



Flexible Communications –
Dynamic Solutions

OpenCom 100

Convergent communication –
the diversity of multifunctional ICT systems

ASTRA

The system – the best start for tomorrow’s communication



Today, intelligent communications solutions are one of the most important factors when it comes to achieving success in the face of competition. The combination of data and voice transmission results in completely new communications solutions for your everyday work routines. Take the OpenCom 100 range of systems, for example: these improve your efficiency, increase your mobility, provide comprehensive security, simplify use and adapt themselves to your requirements with ease as well.

ICT systems – combining the worlds of information technology and communications

Multifunctional ICT systems combine data and voice transmission. All of the communications processes run on a single platform, which means that you save infrastructure and system administration costs. ICT systems simplify the organisation and management of the various forms of electronic communication used in businesses, while at the same time opening up new horizons for your company. Thanks to its expandability, the OpenCom 100 range of systems protects the investments made by companies eager for growth, enabling you to face the future with even more confidence.

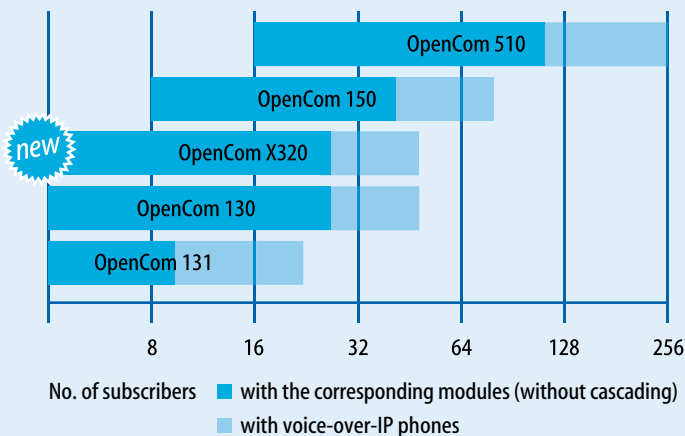
The technology of the future – convergent communication

OpenCom stands for simplification: telephony (communications), Internet (IP), messaging and complex applications all utilise the same platform. Due to the expansion modules and network technology, the number of trunk lines, digital terminals and analogue connections can be adjusted at any time to suit your changing needs. The systems enable the straightforward integration of your accustomed applications, while at the same time, thanks to the multifunctional technology employed, your work processes can be optimised and home workers and branch offices can also be integrated economically.

Programmed for the future

The OpenCom 100 range consists of the following systems: OpenCom 130, OpenCom 131, OpenCom 150, OpenCom 510 and OpenCom X320. These systems cover configurations ranging from four to 200 subscribers, providing the right solution for companies of every size. The OpenCom 100 systems are characterised by their ease of handling and uncomplicated operation. And you also save on running costs, thanks to the leaner infrastructure.

Areas in which the various systems of the OpenCom 100 range can be deployed





OpenCom 100

Voice over IP

“Voice over IP” basically means that the data network is used for voice transmission. Here, the OpenCom 100 offers all the convenience of intelligent and secure IP communication. This includes the connection of IP terminals, and Internet telephony via SIP. With voice over IP you can also network all your company’s sites with a single multifunctional communications system – easily, economically, and with all the concomitant advantages. You can:

a) reduce your costs

Calls between company sites are free, including calls to mobile terminals, while the integration of voice mailboxes, your switchboard and network management will result in a sustained reduction of your running costs. In addition, you save on hardware and maintenance costs for your infrastructure.


b) increase your productivity

Thanks to the connection of their home offices and the networking of your branch offices via a WAN or WLAN, your external staff (home workers, sales personnel, field staff and so on) can also access the company network. This means you can be reached quickly and easily by colleagues and customers alike as you are part of the company’s communications network and its data network.

c) face the future with more confidence

The technical infrastructure we can provide for you can be expanded easily, thus guaranteeing the safety of your investment. You can set up fully functioning offices wherever there is a broadband network connection.

Overview of the OpenCom 100 range of systems

	DECT	DECTover IP®	Soft gateway IP/non-IP channels	Max. no. of gateway channels using gateway module(s)	Max. no. of simultaneous SIP calls possible (Internet telephony)	QSIG over IP	VPN	DynDNS	Cascading	Operating system
OpenCom 131	-	-	4	4	-	-	-	-	-	OSE
OpenCom 130	x ¹	x ³	4	8 ⁴	8 ³	x ^{3,6}	-	-	x	OSE
OpenCom 150	x ¹	x ³	4	16 ⁴	16 ³	x ^{3,6}	-	-	-	OSE
OpenCom 150 rack	x ¹	x ³	4	16 ⁴	16 ³	x ^{3,6}	-	-	x	OSE
OpenCom 510	x ²	x ³	-	64 ⁴	64 ³	x ^{3,6}	-	-	x	OSE
 OpenCom X320	x	x	32	40 ⁵	8 ³	x ³	x	x	-	Linux

¹ Only in conjunction with M100-Ud modules

² Only in conjunction with MS+U_{PN}2-8

³ Gateway module is required

⁴ With echo cancellation and compressing codecs

⁵ Of which eight channels are equipped with echo cancellation and compressing codecs

⁶ A separate VPN router is required

OpenCom 100 – flexible solutions for every requirement

IP terminals

In addition to the IP system telephones (OpenPhone 73 IP, OpenPhone 75 IP), you can also deploy the SoftPhone solution (OpenPhone 7x IPC) for notebooks as a VoIP solution. From Release 8.5 onwards, this also applies to SIP terminals, including, amongst others, the Aastra Phone 312 WLAN telephone. In this way, your branches and home workers can be virtually integrated, regardless of whether this is via DSL or ISDN.

QSIG over IP

Networking two or more sites using the multifunctional OpenCom 100 systems and QSIG over IP enables a shared telephone number plan and direct dialling to another site (using extension numbers). Telephone calls between sites are free of charge: internal calls are automatically routed via IP. Depending on your requirements, network sites can also be equipped with their own trunk lines if necessary.

DECToverIP®

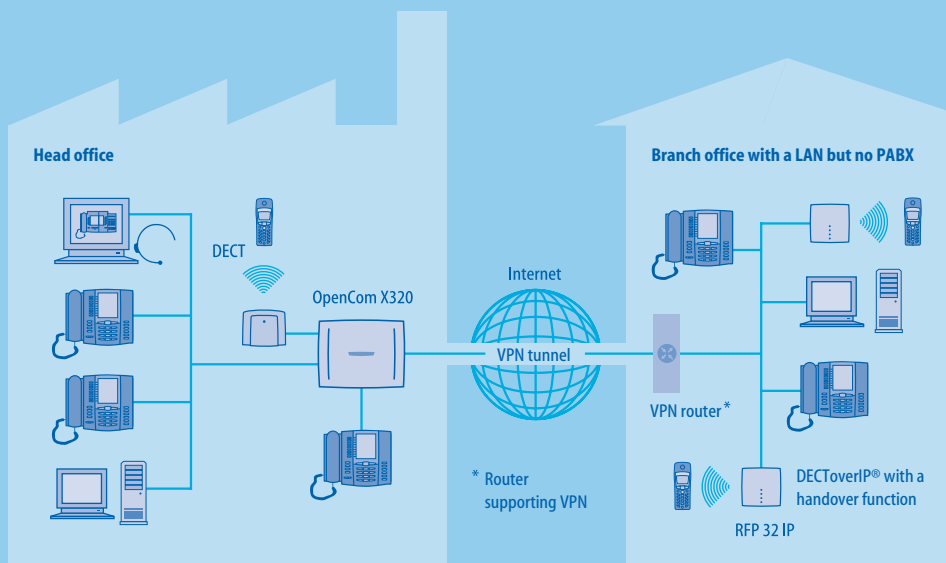
The term “DECToverIP®” refers to the complete integration of cordless DECT telephony in an IP infrastructure. The DECToverIP® base stations are connected directly to the LAN in exactly the same way as VoIP terminals and utilise the advantages of the sophisticated DECT technology for radio transmission. Either system telephones or standard GAP telephones can be used as cordless DECT terminals. The deployment of DECToverIP® solutions is especially advantageous for those branches of a company connected to head office via IP routes. From the perspective of head office, the cordless terminals in the system are simply normal extensions. Employees can thus always be contacted via their telephone numbers, regardless of whether they are at head office or a branch office. Using IP routes for both data and telephony saves the cost of installing and maintaining additional infrastructure.



Products, from left to right: OpenCom X320, OpenCom X320rack, RFP 42 WLAN, Aastra Phone 312, OpenPhone 27, OpenPhone 75

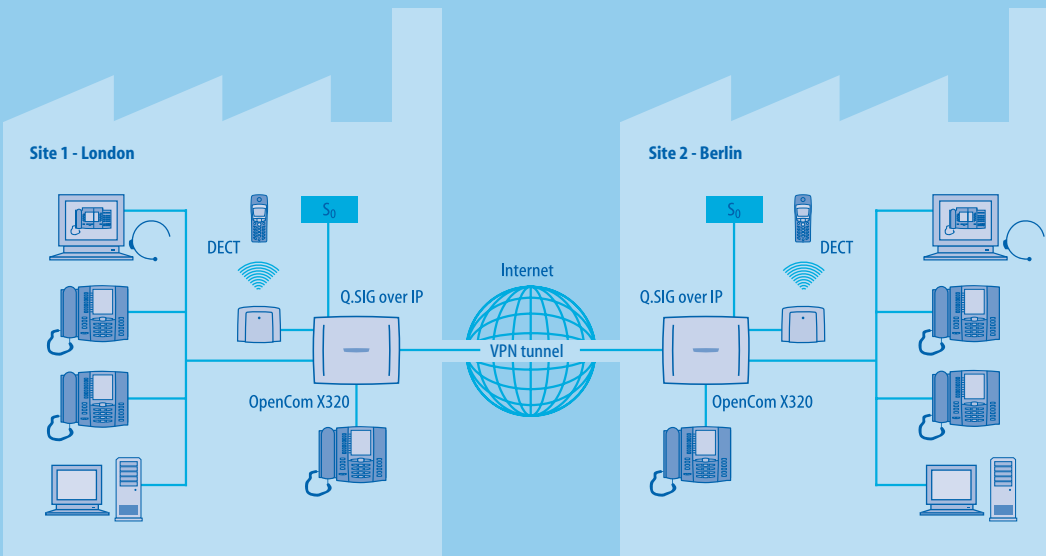
OpenCom 100

DECToverIP® in a branch office or home office



If an OpenCom 130, 150 or 510 is deployed, an additional VPN router will be required in the head office

Complete system – Q.SIG over IP network



If an OpenCom 130, 150 or 510 is deployed, additional VPN routers will be required



Corded terminals simply make your communication professional



OpenPhone 71



OpenPhone 73 / 73 IP



OpenPhone 75/75 IP with its illuminated display switched on

The OpenPhone 71, 73 and 75 are available in black and ice-grey.

Ease of operation paired with versatile system functions, custom solutions for all your terminal requirements and the use of innovative technology are what characterise the OpenPhone 7x range of telephones. Ergonomics and context-sensitive user guidance are other special aspects of their design. As an alternative to the conventional UPN terminals, IP terminals with the same scope of functions are also available. In addition, all the terminals are also suitable for wall-mounting.

The hot-desking feature enables a configured user interface which has its individual set-up of function keys, caller lists, a personal phonebook and the user's own phone number to be applied to any other OpenPhone 7x or OpenPhone 7x IPC that is not being used. This means that several field employees can share a single terminal at head office, for example, as each one uses their own familiar interface.

OpenPhone 71

In addition to the usual open-listening function, the OpenPhone 71 is also equipped with a hands-free function, a DHSg headset connector, one line key and five function keys that can be individually programmed. The two-line display ensures that the user always has a clear view of features such as the phonebook.

OpenPhone 73

The OpenPhone 73 has an increased range of functions relative to the OpenPhone 71. Its four-line display provides an even better overview as well. Three softkeys and five function keys help you get to grips with even the most difficult communications tasks. This terminal can be expanded by adding up to three 73P keypad extensions.

OpenPhone 75

The OpenPhone 75 was developed in order to deal with complex communications tasks. The illuminated 11-line display and the nine softkeys enable the user to keep track of an entire team at a glance and permit administration of the internal phonebook, call lists and switching function. The number of function keys can be increased by adding up to three 73P or 75D keypad extensions.

OpenPhone 73 IP/OpenPhone 75 IP

The IP models of the OpenPhone 73 and OpenPhone 75 are equipped with the same features as their conventional counterparts. Power can be supplied over Ethernet. The integrated switch allows a PC to be connected directly to the OpenPhone, thus reducing the amount of infrastructure required.

Options available for the OpenPhone 70 range

OpenCom 100



OpenPhone 75 with a 73P keypad extension
OpenPhone 73 with a 73P keypad extension



OpenPhone 75 with a 75D keypad extension



OpenPhone 7x IPC

OpenPhone 7x IPC

The OpenPhone 7x IPC is a softphone solution for Microsoft Windows. The IPC variant is equipped with all the features of the OpenPhone 71, 73 and 75 terminals, but also includes an integrated answering device. Conversations can be recorded on a hard disk drive, while hot-desking enables users to access their own OpenPhone user interfaces from any PC, including all their pre-programmed settings.

In order to use the OpenPhone 7x IPC, an appropriate number of OpenSoftPhone 100 licences must be activated.

KeyExtension 73P

This keypad add-on makes an additional 36 softkeys (function and destination keys) available. It is compatible with the OpenPhone 73/73 IP and OpenPhone 75/75 IP. Up to three KeyExtensions with 36 keys each can be connected.

KeyExtension 75D

This keypad add-on expands an OpenPhone 75/75 IP by adding 20 softkeys (function and destination keys), each with three levels. The display is illuminated. Up to three 75D extensions can be connected.

OpenSoftPhone 100

For all softphones that are simultaneously active, a corresponding number of activations must be present in the OpenCom 100. Activation is by means of OpenSoftPhone 100 licences, which are available in sets of two, four, eight and 16. These licences can also be combined up to a total of 30. For example, with one OpenSoftPhone 104 and one OpenSoftPhone 108 you can activate (i.e. operate) 12 OpenPhone 7x IPCs simultaneously.

OpenSoftPhone 104 can be activated for a 60-day test period.

Cordless terminals – uncompromising mobility



OpenPhone 26



OpenPhone 27



OpenPhone 28

The OpenCom 100 range enables you to create a professional radio network fast and easily. The systems function as DECT servers and can manage up to 128 base stations, thus ensuring the radio coverage of large offices or even entire company premises. Calls are handed over from one DECT cell to the next – thanks to the roaming and hand-over features, they are never interrupted, so you can enjoy the full convenience of cordless communication.

OpenPhone 26 – the convenient solution

The OpenPhone 26 is the entry-level model in the OpenPhone 20 range of DECT system telephones. It is equipped with an illuminated display, an open-listening feature and an emergency call button.

OpenPhone 27 – the premium solution

The OpenPhone 27 has all the features of the OpenPhone 26, plus a vibration alarm, a headset connector, the hands-free operation feature and an illuminated keypad. The bigger display simplifies actions such as using the system menus and scrolling through the phonebook. The integrated memory card stores the terminal ID for the system, the users' own phonebooks and all their personal settings so that whenever they switch terminals, all their pre-settings are immediately available on the new one (such as the phonebook, which can contain up to 100 entries). This means that a replacement terminal can be used right away, without first having to be checked in. Integration into the corporate network means that users can be sent internal text messages and notified whenever they have received e-mail.

OpenPhone 28 – the robust solution

The OpenPhone 28 is particularly suitable for use in dusty or damp conditions (it complies with industrial ingress protection standard IP 54 on protection against dust and splashing water). It comes with the same features as the OpenPhone 27, but also includes a "man down" function, i.e. a built-in tilt switch that automatically triggers a call in the event of an emergency. The user can also trigger an alarm using the SOS key.



RFP 22



RFP 32 IP



RFP 24/RFP 34 IP



RFP 42 WLAN

The base stations

The DECT base stations are the fundamental building blocks for creating your own DECT radio networks on OpenCom 100 systems. Each of these stations represents its own cell in the DECT radio network and covers a range of approximately 300 m. Base stations are available for connection to conventional two-wire lines (DECT) or to an IP network (DECToverIP®).

RFP 22 – the indoor DECT base station

The RFP 22 enables between four and eight calls to be made simultaneously using one to two UPN interfaces. Connection is via the two-wire system interface, and its range is up to 1,000 metres.

RFP 24 – the outdoor DECT base station

The RFP 24 is equipped with the same features as the RFP 22, but is specially designed for outdoor operation. It complies with the standards of ingress protection class IP 55. The RFP 24 can optionally be fitted with either a dipole or a directional antenna in order to adapt it optimally to its operating conditions.

RFP 32 IP – the indoor DECToverIP® base station

The RFP 32 IP enables the complete integration of DECT radio networks into the IP infrastructure and can be used to make eight calls simultaneously. Power can be supplied by a separate adapter or over Ethernet.

RFP 34 IP – the outdoor DECToverIP® base station

The RFP 34 IP combines the features of the RFP 32 IP with outdoor operational capability (complies with IP 55). If desired, it can be fitted with directional aerials instead of dipole antennas. Power is supplied over Ethernet.

RFP 42 WLAN – the DECToverIP®/WLAN base station

The RFP 42 WLAN intelligently combines two standards of mobile communication: DECT allows the operation of mobile system phones, while at the same time the built-in WLAN access point enables mobile PCs or workstations to access the corporate network. Thanks to its central administration, it is possible to create a hotspot using several WLAN access points.

Applications and licences – intelligent solutions for everyday situations

Try before you buy!
All the applications are pre-installed. You can test those marked with an asterisk (*) for 60 days, using the complete application without any restrictions in scope. Administration and operation are via your Web browser.

Communication technology can have a major impact on your company if it can be integrated into your business processes seamlessly. OpenCom 100 applications provide intelligent, simple and fast solutions for a host of purposes. Specific requirements can easily be met by combining and extending these modules to make complex customised system solutions.

OpenVoice 200*

In the case of OpenVoice 200, between two and 64 members of staff or user groups have access to individual voice mailboxes, depending on the version used (as many as 200 are possible in OpenCom 510). Incoming voice messages can be indicated and retrieved on the displays of corded and cordless system telephones. Data is saved on a CompactFlash (CF) card. If required, OpenVoice 200 can switch to menus in other languages, and it has the integrated feature of “announcement before answering”.

OpenLine SIP 2

OpenLine SIP 2 is an IP telephony licence that activates two IP telephony channels via SIP. (The prerequisite for this is an M100-IP or an MG-ETH1-1 gateway module with two free SIP channels included in the scope of delivery.) Multiple activation is possible up to the number

of gateway channels present. The lines (SIP, ISDN or analogue ones) are either seized automatically using the LCR feature or the phonebook, or seized manually using an exchange code digit.

OpenLine QSIG-IP 1

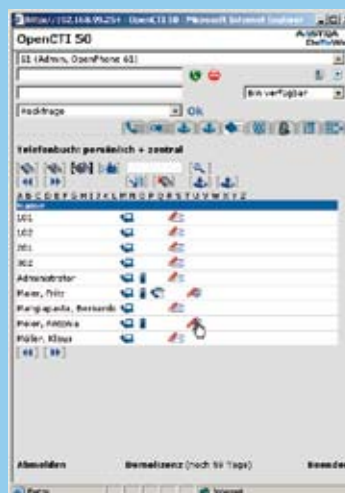
Communications systems on remote sites can also be networked over IP routes. A licence is required for each end. Using QSIG, extended features can be transmitted, while a shared number plan enables calls to be made directly to extensions on the remote system without the necessity of dialling area codes first.

OpenCTI 50*

Computer telephony integration (CTI) makes it possible to couple data and voice communication throughout a company. This allows users to dial their phonebook contacts or manage and query their voice boxes from their Web browsers, for example. On OpenCom X320, OpenCTI 50 is used to query the fax box.

OpenAttendant 205*

OpenAttendant 205 is the innovative alternative to a conventional switchboard and can also be used for information and announcement services.



OpenCom 100

Using a CompactFlash memory device, the application provides automatic, interactive caller prompting via the telephone keypad. You can define the menus freely. Up to five auto attendant systems are supported. Access to certain areas can be password-protected if desired. The module contains announcement-text and music-on-hold functions plus integrated conversion software.

OpenCompany 45*

If an OpenCom 100 is deployed for a group of companies or shared offices, OpenCompany 45 enables you to keep the communications and costs incurred by up to five different user groups separate from each other. This separation covers the outside lines, call distribution, the central phonebook, call charge registration and trunk group seizure.

OpenCount 100*

OpenCount 100 enables comprehensive, central recording of all call data (6,000 data records) as well as the charges incurred, and provides a clear, detailed evaluation. Using the integrated export feature, data can be transferred to other programs for further editing.

Solutions for guesthouses and hotels

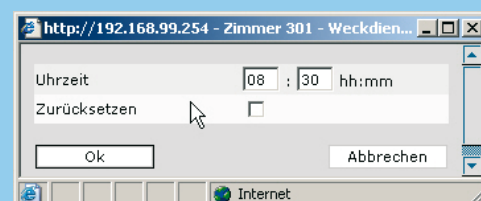
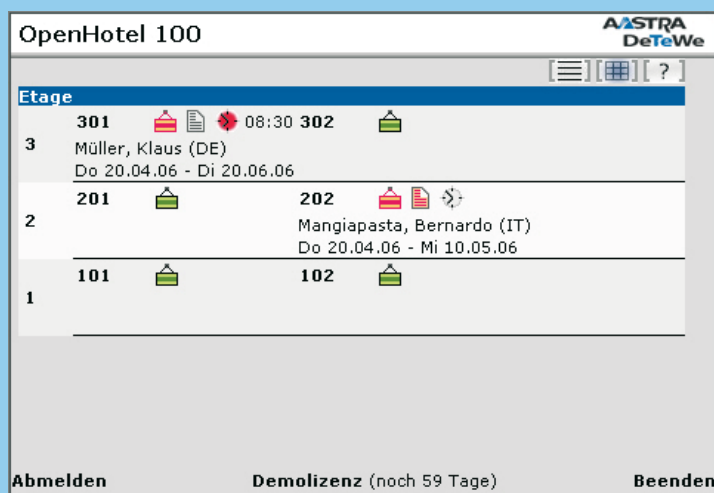
The OpenCom 100 range provides flexible solutions for hotels and guesthouses. OpenHotel 100 and OpenHotel 20 include check-in and check-out functions, an overview of the room status, a wake-up service, OpenCount 100 and message-waiting on system terminals or suitable analogue telephones.

OpenHotel 20

Your system telephone can provide you with an overview of the room status of up to 20 rooms in guesthouses and small hotels (vacant, occupied or to be cleaned). In addition, the room key manages check-ins and check-outs. Call charges can be shown on the terminal display when guests wish to check out.

OpenHotel 100*

OpenHotel 100 is ideal for hotels with up to 200 rooms and provides an overview of the room status on the receptionist's PC. The language of the display texts used on the guest's room telephone can be set via the browser when the guest checks in. If desired, guests can be given a printed telephone bill when they check out.

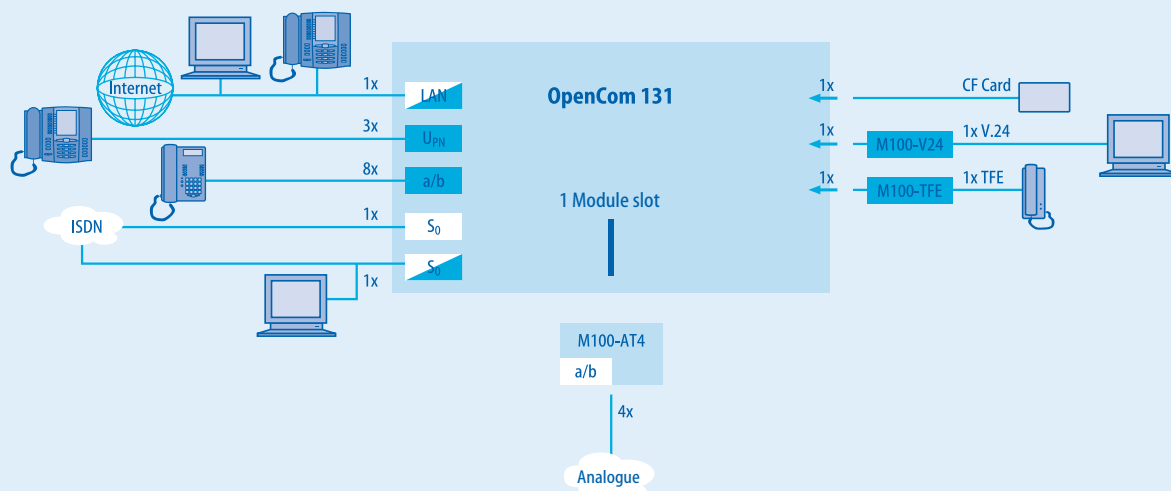


- Activate/deactivate Internet access
- Advice of charge
 - At the end of the call
 - Call charge factor can be set per user group
 - Call charge factor can be set per user group
 - Call data can be read out on another system phone
- Announcements (groups and individual announcements) to terminals in the OpenPhone 70 range and Open Phone 2x
- AOCD / AOCE: advice of charge during and at the end of the call *)
- Associated dialling (pre-dialling for DECT headsets from system terminals) ¹
- AutoAttendant (interactive call management) with OpenAttendant 205
 - Up to five parallel AutoAttendant systems in an OpenCom 100 system
 - 500 actions (12 actions per menu (0-9, *, #))
 - 50 menus with multiple uses
 - Menus can be nested as required
 - 300 audio files
 - Four channels
 - Actions only performed after PIN entry, e.g. code-protected call forwarding to GSM or private telephone number
- Automatic call connection (internal and/or external calls)
- Automatic dialling (call made without dialling, also known as a „baby call“)
- Automatic external line seizure
- Automatic seizure of an external line can be configured
- Baby call
- Barring (blacklists, whitelists and lists of filters) programmable for user groups
 - Blacklists for outgoing calls
 - Special numbers for emergency calls also programmable
 - Lists of filters for barring incoming calls
 - Whitelist
- Batch *see function keys*
- Booking number
 - Input prior to the call
 - Input during the call
 - Change during the call
- Busy indicator for trunk groups/routes
- Busy keys
- Busy on busy
- Call data recording and evaluation with OpenCount 100
 - Saves up to 6,000 call data records
 - Data can be viewed, printed and exported
 - Export as a csv file (also compressed as a zip file)
 - Concluding digits in telephone numbers can be suppressed for call data recording (data privacy)
 - Call data record lists beginning of call, duration, units, amount, internal, external, master numbers, booking numbers (personnel numbers for projects), users, firms, network operators, type of call (private/business), type of service (telephone/fax/data), direction (incoming/outgoing/both), type of set-up (direct/forwarded/connected), connection, route
 - Telephone numbers stored in different forms for business/personal calls (complete/last digits suppressed) for data protection (e.g. government agencies) ¹
- Call deflection
- Call forwarding (unconditional, on busy, on no reply)
- Call forwarding unconditional, after a set time, on busy, separate for internal and external calls
 - For MSN groups (nine MSN groups can be configured)
 - Delete all call-forwarding destinations
- Call holding
- Call lists (accepted calls, missed calls, busy)
 - Entry in call list when accepted by answering device or voicemail
 - Entry in call list without its telephone number
- Call pick-up (pick-up groups or selective pick-up)
- Call pick-up from an answerphone
- Call queue
- Call transfer
- Call transfer alert
- Call variants *see time groups*
- Call waiting
 - Signal waiting call
 - Reject waiting call
 - Accept waiting call
 - Call-waiting protection
- Callback on busy, internal and external
- Callback on no reply
- Calls can be parked/unparked in positions „0“ to „9“, also on standard phones
- Cascade two OpenCom 130, two OpenCom 150 rack or two OpenCom 510 systems
- CCNR per keypad in the exchange
- Central phonebook (speed dialling) (2,000 destinations with three telephone numbers each), individual and per company
 - With decentralised administration rights
 - One default number can be configured per name
 - CLIP/CLIR when a call is dialled can be configured for each name
- CFB, CFNR, CFU
- Chains *see function keys*
- Change IP address on system phone (PIN-protected)
- Change network mask from a system phone (PIN-protected)
- Check-in, check-out *see hotel function*
- CLIP * / CLIR** also possible on analogue phones
- CLIP no screening, display a different number* on a system connection
- CLIP-dependent call forwarding
- CLIP-dependent call forwarding to certain destinations
- Codes for system features on standard terminals
- Computer support with a telephony interface (CTI), TAPI 2.1, CSTA and browser (OpenCTI 50)
- Configurable external line seizure
- Configuration via a PC using a Web browser; remote configuration also possible
- Copying of system phones, including key assignments and labels
- CSTA interface to existing applications (e.g. hotel software) ¹
- Day / night line *see time groups*
- Daytime/night line switchover
- Deactivation of features also possible without authorisation
- Deactivation of the user interface (applies to the system menus; terminal menus remain unaffected)
 - of the phonebook
 - of key programming
- DECT system telephones
- DECToverIP®² : connection of DECT base stations via IP with handover
- Default number can be configured in phonebook
- Default/expert programming modes
- Direct inward dialling to internal ISDN connections, e.g. for Unified Messaging systems (ECT)
- Disconnect
- Disconnect an active ISP connection
- Disconnect from enquiry call
- Display active ISP connection
- Door intercom / door functions
 - Doorbell signalling (sensor call), intercom and door opener (actor)
 - Door intercom in accordance with FTZ 123D12 (Federal Office for Communications Technology in Germany) ⁶
 - Two-wire door intercom with pre-programmed codes, depending on type
- DynDNS³
- E-mail notification (header is displayed on system phone)
- E-mail notification in the event of a malfunction, e.g. failed ISDN line
- Emergency call function, emergency call with priority and dropping of active call if required. Emergency numbers can be edited.
- Enquiry calls
- Entries from call list are copied to phonebook
- Entries from redial list are copied to phonebook
- External call authorisation (five levels)
- External line access authorisation (five levels)
- Fax box: faxes can be received; fax polling using OpenCTI 150⁴
 - Ten fax boxes¹
- Follow me (PIN-protected)
- Forward door call
- Forward MSN and MSN group
- Forward other subscribers by code digit input
- Function keys with five-way assignment (chain, batch)
- Gateway channels
 - Soft gateway with four IP - non-IP channels OpenCom 131, 131 and 150
 - Soft gateway with 32 IP - non-IP channels OpenCom X320
 - Max. no. of gateway channels: eight - OpenCom 130; 16 - OpenCom 150; 40 - OpenCom X320; 64 - OpenCom 510
- Hot-desking: application of a user interface on an OpenPhone 7x
- Hotel functions with OpenHotel 20 and OpenHotel 100
 - Check-in and check-out, including authorisation switching
 - Wake-up calls
 - Change language of room system telephones on check-in
 - Ascertain room status (free, occupied, to be cleaned) via a system phone (room key) or Web browser (Open Hotel 100)
 - Retrieve call charges on system phones
 - Record call data if OpenCount 100 has been implemented
 - Export the call data to an HTML document (OpenHotel 100)
 - Overview of rooms on reception PC, including room number, room status, name of guest, language of guest/system phone in room, symbol for activated

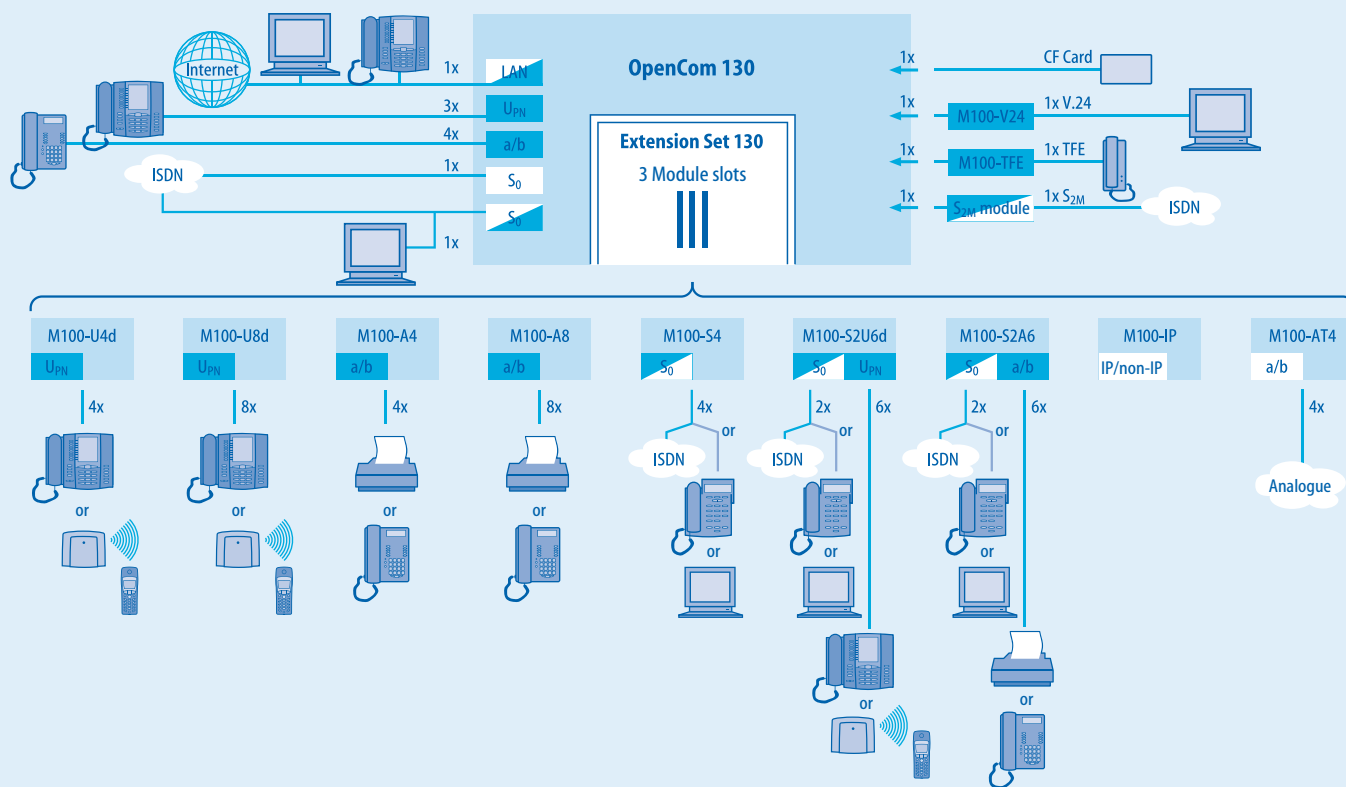
- wake-up call, symbol for note/message-waiting indicator, period of occupancy (check-in/check-out date) (OpenHotel 100)
 - Function key on system phone for wake-up calls
 - Can be operated under Windows, UNIX or Mac OS2
 - Voicemail is deleted on check-out
 - Hunt groups (cyclic, linear, statistical, parallel)
 - Exclusion from a hunt group
 - Intercom protection
 - Internal traffic can be individually barred with CLIP-dependent call forwarding
 - Internet telephony (SIP telephony) in conj. with an OpenLine SIP2 licence⁵
 - Four SIP accounts
 - Intelligent routing using LCR/ARS, phonebook or routing code digit
 - Keypad dialling
 - Least Cost Routing (LCR) and Automatic Route Selection (ARS) can be deactivated
 - Line keys (>> two per terminal)
 - Manager/secretary feature
 - MCID (identification of bothersome callers)
 - Message-waiting indication (MWI) on analogue terminals (FSK, short ring or line reversal)
 - Mixed mode of operation (system connection/ multi-terminal connection/SIP-exchange)
 - Multi-company variant with OpenCompany 45
 - Up to five companies can be configured
 - Separate phonebooks at three levels:
 - Central phonebook with the telephone numbers common to all companies
 - Company-specific phonebook
 - Private phonebook for every member of staff
 - External line seizure using „0“ can be set for each company
 - Individual attendant terminals (for each company) or a shared attendant terminal for all of the companies can be specified
 - Separate call data recording can be configured for each company (OpenCount 100 option)
 - Assignment of the NTBA/trunk group/route, user group and phonebook to a company
 - If OpenCTI 50 is deployed, then only the subscribers in one's own company are visible in the busy indicator
 - Networking using QSIG via tie lines, VPN and IP
 - Night line *see time groups*
 - Offline configuration is possible without a communications system
 - OpenCount 510 is supported on the V.24 interface
 - Parking/terminal portability on S0 bus
 - Partial re-routing on system connection*
 - Pick-up group
 - Pick-up notification
 - Pick-up protection
 - Post-dialling
 - Pre-announcement feature in OpenVoice 200
 - QSIG via S0, S2M (also via IP within OpenCom 100)
 - Recall
 - Redial list per terminal
 - Reject call
 - Remote control (changing of call forwarding, dialling)
 - Remote maintenance including error log readout
 - Remote servicing (e.g. with a session key),
 - Remote software download. Also possible for system phones and RFPs
 - Restart system from a system phone (PIN-protected)
 - Route programming
 - Router functions
 - DynDNS³
 - Fixed IP address possible for DSL connection
 - DHCP server can be configured (dynamic and static address assignment, also mixed mode)
 - DNS (Domain Name Server) can be configured (100 entries)
 - LAN-to-LAN support
 - NAT (Network Address Translation), can be deactivated for ISP
 - Net-CAPI (ISDN card function in network)
 - Port mapping
 - PPP over Ethernet (PPPoE) for direct connection to DSL modem
 - RAS firewall with CLID, PAP, CHAP, callback
 - Remote Access Service (RAS) for up to eight simultaneous calls
 - Remote configuration
 - Static and dynamic routing
 - TCP/IP router for ISDN and xDSL
 - VPN with IPsec, PPTP and L2TP (hardware encryption)³
 - Time account can be configured for connection to ISP
 - Access to internal central OpenCom 100 phonebook via LDAP (OpenCom 100 = LDAP server)
 - Selective pick-up
 - Send text messages (60 characters) to and between system phones (groups or individual terminals)
 - Sensor call (doorbell)
 - Separate call protection for internal and external calls
 - Serial system function
 - Service indicator can be configured for each analogue phone
 - SIP - *see also Internet telephony*
 - SIP trunk line can be selected using LCR/ARS, phonebook or trunk group
 - Internal SIP devices^{1,5}
 - SMS via landline on analogue or S0 connection
 - SNTP server (time server – synchronises the time on all PCs connected to the network)
 - Soft gateway G.711
 - Four IP - non-IP channels on OpenCom 130, 131 and 150 systems
 - 32 IP - non-IP channels on OpenCom X320 systems
 - Speed dialling (100 or 1,000 destinations)
 - Switch actor (relay) internally
 - TAPI 2.1 Microsoft (50 calls/with all system phones, also DECT, analogue, GAP, but not ISDN/DSS1). Not a multi-line TAPI.
 - Team functions
 - Team keys
 - Telephone lock and access codes
 - Telephone number display can be separately suppressed for internal and external calls as well as for phonebook entries
 - Telephone number displayed on team key
 - Telephone number mapping on system and multi-terminal connections
 - Telephone number plan for two- to five-digit numbers. Mixed mode also possible.
 - Three-party conferences
 - Time groups (day/night service), ten call variants can be programmed, manual and automatic switchover (after a specific time), ten switchover points per weekday
 - Toggle
 - Transfer second call
 - Trunk groups, routes (can also be selected using LCR/ARS)
 - Trunk line access authorisation switchover
 - Up to 32 seconds of music for external music on hold / internal music on hold can be individually loaded
 - VIP call with special call signalling
 - Virtual telephone numbers
 - Voice over IP using IP system phones or DECToverIP base stations
 - Voicebox integrated with OpenVoice 200, equipped with four channels and pre-announcement feature
 - Two, ten, 20 and 64 voiceboxes possible (200 with OpenCom 510)
 - Four parallel voice channels
 - Group boxes with up to 20 subscribers
 - Softkey can be set for making voicebox queries
 - PIN protection for voiceboxes
 - Several welcoming and closing texts can be recorded or selected for each voicebox and automatically controlled by timers
 - Convenient operation with OpenCTI 50 (e.g. loading of welcoming and closing texts from a PC)
 - Notification call when a message has been received on the internal or external telephone number, either immediately or daily at a pre-programmed time with direct query
 - Notification call or e-mail when a message has been received
 - Acoustic menu guide in English, French, German, Dutch, Spanish, Italian and Swedish
 - Eight different texts for pre-announcements for different groups/MSNs
 - Time stamp with an announcement
 - Signalling by means of an info LED (on OpenPhone 7x, 26, 27), tape symbol (OpenPhone 26, 27, 28) or special dialling tone (ISDN, analogue terminals)
 - MWI on ISDN and analogue terminals
 - VPN *see Router functions*
 - Wake-up / appointment call with date
 - WLAN-SIP terminals can be checked in (AastraPhone 312, Nokia N80)^{1,5}
- * If provided by the network operator
 ** Limited if an analogue trunk line is used
- ¹ From Release 8.5 onwards
² Gateway module M100-IP is required in OpenCom 130, 150 and 150rack systems. The MG+ETH1-1 is required in OpenCom 510 systems.
³ Only OpenCom X320 and X320rack systems
⁴ Only OpenCom X320 and X320rack systems equipped with M300-Fax/V.24
⁵ Gateway module M100-IP is required in OpenCom 130, 150, 150rack, X320 and X320rack systems. The MG+ETH1-1 is required in OpenCom 510 systems
⁶ Only OpenCom 131 and 130 systems equipped with M100-TFE and/or OpenCom 150 and 150rack systems equipped with M100-TFE

An overview of the configurations that are possible

OpenCom 131



OpenCom 130

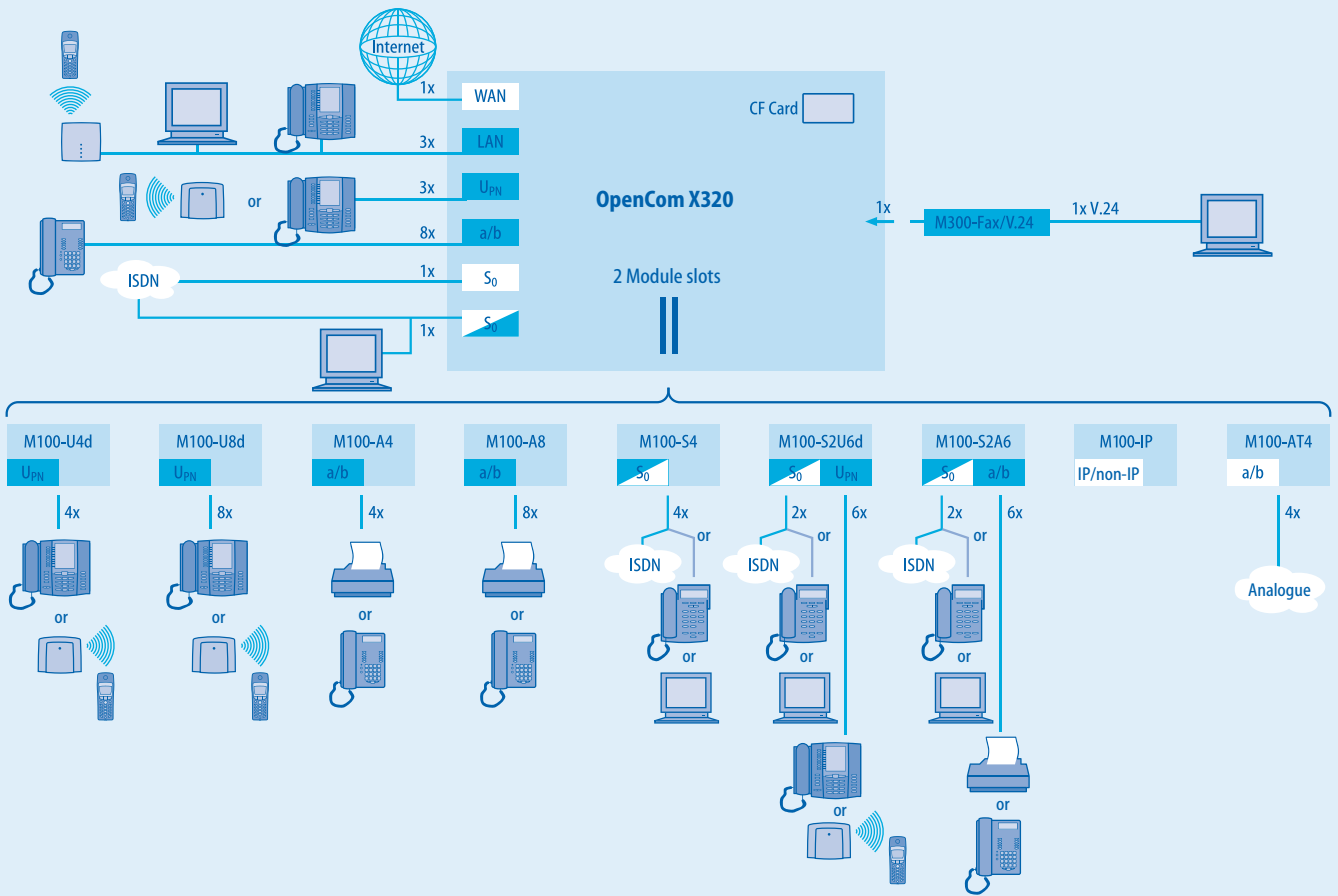


Sample configurations OpenCom 130

	Equipped with			S ₀	U _{PN}	a/b	channels/IP system phones
	Slot 1	Slot 2	Slot 3				
DECT	M100-A8	M100-A8	M100-A8	2	3	28	4/12
	M100-S4	M100-A8	M100-A8	6	3	20	4/12
	M100-S2A6	M100-A8	M100-A8	4	3	26	4/12
	M100-S2A6	M100-S2A6	M100-A8	6	3	24	4/12
	M100-S4	M100-U8d	M100-A8	6	11	12	4/12
	M100-S2U6d	M100-A8	M100-A8	4	9	20	4/12
	M100-S2U6d	M100-S2A6	M100-A8	6	9	18	4/12
	M100-U8d	M100-U8d	M100-A8	2	19	12	4/12
IP	M100-S2U6d	M100-U8d	M100-A8	4	17	12	4/12
	M100-S2U6d	M100-A8	M100-IP*	4	9	12	8/24

* Slots 2 or 3 only

OpenCom X320



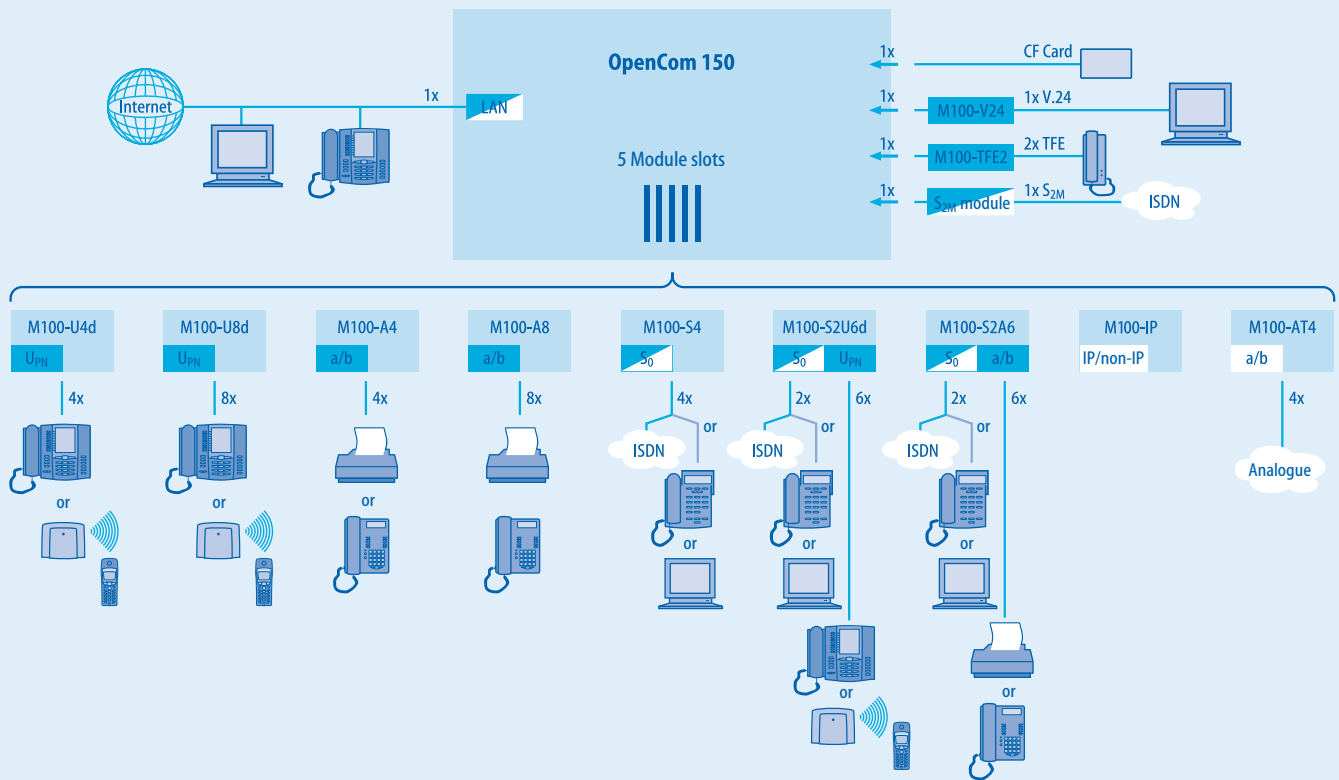
Sample configurations OpenCom X320

Equipped with		S ₀	U _{PN} DECT-capable	a/b	DECT over IP				Echo cancellation	Codec		
Slot 1	Slot 2				DECT	DECT over IP	VPN	SIP		G.711	G.729A	G.723
-	-	2	3	8	x	x	x	-	-	x	-	-
M100-U8d	M100-8d	2	19	8	x	x	x	-	-	x	-	-
M100-A8	M100-A8	2	3	24	x	x	x	-	-	x	-	-
M100-S2A6	M100-A8	4	11	14	x	x	x	-	-	x	-	-
M100-S2A6	M100-S2A6	6	9	14	x	x	x	-	-	x	-	-
M100-S2U6d	M100-IP*	4	9	8	x	x	x	x	x	x	x	x
M100-A8	M100-IP*	2	3	16	x	x	x	x	x	x	x	x

* Slot 2 only

An overview of the configurations that are possible

OpenCom 150

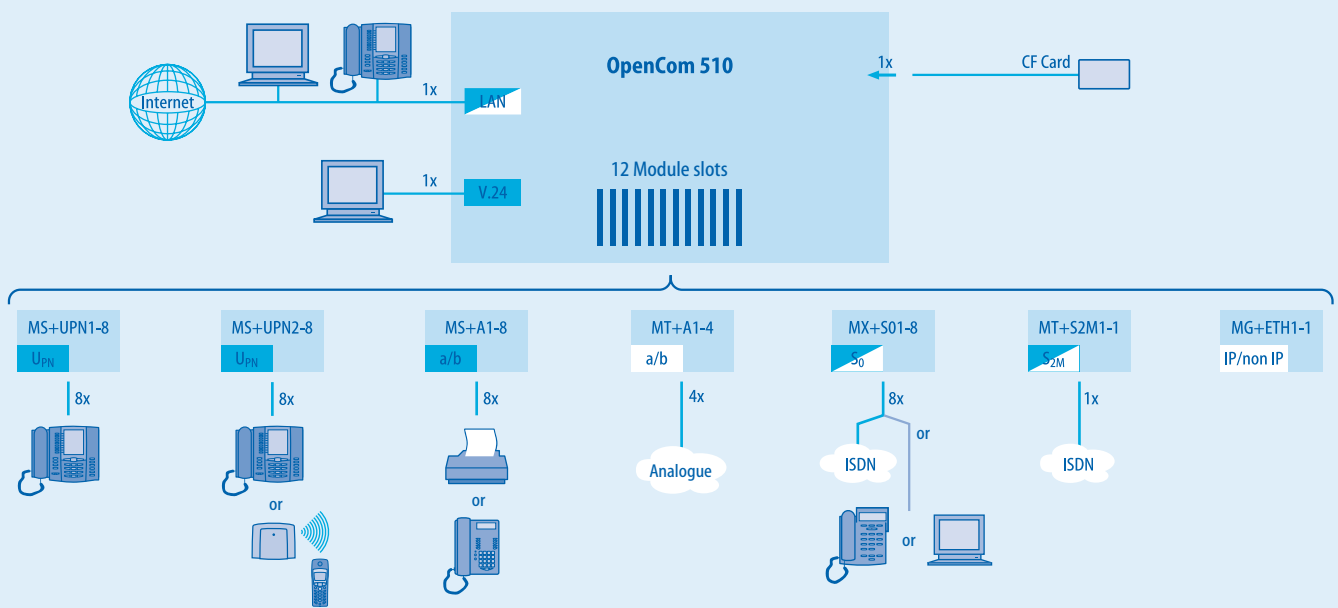


Sample configurations OpenCom 150

Slot 1	Slot 2	Slot 3	Slot 4	Slot 5	S ₀	U _{PN}	a/b	Analogue trunk/S _{2M}	Gateway channels/ IP system terminals
M100-S2U6d	M100-S2A6	M100-A8	M100-A8	M100-A8	4	6	30	-/x	4/12
M100-S2U6d	M100-S2U6d	M100-A8	M100-A8	M100-A8	4	12	24	-/x	4/12
M100-S4	M100-U8d	M100-U8d	M100-A8	M100-A8	4	16	16	-/x	4/12
M100-S4	M100-A8	M100-A8	M100-A8	M100-A8	4	-	32	-/x	4/12
M100-S4	M100-S2U6d	M100-A8	M100-A8	M100-A8	6	6	24	-/x	4/12
M100-S2U6d	M100-S2A6	M100-S2A6	M100-A8	M100-A8	6	6	28	-/x	4/12
M100-S2U6d	M100-S2U6d	M100-S2U6d	M100-A8	M100-A8	6	18	16	-/x	4/12
M100-S4	M100-S2U6d	M100-S2U6d	M100-A8	M100-A8	8	12	16	-/x	4/12
M100-S4	M100-S4	M100-S4	M100-A8	M100-A8	12	-	16	-/x	4/12
M100-U8d	M100-A8	M100-AT4	M100-AT4	M100-AT4	-	8	8	12/x	4/12
M100-U8d	M100-A8	M100-A8	M100-AT4	M100-AT4	-	8	16	8/x	4/12
M100-U8d	M100-U8d	M100-A8	M100-AT4	M100-AT4	-	16	8	8/x	4/12
M100-U8d	M100-U8d	M100-A8	M100-A8	M100-AT4	-	16	16	4/x	4/12
M100-U8d	M100-U8d	M100-A8	M100-A8	M100-A8	-	16	24	-/x	4/12
M100-U8d	M100-U8d	M100-U8d	M100-A8	M100-AT4	-	24	8	4/x	4/12
M100-U8d	M100-U8d	M100-U8d	M100-A8	M100-A8	-	24	16	-/x	4/12
M100-U8d	M100-U8d	M100-IP*	M100-IP*	M100-A8	-	16	8	-/x	16/48

* Slots 3 and 4 only

OpenCom 510



A second power supply (MPS+1-AC) is required to supply modules 7 to 12

An overview of the configurations that are possible



Connections OpenCom 131 OpenCom 130 OpenCom X320 OpenCom 150 OpenCom 510

	Connections	OpenCom 131	OpenCom 130	OpenCom X320	OpenCom 150	OpenCom 510
Basic configuration	S ₀ external	1	1	1	-	-
	S ₀ switchable	1	1	1	-	-
	U _{PN}	3	3	DECT-capable	-	-
	a/b, CLIP-capable	8	4	8	-	-
	Slots	1 (only M100-AT4)	3 (optional)	2	5	12
	WAN	-	-	1	-	-
	LAN	1	1	3 (2x power over Ethernet ¹)	1	1
	Softgateway	4 IP<->NonIP-channels	4 ² IP<->NonIP-channels	32 IP<->NonIP-channels	4 ² IP<->NonIP-channels	-
Special slots	V.24	M100-V.24 Separate slot	M100-V.24 Separate slot	M300-FAX/V.24 Separate slot	M100-V.24 Separate slot	1
	TFE (FTZ 123D12)	M100-TFE Separate slot	M100-TFE Separate slot	-	M100-TFE2 Separate slot	-
	S _{2M}	-	S _{2M} -module Separate slot	-	S _{2M} -module Separate slot	MT+S _{2M} 1-1 ³ 1 x S _{2M}
Modular expansions			Slots 1 2 3	Slots 1 2	Slots 1 2 3 4 5	
	S ₀ switchable	-	M100-S4 4 x S ₀ x x	M100-S4 4 x S ₀ x x	M100-S4 4 x S ₀ x x x x	MX+S ₀ 1-8 8 x S ₀ switchable
	U _{PN}	-	M100-S2U6d 2 x S ₀ and 6 x U _{PN} x x	M100-S2U6d 2 x S ₀ and 6 x U _{PN} x x	M100-S2U6d 2 x S ₀ and 6 x U _{PN} x x x x	MS+U _{PN} 1-8 8 x U _{PN}
	U _{PN} DECT-capable	-	M100-S2A6 2 x S ₀ and 6 x a/b x x	M100-S2A6 2 x S ₀ and 6 x a/b x x	M100-S2A6 2 x S ₀ and 6 x a/b x x x x	MS+U _{PN} 2-8 8 x U _{PN}
	a/b, CLIP-capable	-	M100-U4d 4 x U _{PN} x x	M100-U4d 4 x U _{PN} x x	M100-U4d 4 x U _{PN} x x x x	MS+A1-8 8 x a/b
			M100-U8d 8 x U _{PN} x x	M100-U8d 8 x U _{PN} x x	100-U8d 8 x U _{PN} x x x x	
			M100-S2U6d 2 x S ₀ and 6 x U _{PN} x x	M100-S2U6d 2 x S ₀ and 6 x U _{PN} x x	M100-S2U6d 2 x S ₀ and 6 x U _{PN} x x x x	
			M100-A4 4 x a/b x x x	M100-A4 4 x a/b x x	M100-A4 4 x a/b x x x x	
			M100-A8 8 x a/b x x x x	M100-A8 8 x a/b x x x	M100-A8 8 x a/b x x x x x	
	Analogue trunk	M100-AT4 4 analogue trunks	M100-AT4 4 analogue trunks x	M100-AT4 4 analogue trunks x x	M100-AT4 4 analogue trunks x x x x	MT+A1-4 4 analogue trunks
VoIP-Gateway	-	M100-IP ⁴ 8 channels (x) (x)	M100-IP 8 channels x	M100-IP 8 channels x x x x	MG+ETH1-1 ³ 16 channels	

¹ IP system phones or IP-DECT base stations can be connected without any additional power supplies. Power is supplied by the OpenCom X320 system. (IEEE 802.3af, class 3)

² No longer available if M100-IP is deployed

³ 4x pluggable

⁴ 1x pluggable

An overview of the corded terminals available



OpenPhone 75



OpenPhone 75 IP



OpenPhone 75 IPC



OpenPhone 73



Features	Features	Features	Features
Nine softkeys/line keys with LEDs	Nine softkeys/line keys with LEDs	PC user interface as with OpenPhone 71, 73 or 75, but in addition:	Three softkeys/line keys with LEDs
15 function keys, four of which feature LED signalling	15 function keys, four of which feature LED signalling	interface design for use in conjunction with skins (interface can be changed by downloading skins)	Five freely programmable keys with LEDs
Scroll key	Scroll key		15 function keys, four of which feature LED signalling
11-line illuminated graphic display 144×128 pixels	11-line illuminated graphic display 144×128 pixels		Scroll key
U _{PN} -interface	Ethernet interface		Four-line graphic display 144×48 Pixel
Adjustable to four different heights by means of snap-in feet	Adjustable to four different heights by means of snap-in feet		U _{PN} -interface
Can be wall-mounted	Can be wall-mounted		Adjustable to four different heights by means of snap-in feet
Can be extended by adding up to three KeyExtensions 73P or 75D	Can be extended by adding up to three KeyExtensions 73P or 75D		Can be wall-mounted
DHSG headset connector	DHSG headset connector and Ethernet switch for one PC		Can be extended by adding up to three KeyExtensions 73P
Power is supplied by the system via the U _{PN} -interface	Power is supplied by an adapter or by Power-over-Ethernet (IEEE 802.3af, class 3)		DHSG headset connector
Power is supplied by the system via the U _{PN} -interface	Power is supplied by the system via the U _{PN} -interface		Power is supplied by the system via the U _{PN} -interface
Features	Features	Features	Features
MenuCard feature	MenuCard feature	Same as OpenPhone 7x IP, but also with:	MenuCard feature
Variable menu structure depending on call state	Variable menu structure depending on call state	a recording function for conversations, a PC answering device, free seating/roaming user	Variable menu structure depending on call state
Volume control (handset, loudspeaker, ring tone and headset)	Volume control (handset, loudspeaker, ring tone and headset)		Volume control (handset, loudspeaker, ring tone and headset)
Hands-free operation	Hands-free operation		Hands-free operation
Muting feature	Muting feature		Muting feature
Pre-dialling	Pre-dialling		Pre-dialling
Last number redial	Last number redial		Last number redial
Call list with date and time of call	Call list with date and time of call		Call list with date and time of call
LEDs for indicating call-switching states (call protection, call forwarding) and additional information (e.g. message waiting or e-mail)	LEDs for indicating call-switching states (call protection, call forwarding) and additional information (e.g. message waiting or e-mail)		LEDs for indicating call-switching states (call protection, call forwarding) and additional information (e.g. message waiting or e-mail)
Receipt of text messages	Receipt of text messages		Receipt of text messages
Dimensions: (W×H×D): 235×208×46 mm	Dimensions: (W×H×D): 235×208×46 mm		Dimensions: (W×H×D): 235×208×46 mm
Colour: black/ice grey	Colour: black		Colour: black/ice grey



OpenPhone 73 IP



OpenPhone 71



KeyExtension 75D
for OpenPhone 75, 75 IP



KeyExtension 73P
for OpenPhone 73, 73 IP, 75 and 75 IP

Features	Features
Three softkeys/line keys with LEDs	One line key with an LED
Five freely programmable keys with LEDs	Five freely programmable keys with LEDs
15 function keys, four of which feature LED signalling	15 function keys, four of which feature LED signalling
Scroll key	
Four-line graphic display 144×48 Pixel	Two-line display showing 19 characters
Ethernet interface	U _{PN} -interface
Adjustable to four different heights by means of snap-in feet	
Can be wall-mounted	Can be wall-mounted
Can be extended by adding up to three KeyExtensions 73P	
DHSG headset connector and Ethernet switch for one PC	DHSG headset connector
Power is supplied by an adapter or by Power-over-Ethernet (IEEE 802.3af, class 3)	Power is supplied by the system via the U _{PN} -interface
Features	Features
MenuCard feature	MenuCard feature
Variable menu structure depending on call state	Variable menu structure depending on call state
Volume control (handset, loudspeaker, ring tone and headset)	Volume control (handset, loudspeaker, ring tone and headset)
Hands-free operation	Hands-free operation
Muting feature	Muting feature
Pre-dialling	Pre-dialling
Last number redial	Last number redial
Call list with date and time of call	Call list with date and time of call
LEDs for indicating call-switching states (call protection, call forwarding) and additional information (e.g. message waiting or e-mail)	LEDs for indicating call-switching states (call protection, call forwarding) and additional information (e.g. message waiting or e-mail)
Receipt of text messages	Receipt of text messages
Dimensions: (W×H×D): 235×208×46 mm	Dimensions: (W×H×D): 221×188×47 mm
Colour: black	Colour: black/ice grey

Features	Features
20 softkeys/line keys with LEDs	
	36 freely programmable keys with LEDs
Three function keys for switching between three levels	
11-line illuminated graphic display 144 × 128 pixels	
Adjustable to four different heights by means of snap-in feet	Adjustable to four different heights by means of snap-in feet
Can be wall-mounted	Can be wall-mounted
Power is required, either via an adapter or Power-over-Ethernet	Power is required, either via an adapter or Power-over-Ethernet
Features	Features
LEDs for indicating call-switching states (call protection, call forwarding) and additional information (e.g. message waiting or e-mail)	LEDs for indicating call-switching states (call protection, call forwarding) and additional information (e.g. message waiting or e-mail)
Dimensions: (W×H×D): 150×200×46 mm	Dimensions: (W×H×D): 150×200×46 mm
Colour: black/ice grey	Colour: black/ice grey

An overview of cordless terminals and components



OpenPhone 27



OpenPhone 26



OpenPhone 28



DECT base stations:
RFP 22 (indoors)
RFP 24 (outdoors)



DECToverIP® base stations:
RFP 32 IP (indoors)
RFP 34 IP (outdoors)



DECToverIP® base station
and WLAN access point
RFP 42 WLAN

Features	Features	Features	Features	Features	Features
Two softkeys illuminated keypad	Two softkeys	Two softkeys			
Four permanently programmed function keys	Four permanently programmed function keys	Five permanently programmed function keys			
Scroll key	Scroll key	Scroll key			
Five-line graphic display 96 x 60 pixels, backlit	Three-line graphic display 96 x 33 pixels, backlit	Five-line graphic display 120 x 96 pixels, backlit			
USB port					
DECT interface with system functionality	DECT interface with system functionality	DECT interface with system functionality	Standard: DECT Network standard: U _{PN}	Radio standard: DECT Network standard: TCP-IP	Radio standard: DECT WLAN (IEEE 802.11 b and g) Network standard: TCP-IP
Headset connector		Headset connector			
30 ring-tone melodies	10 ring-tone melodies	30 ring-tone melodies			
Vibration alarm		Vibration alarm			
Belt clip	Optional belt clip	Integrated belt clip			
Memory card (for phonebook, holds up to 100 entries and specific terminal data)		Memory card (for phonebook, holds up to 100 entries and specific terminal data)			
Weight: approx. 138 g	Weight: approx. 138 g	Weight: approx. 117 g			
Stand-by time: 140 hours	Stand-by time: 200 hours	Stand-by time: 75 hours			
Talk time: 14 hours	Talk time: 20 hours	Talk time: 8 hours			
Batteries: rechargeable NiMH (AAA)	Batteries: rechargeable NiMH (AAA)	Battery pack (NiMH)			
Charging time: up to six hours for empty batteries	Charging time: up to six hours for empty batteries	Charging time: up to seven hours for empty batteries			
Features	Features	Features	Features	Features	Features
MenuCard feature	MenuCard feature	MenuCard feature	Voice and data transmission	Voice and data transmission	Voice and data transmission
Variable menu structure depending on call state	Variable menu structure depending on call state	Variable menu structure depending on call state	Over-the-air data transmission	Over-the-air data transmission	Over-the-air data transmission
Volume control (handset loudspeaker, ring tone)	Volume control (handset loudspeaker, ring tone)	Volume control (handset loudspeaker, ring tone)	Connection via one U _{PN} interface for four simultaneous calls	Connection to OpenCom 100 via an Ethernet LAN with TCP-IP	Connection to OpenCom 100 via an Ethernet LAN with TCP-IP
Hands-free operation	Open listening	Hands-free operation	or		
Muting feature	Muting feature	Muting feature	Connection via two U _{PN} interfaces for eight simultaneous calls	Eight simultaneous calls	Eight simultaneous calls
Pre-dialling, last number redial	Pre-dialling, last number redial	Pre-dialling, last number redial	Power is supplied by the system via the U _{PN} interface	Power supply: Power-over-Ethernet or plug-in adapter (RFP 32 IP only)	Power supply: Power-over-Ethernet or plug-in adapter
Emergency button	Emergency button	Emergency button and "man-down" feature			
Call list with date and time of call	Call list with date and time of call	Call list with date and time of call	Automatic runtime recording	Sync-over-Air	Sync-over-Air
Toolbar for indicating call-switching states (call protection, call forwarding) and additional information (e.g. message waiting or e-mail)	Toolbar for indicating call-switching states (call protection, call forwarding) and additional information (e.g. message waiting or e-mail)	Toolbar for indicating call-switching states (call protection, call forwarding) and additional information (e.g. message waiting or e-mail)	Cable up to one km in length	Cable length as for Ethernet standard	Cable length as for Ethernet standard
			LED for indicating operating states (RFP 22 only)	LED for indicating operating states (RFP 32 IP only)	LED for indicating operating states
			Can be wall-mounted. The RFP 22 can also be turned 180° for mounting	Can be wall-mounted or mast-mounted (RFP 34 IP)	Can be wall-mounted
Receipt of text messages	Receipt of text messages	Receipt of text messages	RFP 22 is equipped with a built-in omnidirectional antenna, and RFP 24 can be operated with a dipole or directional antenna	RFP 32 IP is equipped with a built-in omnidirectional antenna, RFP 34 IP can be operated with a dipole or directional antenna	Equipped with a built-in omnidirectional antenna for DECT and an external dipole antenna for WLAN
Dimensions of portable part: (W×H×D): 146×55×28 mm	Dimensions of portable part: (W×H×D): 146×55×28 mm	Dimensions of portable part: (W×H×D): 138×47×21 mm	Dimensions (W×H×D): RFP 22: 151×101×85 mm RFP 24: 240×236,5×65 mm	Dimensions (W×H×D): RFP 32 IP: 195×200×30 mm RFP 34 IP: 240×236,5×65 mm	Dimensions (W×H×D): 195×200×30 mm
		Ingress protection: IP 54	Ingress protection: IP 55 (RFP 24 only)	Ingress protection: IP 55 (RFP 34 IP only)	Ingress protection: IP 20
Colour: black/metallic silver	Colour: black/metallic silver	Colour: black/silver	Colour: RFP 22 is ice grey, RFP 24 is light grey	Colour: ice grey	Colour: ice grey

OpenCom100

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