



COMMUNICATION SOLUTION

The comprehensive, modular communications (wall) system

elmeg hybird 300

- IP-based voice system for complex solutions
- Highly flexible modular configuration
- Universal range of interfaces
- Solution orientated - integrated voice applications
- Configuration Interface - individual user portal
- Management via WEB browser for administrators
- Wall system for up to 60 users



elmeg hybrid 300

The comprehensive, modular communications (wall) system

The hybrid 300 wall-mount voice and data system provides IP functionality and 3+2 slots for FXS, UP0/S0 and FXO modules. Included are licenses for 10 terminals, 2 SIP channels, 5 SIP clients and modules 4S/U+6FXS and connection module (MC CL).

hybird Systems

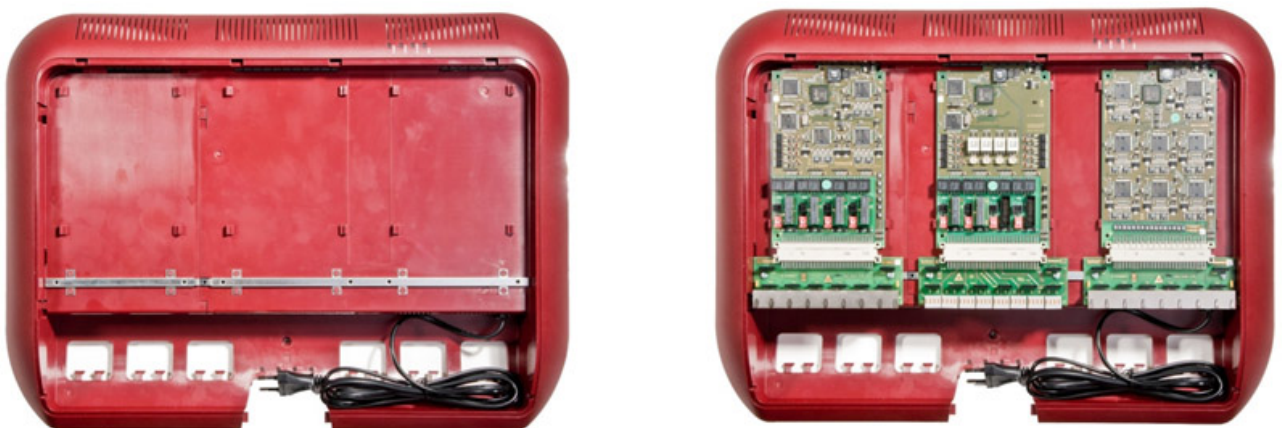
The elmeg hybrid systems are the first fully-migrated products that were developed based on a standard software (SW) platform. This SW platform combines the core competences of both the elmeg PABX and the bintec router/gateway products. hybrid stands for the seamless migration of future IP technology with "conventional" technology and supports the appropriate standards (internal and external SIP).

The elmeg hybrid systems were developed as pure IP-PABX with the possibility of using hybrid technologies via an extremely flexible module concept. Investment security was of particular importance during the development; i.e. reusing existing infrastructure and equipment such as telephones for example (2nd and 4th existing system telephones via a new SW release), external applications etc.

The systems does not have fixed TDM ports; meaning therefore that the basic configuration is a pure IP system. A number of interfaces are fixed to the motherboard: 2 x V.24 (1 x for service, 1 x for call data output), 1 SD card slot, 2 contacts, 4+1 Ethernet interfaces and 1 reset key.

In delivery status the hybrid licenses for 10 terminals, 2 SIP channels and 5 SIP clients are included.

Connectors



The elmeg hybrid 300 offers 3 module slots for traditional (TDM) extension/ line modules for use with up to 60 extensions as a wall system. 4 different modules are available for these slots: Modules 8FXS / 16FXS with 8 / 16 analogue extensions, Module 4S/U+4U with 4 switchable and 4 fixed digital interfaces. The 4 switchable interfaces can be operated in S0 internal / S0 external / Up0 modes, and the 4 fixed interfaces are operated in the fixed Up0 mode. On the other hand the Module 4S/U+6FXS implements 4 variable digital interfaces combined with 6 analogue

connectors. All extension modules can be optionally equipped with RJ45 plugs or terminal blocks.

In order to ensure future security levels, separate option module slots are available: With respect to media transfer, i.e. the connection from "traditional" technology to IP telephones or to SIP providers, the elmeg hybrid can be upgraded if required by a further 2 powerful DSP modules that provide parallel usable media transfers. Two further special module slots are provided for the operation of analogue exchange lines. The Module 4FXO offers 4 ports for the connection of analog exchange lines.

Management

Management of the hybrid is done through the FCI (Configuration Interface) via the web browser.

The setting of important functions via the various individual user portals can be selected personally by the user; the administrator is therefore not required. Individual portals are also available for the various integrated applications (call centre, hotel reception, telephone booking system etc). This allows the authorised employee to look after the administration of the various integrated solutions.

Terminals with system telephony features

The new elmeg S530/560 system telephones are used as digital terminals. This family of terminal devices is perfectly tailored to the feature set of the hybrid systems. Menus provide for excellent usability. The elmeg hybrid assumes centralized management duties for the system telephones. Consequently, the system telephones are configured from the hybrid system. The main configuration parameters are transferred directly to the system telephones. This makes it much easier to configure the system-there is no longer a need to perform configurations directly on the telephone.

As IP system telephones elmeg IP120/IP130/IP140 are used. Here are no SIP-Client licenses at the hybrid system required. There is an automated setup via the hybrid communication system (auto provisioning). This terminals access the central system telephone book of the hybrid via LDAP. Advanced features like BLF keys and MWI signalling are supported.

Safeguarding previous investments was also a high priority in developing the hybrid systems. As a result, existing infrastructure or equipment such as the system telephones elmeg CS290, CS400xt, CS410 or elmeg IP-S290/IP-S400 can continue to be used.

Integrated hotel application

The integrated hotel application is intended for small and medium-sized hotels and guest houses and is a complete solution with its own admin access.

The functions are:

- Check in/out: Releasing/blocking of line access authorisation
- Room status (cleaning) can be set via the room telephone
- Printout of call data with itemised billing
- Configurable cost factor for calls
- Information about existing messages on room telephone (MWI)
- Reception telephone with room function keys

- Wake-up to room telephones

Integrated voice applications

Mini call center

The mini call center is a dedicated solution with its own administrator access and provides features for a small call center team of up to 16 employees. This solution is ideal for smaller groups within the company with high and varying call volumes such as internal sales, support, order hotlines, order processing, and customer service.

Features:

- Flexible allocation of lines and agents to the call center Supervisors can make changes on the fly (according to call volume)
- Queue management (calls distributed to agents after a break)
- Statistics on lines and agents
- Web portal for administration

Voice applications

The integrated voice applications are based on WAV files and provide a wide range of solutions:

- Auto attendant: with the option of selecting the desired department by entering a number on the keypad after the announcement, or dialing an extension directly
- MoH: customized music is played to callers on hold
- Greeting / announcement: recorded message for the caller, for instance hours of operation

Calendars are used to schedule features and applications to run on specific dates at specific times. There are calendars for the team features (call types), nighttime answering service, door intercom functionality, class of service, etc.

TAPI

The newly developed elmeg hybrid TAPI interface is 64-bit compatible and allows for a wide variety of CTI applications. The compatibility to ESTOS and C4B enables the integration of CTI functions in different applications (Exchange, Outlook, Lotus Notes, Tobit, David, CRM systems etc). All system telephones as well as analogue and ISDN standard terminals can be connected via the "new" TAPI. The interface enables TAPI clients to be connected to the LAN; either with or without using a TAPI server.

External applications server

The connection to MS Exchange implements the following unified messaging functions:

- Voice Messaging – access to messages, appointments, contacts and voice messages by voice/tone dialling; any messages in the mailbox are read.
- Voice control – any messages in the mailbox can be controlled using your voice.
- Answering machine – the exchange mailbox can be used as an answering machine.
- Auto Attendant (16 languages) – transfer of calls with possibility to search in address book as well.

LDAP

elmeg hybrid provides an integrated LDAP server. LDAP-capable devices such as standard IP telephones can access the central system telephone book of the hybrid. Accessing the private telephone book of a user is also possible — with username and password protection.

Mobility

To equip employees with cordless telephones, a DECToIP system can be connected to the hybrid using the SIP protocol — without an integrated module. This mobility solution combines two proven technologies: DECT is employed to connect base stations and terminal devices (good radio coverage and voice quality), and IP is used between the DECT base stations and the elmeg hybrid. Radio coverage can be adapted to the site of the installation thanks to the flexibility of positioning base stations and DECT repeaters.

IP

The hybrid systems can be connected to the LAN via the existing Ethernet interfaces and shall use the existing infrastructural components such as: routers, WLAN access points and application servers. IP system telephones, standard SIP terminals and SIP lines are also connected to the system via the IP infrastructure. It is also possible to integrate offsite extensions and home offices, or to connect a number of sites via the Internet. The hybrid systems implement the transmission of faxes in accordance with the T.38 protocol.

Variants

elmeg hybrid 300 starter pack.
 (5510000184)

Wall System, int. version: system telephony, 3+2 slots for FXS/S0/Up0/FXO, integr. IP Gateway, TAPI, hotel, mini call center, voice applications, VoIP ready, lic. for 10xterminals/2xSIP channels/5xSIP clients; incl. M 4S/U+6FXS, connection module (MC CL)

Features

Hardware - modular expansions

Expansion slots	3 module slots for expansion modules for extensions/lines
Modules for expansion slots	Module 4SU+4U with 8 digital interfaces (IF), Module 4SU+6FXS with 4 digital extension/line IFs and 6 analogue extension IFs, Module 8FXS with 8 analogue extension IFs, Module 16 FXS with 16 analogue extension IFs
Special slots for FXO	2 special slots for separate use of line modules
Modules for special slots	Intended for module 4FXO with 4 analogue exchanges
DSP special slots	2 special slots to be used by DSP modules for media transfers from IP to TDM

Hardware - modular expansions

Modules for DSP special slots	Module DSP 4 with 4 channels, module DSP 8 with 8 channels, module DSP 32 with 32 channels
Modules for overvoltage protection	Module FSM for use on each extension/line module per port to identify any overvoltages

Hardware - Basic configuration

Serial 1 - Interface for console (support)	Service interface for direct access to system console
Serial 2 - Interface for PC or serial printer/API	Application interface for hotel API, printout of charges on serial printer
Contacts	2 x NO switches, activated by entering code internally/externally
Media transfers (TDM - IP)	5 DSP channels on board, codecs: G.711, G.722, G.729, G.726
Reset key/factory settings	Restart or reset to ex works state
Status LEDs	Display of operational states
SD card slot	Used for a SD memory card SD 1.0, 1.1, 2.0 (SDHC) to store messages, announcements, charges etc.
12 V voltage	To control a 2nd alarm etc, Load: 12 V, 300 mA
Module power supply (mains unit)	1 module
LAN interfaces	4+1: WAN, DMZ configurable via SW
Switch	10/100/1000 Mbit/s, auto sensing

Technical data

Dimensions	500 x 370 x 75 mm
Housing	Plastic housing, connectors in housing
Power supply	230 V
Power consumption	At rest: 12 W, active: 50 W (modules: 3 x 16 FXS - 50% load, 24 calls in progress)
Weight	5.90 kg without packaging and accessories
Operating conditions	Operating temperature: +5° C to +40° C; storage: -20°C to +70°C; relative humidity: max. 85 % non-condensing, dry rooms, dust-free
Standards and approvals	R&TTE Directive 1999/5/EC; EN 60950-1; EN 55022; EN 555024
FXS traffic load (1)	The FXS modules are designed for a long-term traffic load of 30 - 50% of the connected terminals.
FXS traffic load (2)	If this value is exceeded over a long period then this causes the modules to heat up. At 80°C the affected module is switched off for safety reasons.

Content of Delivery

Content of Delivery

LAN cable, CAT.5	2 parts per 3m
Network cable	Permanently mounted, 1.5m
Installation and mounting material	Dowels, screws, terminal blocks
Documentation	Brief start-up procedure manual
Data storage devices	SW, documentation, brochure etc.

Max. system values

Max. number of ISDN S0 connectors	Total: max. 12; external: max. 12; internal: 12 for the connector of S0 standard telephones or system telephones
Up0 connectors	Max. 24 Up0 connectors for max. 24 U-system telephones [SysTels] (when using S0 output - additional 24 S0 SysTels)
IP telephones (IP-SysTels)	Max. 60 IP system telephones
Internal analogue connectors	For the operation of max. 48 analogue terminals
Door terminals	Max. 4 door terminals
SIP provider (VoIP)	Max. 25 SIP providers
External SIP channels	Max. 2 to 65 SIP channels (license model)
Media transfers (TDM - IP)	Max. 64, modules equipped with 4/8/32 channels, as well as 5 DSP channels on Board.
Standard IP telephones (SIP)	5 to 65, 5 per standard licence, can then be extended in increments of 10
Calendars/switching points	Max. 20 calendars can be set for all types per max. 10 switching points.
User	Max. number of users: 60

Maintenance

Web browser access	Access over ISDN: Configuration, SW update, system status, readout of important system data, tracing, fault diagnosis
ISDN Login	Telnet (console) access, access to diagnostic memory, traces

Quality of Service (QoS)

Liability	2 year manufacturer guarantee including advance replacement
Software update	SW system, SW management etc.

PABX functions

Alphanumeric central phonebook	1000 entries in phonebook, individual authorisation for phonebook access, import/export possibility, name display on phonebook
--------------------------------	--

PABX functions	
Analogue ports - internal	To connect analogue terminals: MFC dialling method, adjustable flash times, setting as: phone/fax/modem/answ.machine/combo device, name display on phonebook for (CNIP/CNIR), transfer of phone numbers to internal analogue ports (CLIP, CLIP off Hook)
Internal call waiting	Call waiting is signalled by a call waiting tone on FXS ports. Possible procedures: ignore call waiting (timeout after 30 secs), accept directly, accept through hold for enquiry, reject
Call waiting protection	The call waiting protection is configurable per FXS extension (Ext.) as well as via Class of Service (CoS); the ext. is implemented in the terminal for ISDN extensions.
Do not disturb feature for internal ports (1)	The do not disturb feature (at rest) for FXS ports is configurable for a) just internal calls, b) just external calls, or c) internal and external calls;
Do not disturb feature for internal ports (2)	A special dial tone signals that the do not disturb feature is active; it shall however be possible to accept calls whilst in do not disturb mode.
Call assignments	Team and door terminal lists can be automatically switched on via programmable weekly calendars. It shall be possible for an authorised extension to manually switch on
Set up call forwarding remotely	Call forwarding can be remotely carried out in the system.
Call forwarding (CF) immediately/after a period of time/when busy (2)	Set up of call forwarding for internal extensions via user portal as well. The call forwarding set up is also possible with standard telephones via the telephone code procedure; this can also be done externally via the 2nd B channel.
Call forwarding during a call (CD - call deflection)	Automatic call deflection to PtMP connector if an incoming external call is to be forwarded externally.
Call forwarding during a call (partial rerouting) for PtP	Automatic execution if a internal extension has set up an external call forwarding. In the event of failure the call forwarding is done via the 2nd B channel.
Release (if dialled incorrectly, or if no answer)	Release to a configurable destination in the event of: incomplete DDI (after a period of time); if dialled incorrectly and if all team extensions are logged out etc.
Call assignment	External calls can be flexibly assigned to extensions, teams or to voice applications as well.
Exchange access right	The exchange access right can be set at different levels per user: internal, incoming, local, national, unlimited.
Switchable exchange access right	The exchange access right can be controlled via the calendars through appropriate authorisation in the CoS
Automatic outside line	The automatic outside line is configurable per user; an internal number can therefore be dialled by pressing *
Global exchange access	The dialling code (typically 0) can be programmed freely.
ARS	Automatic route selection (LCR) is a dial control with a telephone number-dependent bundle selection. ARS is configurable per extension via the CoS.
Authority matrix (Class of Service)	The CoS contains a list of functions for the user; the CoS can be switched via the calendars/manually.
Bundle formation/division	Authorisation to assign a bundle is done via the CoS.
Specified bundle assignment	The bundle assignment can be done via the code on standard terminals or via the bundle key on SysTel.
Call Through (2)	Cheap tariffs, e.g. when dialling abroad, can therefore be used. When the ARS is switched on, routing is also possible via internal analogue GSM gateways.

PABX functions	
Boss/secretary function	Functional linking of 2 system telephones - routing of calls via call function
CLIP no screening for point-to-points	Sending of call number that does not belong to connector, e.g.: as central call number for call centre. Application to the provider necessary
CLIPO (Calling Line Identification Presentation Override)	Transmission of suppressed numbers to special connectors (e.g. police)
Data protection for analogue extensions	The data protection option prevents call waiting for analogue faxes, modems and door intercoms.
Date/time	Implemented through clock component, clock software, time servers etc. The clock can be adjusted via FCI, synchronisation with ISDN network time is possible. Automatic changeover to summer/winter time
Diagnostic function	Fault logbook and diagnostic history memory in the system (to be saved to SD card)
Direct call	Automatic call setup after x secs to a preset destination after the receiver is lifted without dialling; can be programmed per user, special dialling tone for active direct calls; adjustable reaction time of 0 - 39 secs can be adjusted centrally
Three-party conference call	Up to 8 three-party conference calls for TDM terminals. Possible procedures during the conference call: Disconnect individual extensions, return to active connections and connections on hold
Announcement/announcement block	Announcement to system telephone with notification tone for both the calling party and the called party; can be set per extension
Advanced call assignment for point-to-points	Additional MSNs (exceptional call numbers) that can be configured centrally for all point-to-points. For non-configured call numbers, the call is released to a configurable global default destination.
Fax connection possibility	Connection possibility of a fax to analogue or ISDN internal connectors:
Follow me (1)	Tracing of call diversion of internal extensions via the code procedure; configuration of follow me function externally possible by dialling externally in the PABX (service call number) - protected by PIN2
Follow me (2)	The remote switching authorisation is set centrally.
Charges (1)	Transmission both during (AOC-D) and at the end (AOC-E) of the call in units or currency amounts; operation of pay phones at the internal So bus possible
Charges (2)	Forwarding of charges to internal analogue/digital connectors, charge pulses 12 kHz/16 kHz, charge meter per extension
GSM gateway	GSM gateways can be switched on on hybrid external ISDN ports. The automatic routing via ARS can be adjusted. The post-dial delay on analogue GSM gateway ports can be configured centrally, the ISDN clock synchronisation can be switched.
Pickup	Pickup of calls to other extensions: Pickup within a group; group assignment can be programmed per extension.
Pickup specified	Specified pickup by entering the extension call number; this covers all groups
Pickup of answering machine	Pickup of a call that has already been answered from an answering machine
ISDN connectors, point-to-multipoint/point-to-point with DDI (also mixed)	In the hybrid both external point-to-points (P-P) as well as point-to-multipoints (P-MP) can be set up.
Calendars (PBX Day/Night, CoS, door terminal, teams) (2)	Several different switching times can be selected for each weekday. Exceptions for public holidays can be configured

PABX functions	
Changeable codes for important functions	Programmable telephone codes: exchange access, pickup, specified pickup, speedial number, project number, bundle assignment, open hold for enquiry
Keypad procedures in exchange	Control of performance features in the exchange, authorisation per extension in the CoS
Speedial number	Access to entries in the phone book via a code combined with the respective entry index (000-999)
Layer 2 on exchange connector switched to active non-stop	The ISDN Layer 2 is kept active non-stop. Can be configured per exchange connector
Brokering	Any change between internal and external connections; the respective caller on hold hears MoH.
Save message on SysTel	Signalling via UUS 1
Name display in the call and in the connection	During the call as well as during the connection, the caller's number is displayed (CLIP). If the call number is entered in the phone book, the corresponding name is displayed.
Name assignment for connectors, terminals and teams	In the configuration, names can be assigned to the individual ports. For internal calls the name is displayed on the terminal. In addition the name is also visible in the PABX menu and in FCI, as well as on the terminal for team calls.
Emergency functions with priority circuit (blockade break for ISDN)	A terminal that is configured as an emergency telephone disconnects an occupied exchange port if it is attempting to use an exchange. Any internal extensions can be configured as emergency telephones.
Emergency number storage/emergency telephone/alarm point-to-point (1)	In the hybrid, 10 emergency numbers (up to 20 digits) can be set up. The occupied ISDN exchange is then subject to a blockade break if one of the saved emergency numbers is dialled.
Emergency number storage/emergency telephone/alarm point-to-point (2)	The emergency number dial is, provided that all exchange lines (incl. SIP provider) are occupied, always routed via ISDN (VoIP blocked).
Open hold for enquiry - park in system	By using the open hold for enquiry function, the caller is held in the system queue. The call can be transferred to any telephone via the code procedure or with SysTel park keys.
Internal and external room monitoring	Room monitoring via a telephone that has been approved for this and whose receiver has been lifted or whose hands free has been switched on. Room monitoring can also be remotely activated.
Separation of direction	A fixed exchange/bundle assignment can be configured for each user.
Call number plan	Flexible internal call number plan can be programmed in a variable manner from 1 to 4 digits
Call number prefix	The national/international dialling code can be set up centrally.
Call number transmission/suppression	The transmission and suppression of call numbers is implemented in the hybrid via (CLIP/CLIR/COLP/COLR)
Ringing AC voltage (frequency)	For all FXS ports, the frequency of the ringing AC voltage can be adjusted centrally between 25/50 Hz.
Day/night operation	Switching to the respective operating status for the entire system
Display extension status data	The current settings for a particular user can be displayed. Call number (MSN), name, current authorisation class, assigned interfaces, costs
Appointment call/wake-up call	For telephones in hotel rooms, a wake-up call can be set up by the guest or by reception.

PABX functions

PABX menu	Access to system functions of system telephone: phone book, follow me, direct call, hotel functions, editing of public holidays in calendars
On-hold queue	Callers can be switched to on-hold queues and then retrieved by pressing the correct code.
Music on hold	The MOH to be used for each extension can be configured via Class of Service. Options: no MOH, internal melody 1, internal melody 2, external connector, voice application MOH (external source via jack or WAV file)
Queue	The number of calls on-hold for the team can be individually set.
Return call (1)	A return call shall occur: when put on hold for enquiry, when dialling, when busy, if transferred incorrectly; after a period of time (30 secs). Return call from open hold for enquiry
Return call (2)	The time for the return call can be adjusted separately for iUbA, busy and open hold for enquiry.
Dial control (blacklist/whitelist)	Up to 30 16-digit blacklist numbers and up to 60 16-digit whitelist numbers can be set up in the system. Assignment to the various extensions is done via the CoS.
Simplex operation/simplex operation block	Simplex operation is typically only possible with SysTels. By using this function, the called device is switched immediately to hands free mode and the call is accepted. A simplex operation is ended after 2 minutes for security reasons.
X.31	Connection of X.25 Point of Sale terminals (data transmission in D channel) X.31 case B; up to 4 TEIs with fixed internal/external allocation can be configured
Central configuration of (system) telephones via PABX	Installation and administration of important system telephone parameters in the hybrid

Security

Admin password	Administrator system - access for web configuration
Passwords for application portals	Access for web configuration of integrated solutions: hotel, mini call centre, phone book, call data
Password for user portal	User access to web configuration of individual settings
PIN protection for remote access	Remote access to the system is protected by a 6-digit programmable PIN2.

Team functions

Team function - General (2)	16 extensions can be put into one team. Divisible call signalling can be configured for each team. Team call assignments are allocated to each team. The switching on of call assignments can either be done manually or automatically.
Release	For a particular team, a release to another team can be configured.
Call assignments	4 call assignments are allocated to each team, these can be switched on either manually or via calendars.
Call forwarding (2)	It can also be set up whether a call forwarding should be done externally in the VST via call deflection/partial rerouting and should be cancelled if the entire team call is successful.
Call list control (SysTels)	If an answering machine within the team accepts the call, the call will remain in the call lists for all telephones.

Team functions

Automatic call acceptance (with parallel signalling within the team)	Team calls can be accepted with MOH; the team extensions are then called in parallel. Once a team extension accepts the call, the connection is made.
Call signalling	Call signalling can be individually configured for each team: simultaneous, linear, rotating, constructing, parallel after a period of time, uniform call assignment according to average talk time.
Team call signalling to internal/external terminals	The team call signalling can be done to internal team extensions or to external call numbers. The allocation is done in the call assignments, which can be controlled via the calendars.
Team log in/log off	Team extensions can log themselves in and out of the team. This is possible for both individual as well as all teams; if all extensions are logged out then a call is released to the default destination.
Transfer functions	Transfer functions can be configured for each team: busy options, release options, transfer to busy extensions, automatic release immediately/if busy/if no reply.

Door terminals

Door terminals - General (1)	Door terminals can be switched on on internal FXS ports. For each door terminal, 8 internal extensions or 1 external call nr. (chemists circuit) are included in the call signalling each time it is rung. Refer to call signalling in the day/night ser
Door terminals - General (2)	Door terminal authorisations (call door terminal/open door) are done via the CoS. The door terminal switching authorisation (day/night) can be configured for each extension via CoS; door intercom calls can be picked up.
Doorbell signalling	The signalling time can be programmed for both internal and external use. The monitoring can be switched on or off.
Door terminal external call monitoring	A timer limits the call duration. Can be configured for each door terminal and doorbell
Door terminal call signalling	The call signalling duration can be adjusted.

Call transfer

Hold for enquiry	Can be freely executed on all internal or external extensions. Possible functions: Disconnect active connection, disconnect connection on hold, redial. The extension on hold shall hear MoH.
Hold for enquiry	Hold for enquiry from an active connection to an internal/external extension. The other extension is held in the system.
Transfer to busy extension	A call can be transferred to a busy extension. At the end of the call the connection is made. Automatic return to the original extension after time has expired.
Exchange to exchange transfer	Following the return of an existing exchange connection to the exchange, both external channels can then be interconnected. Not available for FXO
Transfer without advance notice (blind transfer)	Transfer a call by replacing the receiver from the hold for enquiry.
Transfer with advance notice	Transfer a call by replacing the receiver from the hold for enquiry after notifying the extension
Transfer (ECT)	Transfer of calls in exchange (if LM available). Can be reached via FCI, although external-external ECT is allowed.

Call transfer

Transfer of active call through call waiting	Analogue terminals can transfer the incoming call with R5 etc whilst on the call via the code procedure.
--	--

Configuration access

Web configuration	Configuration access is implemented both locally and remotely via IP: HTTP/HTTPS without signed certificate.
Remote configuration via ISDN (1)	Access to the hybrid can be done both remotely as well as via S0. Remote web browsing accessed via external ISDN S0 with X.75 / HTTP protocol
Remote configuration via ISDN (2)	Remote access can be enabled for 30 minutes or permanently; access only by dialling with special service configuration management tool
Remote maintenance	ISDN Login/Telnet access
Firmware download	Via IP
DIME Manager support	The hybrid can also be configured via the DIME Manager.
Management	Management via SNMP, SSH
SNMP browser	Integrated in FCI

Voice applications

General voice applications	Voice applications are based on WAV files with music, announcements etc. Max. 8 voice applications can be configured as: announcement before query, infobox, wake-up message or MOH; WAV files are stored on the memory card (SD).
Announcement/infotext	A WAV file can inform the caller of any changes to opening hours in the form of an announcement/infotext.
Volume control of files	The WAV files can be adjusted by a volume control.
Wake-up message	Wake-up calls for guests can be set up in conjunction with the hotel application.
Music on hold	Music on hold (MoH) can be configured based on WAV files.

Compilation of call data

General compilation of call data (1)	Compilation of records in FLASH with: internal extension no., external call number suppressed/shortened/not shortened), date/time, call duration, currency amount, project number, connector type, exchange line no./MSN/DDI index;
General compilation of call data (2)	can be configured for each extension; storage of incoming calls either generally or only by entering a project number.
Output of records	Available
Storage of records per user can be configured (1)	Possible output of call records on V.24 printer. Output of records in currencies standardised by a ratio of 1/1000; the factor and currency text can be configured.
Storage of records per user can be configured (2)	Shortened numbers are indicated with # character. Printout via V.24 can be switched via PABX menu

Compilation of call data

Call records in memory	2000 records are held in the memory.
Shortened storage of external call numbers.	The storage of shortened call numbers (privacy) is possible.

Mobile extensions

Mobile extensions - General (1)	Integrated application: parallel signalling of incoming calls to an internal terminal and an external call number (e.g. mobile phone). The assignment can be switched on or off via a code.
Mobile extensions - General (2)	The parallel call is initiated by directly dialling the internal extension. During the external connection, hold for enquiry and call transfer to hybrid extensions are both possible via DTMF code procedures.

TAPI

TAPI - General	TAPI is supported for: TDM and IP system telephones. MS Windows XP, Vista, Win7. Support for 32 bit/64 bit, 1st and 3rd parties via LAN, TAPI authorisation for each extension can be adjusted via Class of Service
TAPI functions (1)	Automatic call acceptance via elmeg system telephones, incoming and outgoing calls, call forwarding, hold for enquiry, brokering, call transfer, three-party conference call, call waiting, charge information, call deflection, pickup of calls
TAPI functions (2)	Signalling of call forwarding number(s), MSN/DDI signalling, cause signalling, specified pickup, park/unpark

User - configuration portal

User-configuration portal - General	Each user within the system has access to their own telephones and settings. Individual user names/PIN are accessed via the user portal.
-------------------------------------	--

Application portals

Application portals - General	For the integrated solutions, i.e. hotel, phone book, mini call centre, call data etc, the individual application portals are available.
-------------------------------	--

Mini call centre

Mini call centre - General	Integrated solutions for up to 16 agents for small groups that need to communicate both frequently and in a dynamic manner. The administration is done via a separate portal.
Functions	Flexible assignment of agents and lines, dynamic customisation depending on call volume, call assignment with idle periods for agents, statistical information on agents and lines
Status information (1)	Different status information is displayed, e.g.: lines and assigned agents, number of agents logged on per line.
Status information (2)	Agents in post-processing, active calls (active connections), calls on hold, number of calls accepted today, number of missed calls today.

DECT connection

Singlecell/multicell via LAN	As DECToIP system used with existing Ethernet interfaces via SIP protocol
------------------------------	---

Hotel functions

Hotel function - General	Integrated functions. This is operated from reception telephones via the system menu on the elmeg Hybrid.
Check in/out	A check in/out can be done from the reception telephone (SysTel). Here the room telephone authorisation is switched on and the charges are deleted following notification.
Call cost output on printer/display in SysTel	Output of charge meter in PABX menu, output of charge records and total lines via printer (PC) on hybrid V.24 connector. Hotel-specific text headers and trailers can be edited for the printout
Hotel charge factor	When reading out or printing the call records upon check out via the PABX menu, any call records incurred are then multiplied by the cost conversion factor.
Switching hotel MWI from the reception telephone	Generate MWI to internal ISDN and analogue terminals (can be configured via MWI extension flag), along with possible callback function from hotel room.
Hotel portal for reception	Password protected access to hotel application configuration
Hotel room key (check in/out, status display)	Function key for direct check in/out, room status display
System telephones: Reset personal information	Automatic resetting of automatic redialling, call lists and other personal data when in hotel check in/out, or manually via code programming procedure if extension data/LMs are deleted.
Wake-up function	A wake-up call can be set up from the guest/reception telephone. The wake-up call is a call that plays music on hold.
Room status setting from telephone	Not cleaned, cleaned, cleaned and checked

IP & routing functions

DHCP	DHCP Client/Server/Proxy for easy configuration of TCP/IP
DNS client	DNS Server/Proxy/Relay support
Integration into existing LANs	Available
IP accounting	Detailed IP accounting, source, destination, port, interface and packet/bytes counter, transmission also via syslog protocol to syslog server
IP packet filters	Filters of IP packets with the aid of different criteria such as IP protocols, source/destination of IP address, source/destination of port, TOS/DSCP, Layer 2 priority for each interface can be configured in a different manner
NTP Client/Server	Automatic update of date/time from time server. Internal time server for connected IP terminals.
QoS / TCP Download Rate Control	Used to reserve bandwidth for VoIP connections.
Scheduling	Control of actions as well as time and event-controlled, e.g. such as Reboot Device, Activate/Deactivate Interface, Activate/Deactivate WLAN, Trigger SW Update and Configuration Backup
Stateful Inspection Firewall	Packet filtering depending on the direction with controlling and interpretation of each single connection status

IP & routing functions

Switch Port Separation	hybird makes it possible to run the switch ports as one interface or to logically separate these from each other and to configure them as independent Ethernet interfaces.
System logging & status information	hybird has both logging and status information available
VLAN	VLAN tagging on IP interfaces can be configured
System interface, sub-system operation via IP	For the system interface, 2 systems are interconnected via a bidirectional connection - without global performance feature. The sub-system operation represents a single connection from the main system to the sub-system.
Connector to SIP providers	The connector to the SIP providers can be done either via an individual call number or via a DDI.
Connector of standard SIP terminals/IP system telephones (1)	Standard SIP telephony in LAN; telephony via (WAN) SIP providers; general SIP and router settings: SIP RTP port, TOS value (SIP packets), TOS value (RTP packets)
Connector of standard SIP terminals/IP system telephones (2)	System telephony with IP-S290 & IP-S400 (tunnel for ISDN SysTel protocol via RTP), FW download via http; VoIP protocol with the IP SysTels when using compressed codecs
Number of simultaneous SIP connections per provider	The number of simultaneous SIP connections per provider can be configured.
Offsite extensions	Offsite extensions can be set up with IP system telephones or SIP telephones.
Bandwidth management with support for multiple locations (1)	Locations can be set up in order to use the bandwidth management. A location is identified with the aid of its fixed IP address or DynDNS address, or by using the interface to which the device is connected.
Bandwidth management with support for multiple locations (2)	The available VoIP bandwidth (upstream and downstream) can then be set up for each location.
Codecs	Codecs G.711, G.726, G.729, DTMF Inband, DTMF Outband, SIP Info, T.38
Codec profile for locations, SIP providers or IP terminals	Different codec profiles can be defined in order to influence the voice quality and to establish certain provider-relevant provisions. Codecs can be sorted and offered in accordance with a nr. of different criteria: E.g. acc. to quality, bandwidth etc.
Early media connect	Early media connect connects voice or audio data (e.g.: announcements) before the call was accepted.
Quality of Service	DSCP header/ToS bit configurable
SIP 2.0	Conforms to RFC 3261
STUN	A STUN server is required to allow VoIP devices access to the Internet behind an active NAT. This determines the current public IP address for the connection and uses this for remote addressing.
T.38	Fax support
Dialling end identifier/shortening via #	The time after which the system begins to dial externally; i.e. after dialling the last digit of a call number. The time can be shortened by entering #.

Accessoires

Modules for PABXs

Modules for PABXs

Module 8FXS (5510000191)	8 FXS ports for the connection of analogue terminals - without connection module
Module 16FXS (5510000227)	16 FXS ports for the connection of analogue terminals - without connection module
Module 4S/U+4U (5510000189)	4 switchable digital ports (S0 int./ext., Up0) for the connection of ISDN exchange lines, terminals or system telephones + 4 Up0 ports for the connection of system telephones - without connection module
Module 4S/U+6FXS (5510000190)	4 switchable digital ports (S0 int./ext., Up0) for the connection of ISDN exchange lines, terminals or Up0 system telephones + 6 FXS ports for the connection of analogue terminals - without connection module
Module 4FXO (5510000188)	4 FXO ports for the connection of analog exchange lines for hybrid 300/600
Module connection RJ45 (5510000195)	Connection module RJ45 for operation of the modules (S, U, FXS) in the rack / wall system
Module connection clamp (5510000194)	Connection module clamp for operation of the modules (S, U, FXS) in the rack / wall system
M 4 DSP (1092189)	Module with 4 digital, highly compressed voice channels, speech compression (Codecs) as per G.711, G.723.1, G.726, G.729a/b
M 8 DSP (1092316)	Module with 8 digital, highly compressed voice channels, speech compression (Codecs) as per G.711, G.723.1, G.726, G.729a/b
M 32 DSP (5510000041)	Module for ICT and modular hybrid systems with 32 digital, highly compressed voice channels, speech compression (Codecs) as per G.711, G.723.1, G.726, G.729a/b
Module FSM (1086774)	Usable on elmeg T484, elmeg hybrid, elmeg C46e / C46xe / C48m / C48.net / C46xe-rack / C46xe-rack-plus / C88m / C88m Up0 / ICT-Series

Software Licenses

License upgrade 5 terminals (5500001209)	License to enhance the system by 5 additional terminals
License upgrade 10 terminals (5500000947)	License to enhance the system by 10 additional terminals
License upgrade 20 terminals (5500000948)	License to enhance the system by 20 additional terminals
License upgrade 5 VM boxes (5500001154)	License to enhance the system by 5 additional hybrid VoiceMail boxes
License upgrade 10 VM boxes (5500001155)	License to enhance the system by 10 additional hybrid VoiceMail boxes
License upgrade 5 SIP channels (5500000869)	License to enhance the system by 5 additional SIP channels
License upgrade 10 SIP clients (5500000868)	License to enhance the system by 10 additional SIP clients

Pick-up Service / Warranty Extension

Service Package 'large' (5500000811)	Warranty extension of 3 years to a total of 5 years, including advanced replacement for bintec elmeg products of the category 'large'. Please find a detailed description as well as an overview of the categories on www.bintec-elmeg.com/servicepackages .
---	--

Pick-up Service / Warranty Extension

ServicePackageBundle hybird300
(5500001359)

Warranty extension of 3 years to a total of 5 years, incl. advanced replacement for 'hybird 300 incl.3 modules (e.g. 8FXS, 16FXS, 4FXO, 4S/U+6FXS, 4S/U+4U)'. For detailed description see www.bintec-elmeg.com/servicepackages.

Add-ons

SD card (5500001380)

SD memory card for elmeg hybird systems, pre-initialized with multi-lingual voice mail voice messages, and firmware for system telephony

RJ 45 Y-Adapter (5500000870)

RJ 45 Y - Adapter for the splitting of double assigned ports (M 16 FXS, M 4 S/U+6FXS), 10 pcs.

Cables

Console Cable MiniUSB to DSUB9
(5500000717)

Serial console cable for RS23x, RT, Rxx02 Series and hybird (Mini USB to D-SUB 9)

DECT150 (5530000087)

DECT over IP singlecell base station for 6 handsets / 4 voice channel (elmeg D130, elmeg D140); powered by PoE; power supply

DECT200M (5530000088)

DECT over IP multicell manager for 100 handsets / 30 voice channel (elmeg D130, elmeg D140; elmeg DECT200 basestations necessary); seamless roaming & handover; powered by PoE; power supply not included

DECT200 (5530000089)

DECT over IP multicell base station for 100 handsets / 30 voice channel (elmeg D130, elmeg D140); seamless roaming & handover; powered by PoE; power supply not included

D130 (5530000090)

DECT handset, brilliant, 1.8" TFT colour display with 7 lines, intuitive, icon-based user interface; Headset connection via Bluetooth® or 2.5 mm jack, integration of hybird phone book and voicemail, incl. charging tray

D140 (5530000091)

Slim line DECT handset, brilliant, 1.8" TFT colour display with 8 lines, intuitive, icon-based user interface; vibration function, headset connection via Bluetooth® or 2.5 mm jack, integration of hybird phone book and voicemail, incl. charging tray

D150R (5530000181)

DECT handset, IP65 standards (dust, waterproof, shock resistance), functionality and equipment like D130, no Bluetooth, additional vibration alert and LED torch, Rubber surface for perfect grip, incl. Charging tray