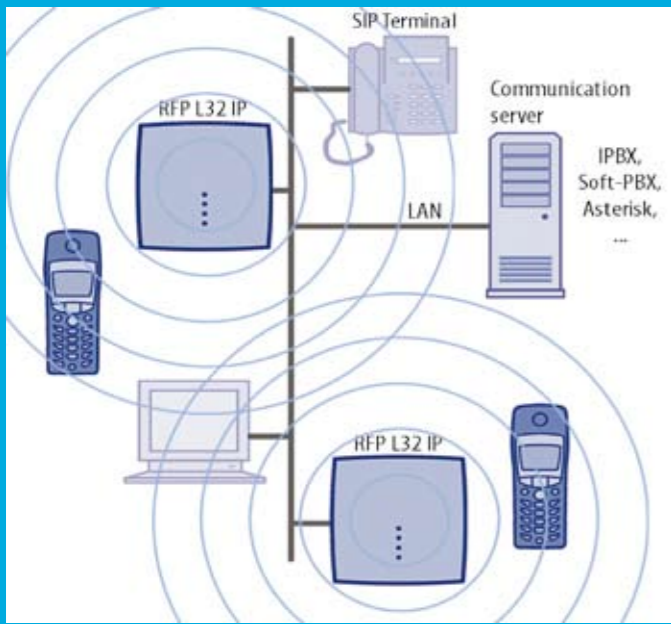
- » Voice over IP (VoIP)  
Voice is conveyed via an IP data network to an IP radio fixed part.
- » DECT (Digital Enhanced Cordless Telecommunications)  
Tried and tested technology for conveying voice securely via the air from the IP radio fixed part to the handset

A multi-cellular DECT radio network can be installed anywhere in a company where data lines do exist. This may be in remote company sites linked together through a VPN connection.

With DECT over SIP™, each call manager and communication server can be completed with DECT which uses SIP on the subscriber side. The range of features available on the handset depends on the number of implemented SIP-standard features supported by the call manager or TK server on the one hand, and the DECT over SIP™ solution on the other. It is this manufacturer independence that makes this solution outstanding and guarantees long-term investment value.

# Communicate mobile in a simple way

DECT over SIP™



## DECT over SIP™ - highlights

- » Excellent voice quality, clearly better than that of GSM handsets
- » IP cancels the limitation of connection lengths typical of classical DECT networks; the range of the mobile network is determined by the IP infrastructure.
- » Use of mobile voice and data communication on the same network.
- » The same installation, equipment, operation and system-maintenance concept.
- » Simple configuration of an installation through configuration data import, simultaneous handset and RFPs setting, easy registration of handsets and Plug & Play of RFPs. This saves time and costs. \*
- » New networks can be created at optimum cost between sites, and existing networks expanded.
- » Mobile terminated calls are routed automatically and without interruption on the company network from RFP to RFP (seamless handover).
- » Roaming takes place between sites linked via WAN, i.e. the handsets are automatically reactivated once the owner reaches the respective local radio network subsystem.
- » Thanks to DECT over SIP™, a lot of mobile subscribers can be added to an existing fixed network installation without necessarily having to purchase a bigger TK device. The user receives a cost-saving, modern mobility solution with minimum investment cost.
- » DECT over IP is a scalable solution that quickly pays for itself and at the same time with a guaranteed future.
- » The security of the solution against unauthorised access is guaranteed through security measures such as https support, password protection, special user accounts, etc. \*
- » If necessary, the system's centralised control can be completed through redundant control to make it more failsafe.\*
- » Thanks to the integration of combined DECT/WLAN radio fixed parts, the system is perfectly suitable for mobile voice and data communication.\*

\* as from release 1.5

## Synchronised radio fixed parts guarantee handover on the radio network.

Hitch-free and uninterrupted handover is possible on networks on which RFPs are synchronised. With Aastra's DECT over SIP™ solution, synchronisation takes place over the air (sync over air).

The IP-RFPs installed on the radio network can synchronise with each other if they detect at least one nearby RFP. The Aastra solution is outstanding in that there is no master/slave system during synchronisation. The DECT network can thus be built up with redundancy, so that if individual RFPs fail (for instance during maintenance work on the IP network), the function of the entire network is maintained.

The radio range required for synchronisation is much lower than the one required for safe and hitch-free voice transmission. Large radio networks can, thus, be set up with a reasonable number of RFPs.

For its DECT network solution, Aastra has chosen internal handover, whereby mobile calls are routed directly from radio cell to radio cell. This prevents unnecessary traffic load for the TK system and ensures that the GAP standard is supported.

The GAP standard guarantees an open system that is compatible with other handsets.

DECT over SIP™ is particularly suitable for companies which

- » Already have an existing data network
- » Already use VoIP
- » Have several mobile workers at different locations and do not wish to run a separate communication server for each location.
- » Wish to develop an extensive industrial site with mobile communication, and on which smaller and bigger operating units have to be linked together on a mobile network
- » Wish to have a scalable, future-oriented solution in order to safeguard the value of their investment for years
- » Need a failsafe solution.



## Why is DECT the leading technology for multi-cellular voice transmission?

DECT is specially designed and developed for optimum voice transmission.

DECT offers:

- » 120 non-overlapping radio channels reserved for DECT
- » Highest reliability level through automatic change of channel in case of inter-system interference
- » No conflict with neighbours regarding the radio channel that may be used and where to use it
- » High range with the same good quality
- » Low installation cost since no frequency plan is necessary
- » High voice quality (clearly better than with GSM) through latest codec
- » Security through encryption
- » Automatic, uninterrupted and hitch-free call handover between the radio cells of a DECT network (seamless handover)
- » Guaranteed bandwidth
- » Highest conversation and standby time with the handsets
- » Best price/ performance ratio compared to all similar technologies, both in terms of procurement and operation.

# Handset for DECT over SIP™ solution

DECT over SIP™



## Aastra 142d

Aastra 142d is the ideal DECT phone for the DECT over SIP™ solution.

With the generously equipped handset you have a very powerful phone for mobile corporate communication. It has a lot of supplementary features such as hands-free operation, buzzer alarm, illuminated graphical display and call list display. Other features include call filter, alarm function and time/date display.

The memory card, which can be used on other devices, has a storage capacity for 100 phone book entries and device-specific features and system registration.

You can communicate comfortably thanks to the hands-free function and headset connection.

Unlike normal, classical DECT handsets, Aastra 142d gives access to the solution's entire SIP system features, in addition to the above-mentioned generous basic features. This means that you can make phone calls while on the move as comfortably as at your work place.

### Functions available on Aastra 142d

- » Hands-free operation
- » Illuminated graphical display: (5 lines, 96 x 60 Pixel) amber-coloured
- » Illuminated keypad
- » Memory card (for phone book with up to 100 entries and device-specific data) You do not have to reregister your handset if you replace your Aastra 142d.
- » Headset socket (2.5 mm jack)
- » Buzzer alarm
- » SOS function for emergency number speed-dialling
- » Speed-dial numbers via digit keys 1 to 9
- » Information and caller-list key
- » Information and loudspeaker keys flash or remain steadily lit when active
- » Mute
- » 30 ring tones
- » Field strength display (4 levels)
- » Volume adjustment (speaker volume, handset volume) (8 levels)
- » Automatic call answering in headset mode
- » Manual and automatic keypad lock (1 minute timer)
- » Temporary ring tone deactivation
- » Silent charging
- » Call filter (block / release)
- » Date / time (international display format)
- » Supports: call waiting, enquiry call, brokering, handover (with or without notification)
- » Call forwarding: immediate, deferred, on busy
- » 13 languages (German, English, French, Spanish, Italian, Dutch, Swedish, Danish, Norwegian, Portuguese, Finnish, Czech, Slovene)

### Technical Data

- » Standby time: up to 140 hours
- » Conversation time: up to 14 hours
- » Battery: 3 AAA cells (NiMH)
- » Charging time: max. 6 hours for empty batteries
- » Weight: 138 g, including the batteries
- » Dimensions (L x W x H): 146 x 52 x 28 mm



## RFP L32 IP and L34 IP – radio fixed parts for the DECT over SIP™ solution

Radio fixed parts RFP L32 IP and RFP L34 IP are the radio fixed parts for the DECT over SIP™ solution and are directly connected to the LAN like a VoIP device.

Indoor or outdoor RFPs are used to set up a DECT radio network over the entire company premises. The indoor variant (RFP L32 IP) has an integrated non-directional antenna, while the outdoor RFP (RFP L34 IP) may use either a directional antenna or a dipole antenna. Even difficult premises or areas can be fitted with an ideal network.

Each radio fixed part works flexibly with 12 or 120 radio channels and guarantees sufficient call capacity.



	RFP L32 IP	RFP L34 IP
Use	Indoor	Indoor and Outdoor
Simultaneous calls	8	8
Wall-mountable	Yes	Yes
Mast-mountable	-	Yes
Power supply	Power over Ethernet (POE), plug-in mains power adapter	POE
Operating mode display	3 (external) LEDs	3 (internal) LEDs
Protection category	IP 20	IP 65
Dimensions (W x H x D)	195 x 200 x 32 mm	240 x 260 x 60 mm
Antenna	Integrated non-directional antenna	May use a dipole antenna or a directional antenna (not included in the delivery)

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