Information

HiPath cordless IP – the SIP-based cordless solution

HiPath cordless IP – completes the HiPath OpenOffice ME / EE Family with a campus-wide mobility solution

Providing employees with cordless phones allows for direct, location-independent communication and is ideally suited for instant availability and enables decisions to be taken quickly. This has organizational and economical advantages.

The flexibility in the number of stations, station frequency, surface coverage, upgrading and the provision of comfort functions with the most modern handsets characterize the system architecture of HiPath cordless IP.

The digital transmission standard DECT (Digital Enhanced Cordless Telecommunication) is used worldwide and works in a secured frequency range.

HiPath cordless IP solution also makes the established DECT standard available in Voice over IP infrastructures. SIP (Session Initiation Protocol) is used to connect to the HiPath OpenOffice ME / EE. The DECT cells can optimally complete SIP-enabled Voice over IP systems as a basis for communications solutions.

Multi-cell technology

The necessary coverage is achieved in buildings or company sites through multi-cell technology. The synchronized cells of the base stations installed at the company overlap so that calls in the entire area of the cordless system can be seamlessly set up and made on the move (roaming and handover).

System features

Handsets

A high degree of flexibility and mobility makes the Gigaset S3 / SL3 professional family for office environments and the Gigaset M2 professional family for industrial environments one of the most popular cordless telephones.

The Gigaset professional is characterized by excellent digital speech quality, a high level of privacy and range (in buildings up to 50 meters and in the open up to 300 meters).

As well as low investment and operating costs the phone provides simple user prompting in connection with the mode-dependent menu keys. This enables optimal access to the large range of comfort features.

A further advantage is the access security in the entire HiPath cordless IP system central registration of the handsets in the system restricts access by unauthorized cordless telephones.

The HiPath cordless IP handsets allow calls to be made in the area covered by the network.

Handsets enable the most important SIP comfort features of the HiPath OpenOffice ME / EE communications systems to be used on the move within the site.

For detailed information on the individual handsets, please consult the separate data sheet with the order no.:
A31002-G2100-A140-*-7629.

DECT IP base stations

The base stations establish a network from cells and communicate with the handsets. The multi-cell technology enables the user to move between the cells with their handsets during a call.

The software of the base station contains complete DECT and IP functionality. The software does not need to be configured and administered locally for each base station but instead can be conveniently operated centrally via the HiPath cordless IP server software.

The optimal location of the base stations for coverage of a building or of a site is determined by a radio analysis-technical measurement.

Special antennas can be used to increase the range.

The base stations can be provided with an outer casing to protect against the effects of the weather.

HiPath cordless IP server software

The HiPath cordless IP server software has various functions.

The HiPath cordless IP server software provides the interface between base stations on the one hand and HiPath OpenOffice on the other.

Configuration / system design
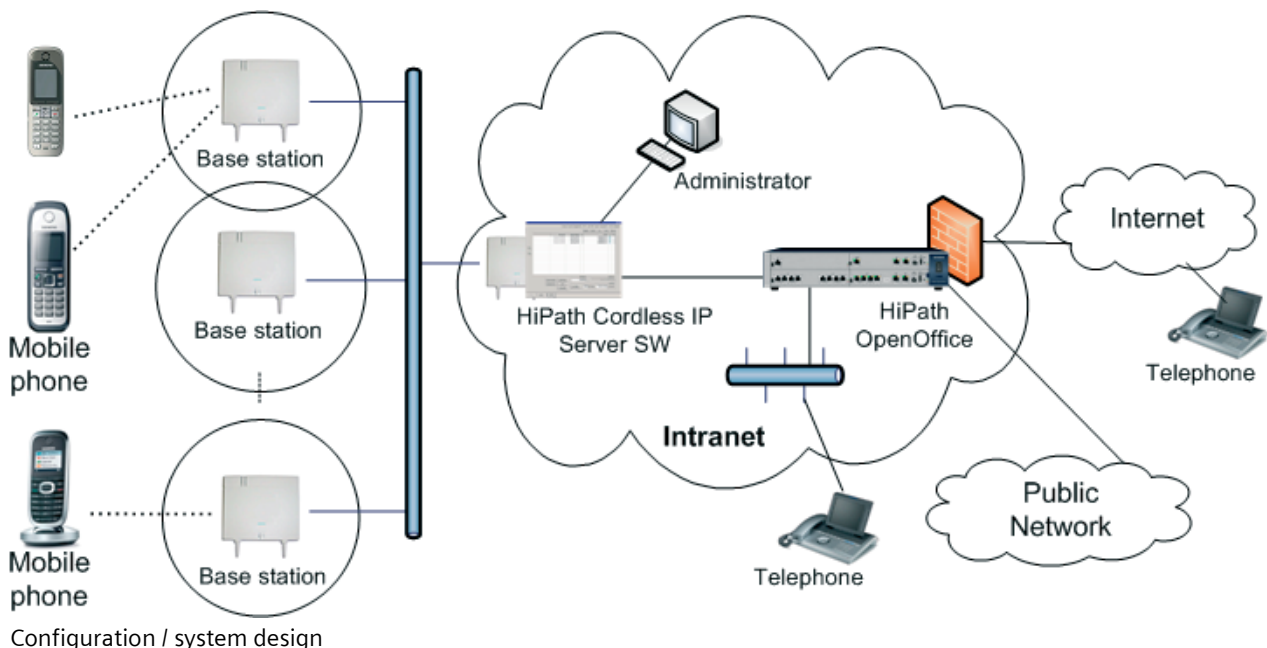
Functions of HiPath cordless IP server software

Router and protocol converter

It provides router and protocol converter functionality by controlling the voice connections between HiPath OpenOffice and the respective base station and additionally by converting these into a data format the base stations can use.

Configuration and administration interface

The base stations and the HiPath cordless IP server software itself are all administered and configured using the web-based management of HiPath cordless IP server software.

Synchronization management

In DECT systems with line-switched connection e. g. HiPath cordless office systems the synchronization information is attained from the connection. This is not possible with the HiPath cordless IP system.

Accurate time synchronization is also necessary between the base stations for a interruption-free call transfer.

Synchronization via DECT (synchronization over the air)

A DECT IP base station must be within the overlapping area of the cell which this DECT IP base station forms in order to synchronize with another DECT IP base station via the DECT interface.

Technical data

System data

- Standard air interface:
  DECT (ETS 300 175)
  GAP (ETS 300 444)

- Frequency range:
  1880 MHz up to 1900 MHz

- Number of carriers: 10 to 12 full duplex channels

- Voice encoding : 32 kbps ADPCM

- CE standard (Safety)

System configuration

Interruption-free call transfer is possible within a max. 10 base stations.

A max. 10 parallel calls are possible within this group.

Features of the SIP interface

In addition to the Gigaset professional handset's features such as the redial list or integrated phonebook, the following features are made available on the Gigasets S3 / SL3 or M2 professional handsets by the HiPath cordless IP solution in connection with HiPath Cordless ME / EE.

- Outgoing / incoming calls

- Number identification (CLIP)

- Hold

- Consultation

- Call toggling

- Call forwarding on busy, call forwarding on no reply via the standard call forwarding of HiPath OpenOffice

- Transfer before / after answering

- 3-way conference

- Turning off the ring tone for an incoming call

- Rejecting a call

- Date and time display in the idle display

- Differentiation internal/external calls

- List of missed calls with incoming calls on the free Gigaset incl. MWI signaling

- Received calls lst

- MFV transmitting (DTMF)

- A group call is possible between Gigaset and optiPoint / OpenStage telephones (both phones ring with an incoming call. If the call is answered on one of the phones, the other phone stops ringing)

Network requirements

In addition the following specifications between the base stations and the HiPath cordless IP server software in the IP network must be adhered to:

- both must be part of the same Ethernet segment. Both Layer 3 routing via a IP router and Network Address Translation (NAT) are not supported,

- At least 2 priority classes in accordance with IEEE 802.1 p/q in the IP network,

- Use of 100 Mbps full duplex for all switched LAN ports

Otherwise this leads to delays in the IP network. This results in synchronization and speech quality problems with the DECT handsets.

Released communications systems und handsets

HiPath cordless IP can be used with the following communications systems:

- HiPath OpenOffice EE (Entry Edition), from V1

- HiPath OpenOffice ME (Medium Edition), from V1

The following handsets are supported by HiPath cordless IP:

- Gigaset SL3 professional

- Gigaset S3 professional

- Gigaset M2 professional

DECT IP base stations

- Maximum number of DECT channels
- DECT signaling in accordance with GAP/PN-CAP
- IP interface - Ethernet network connection: 10/100 Base T
- PoE class 2 in accordance with IEE802.3af
- Power consumption: < 6.5 W; PoE class 2
- Integrated internet / intranet server to access web-based management
- Antenna diversity support
- Software download / update centrally via the HiPath cordless IP server

For HiPath OpenOffice ME / EE also provides the HiPath cordless IP server software:

- Virtual Local Network (VLAN) support
- Quality of Services in the network:
  – Layer 2 prioritization (802.1p/q)
  – Layer 3 prioritization (ToS, DiffServ)
- DHCP options - DCHP active or local entry of IP addresses

Base station indoor:

- Housing dimensions (L X H X W in mm): 202 x 256 x 90
- Weight: approx. 0.5 kg
- Climate in accordance with the IEC721-3-3 class 3K3 standard
- Temperature range: 0 °C to +40 °C
- Storage temperature range: -5 °C to +45 °C.

Housing for an outdoor base station:

- Housing dimensions (L X H X W in mm): 296 x 256 x 90
- Weight: approx. 1.0 kg
- Climate in accordance with the IEC721-3-3 class 4K2 standard
- Outer housing: -25 °C to +40 °C
- Relative humidity when operated with outer housing: up to 95%

Order items

HiPath cordless IP V1 base station (BSIP1) L30280-F600-A183

A port-power over Ethernet injector L30280-F600-A184

- Power line EU 2.5m L30251-U600-A389
- Power line UK 2.5m L30251-U600-A235
- Power line SWZ 2.5m L30280-Z600-F103

DECT identification ARI (Access Rights Identifier) L30251-U600-A395

Outer housing L30280-B600-B212

Communication for the open minded

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www.siemens.com/open