SIEMENS

Hicom 150 E (OfficeCom/OfficePro)

Communication platform for end-user solutions

Hicom® 150 E is a digital buisness communication platform using ISDN technology (DSS1) to offer leading edge services.

Depending on the system in question, Hicom 150 E can be configured to support up to 250 voice terminals and 50 data terminals.

Interactive user guidance based on displays and dialog keys increases the speed and ease with which optiset E digital system telephone features can be activated.

Using the flexible adapter concept means that you can connect a wide variety of add-on devices directly to the optiset E telephones. Individual workstations can thus keep pace with continuously changing requirements.

A universal software concept offers companies of all sizes a professional range of features.

In the case of branch concepts, networking with other systems is achieved by means of the optimized networking protocols CorNet N and QSIG.

Individual user solutions are either integrated into the system as modules or are connected via open interfaces.

Hicom 150 E is a communication system that uses least-cost routing (LCR) to set up the cheapest connections, in relation to time and routes, via selected carriers.

System features *)

The Hicom system offers a wide range of features.

Selected features

- **Caller list.** Unanswered internal and external calls are recorded on system telephones with displays. External calls require the feature "Calling line Identity presentation" (CLIP) to be provided by the network (ISDN). Before being added to the list, calls are stamped with the date and time, and the number of call attempts is recorded. A callback can be initiated directly from this list.
- **Do Not Disturb/"silent call"**. A user can block incoming calls. If Do Not Disturb is activated, callers hear the busy signal. Authorised users (e.g. the Attendant) can override this feature. Acoustic signalling of calls can be deactivated on system telephones, so that they are only shown on the display (not available with optiset E entry).
- **Call pickup.** You can pick up calls within a call pickup group or for specified colleagues from your own telephone.
- **Call override/intrusion.** Authorised users can intrude in another user's on-going connection.
- **Classes of service.** Different classes of service can be assigned to every subscriber in a PBX. The classes of service distinguish between:
  - Unrestricted trunk access
  - Some restriction on trunk access
  - No trunk access
- **Voice call** to system telephones using the internal speaker or via an external speaker is possible.
- **Call charge recording.** The total of meter pulses can be displayed for each terminal or trunk. Call duration display is used for lines without call charge pulses.
- **Group call** allows authorised users to make a voice broadcast to a total of 150 groups containing up to 20 stations. Individual stations can temporarily leave the group.
- **Internal directory.** All extensions are stored with their associated names in the system's internal directory. In the case of system telephones, you can search for these extensions on the display and dial them directly.
- **Speed dialling.** Up to 10 personal destinations can be saved for each individual telephone, and up to 1000 can be saved centrally for all extensions.
- **Toggle** between two existing calls.
- **Text message.** You can send users pre-defined (e.g. "Visitor waiting") or personal short messages (from optiset E memory only) via the display.
- **Advisory messages** can be left at your own telephone (e.g. Back at:....).
- **Account code.** Telephone charges can be assigned to a specific customer or project by entering the account code (max. 11 digits). This code can be entered during a call.
- **Call ID suppression.** In the case of ISDN connections, the caller can suppress the display of his/her call number at the called party's terminal either temporarily or for the entire system.
- **Distinctive Call signalling.** Different ringing signals are provided for internal calls, external calls, recalls and callback calls.
- **Answer group.** Simultaneously ring at more than one telephone.
- **Switches (relays/sensors (not available with OfficePro).** Up to four, code-controlled relays are available by using an optional relay module.
- **Door interface** for entrance telephone and door opener functions. Calls from the entrance telephone can even be routed to an external destination by using an external call forward.
- **Redial (expanded)** for the last three external call numbers dialled.

Standard features

- **Intercept position/attendant console**
- **Camp-on/call waiting tone**
- **Call forwarding from the extension**
- **Display languages** (can be defined individually)
- **Conference** (internal/external)
- **Line seizure** (automatic)
- **Music on hold/external music source**
- **Night service/day service**
- **Park**
- **Consultation hold**
- **Callback** on busy and no answer (automatic)
- **Call forwarding - no answer after timeout**
- **Hunt group** (linear/circular)
- **Lock telephone** (individual code lock)
- **Telephone directory, central**
- **Transferring a call** (internal/external)
- **Recall**

*) Selection

Euro-ISDN features

The prerequisites for a pan-European, uniform communication structure are satisfied by the Euro-ISDN standard, DSS1.

The following Euro-ISDN functions are supported by the system, but please note that some of these features may not be supported by all public networks:

Services. Voice data and group 3 fax documents are transmitted on a 3.1 kHz bandwidth; data and group 4 fax documents are transmitted at 64kbit/s per B channel.

Direct inward dialling (DID). This features allows you to dial each individual station in the PBX directly from the public exchange.

Calling line identification presentation (CLIP). The calling party's ISDN number is displayed at the station called.

Calling line identification restriction (CLIR). The caller's number is not displayed at the station called. This feature can be activated either for the entire system, or temporarily on a per call basis.

Connected line identification presentation (COLP). The connected party's number is shown on the calling party's display.

Connected line identification restriction (COLR). The display of the connected party's number is suppressed on the calling party's display.

Multiple subscriber numbers (MSN). Stations on an S_0 bus can be assigned individual call numbers (MSNs) from the numbering scheme of the PBX. These numbers can then be used to contact the stations directly (e.g. PC cards, group 4 fax machines).

Call charge transfer (AOC). Information regarding call charges is transmitted to the PBX during, or after the call. This information can be displayed on the station display, in units or in currency amounts.

Subaddressing (SUB). User defined information in addition to the call number is transferred to the terminal called. This means that specific customer related procedures can be initiated. Replies are not possible.

User-to-user signalling (UUS1). User-to-user signalling allows a limited volume of information to be transferred in both directions from one terminal to another via the signalling channel.

Call forwarding in the public network (CFU, CFB, CFNR) (not available with S_{2M}). All calls for an ISDN line are forwarded to a predefined destination. This feature is activated from an authorised telephone and applies to the entire connection in the case of a DID connection (point-to-point). In the case of a multidevice connection, only the MSNs assigned to the telephone are forwarded.

Call deflection (CD). Calls for an internal user who has activated external call forwarding are deflected via the public exchange to the external destination station. The B channels are thus not required and are released. In the present version, call charges are not registered at the PBX.

Callback in the public network (CCBS). If an external station called is busy, a callback request within the public network can be stored. The user that entered the request is called back once the external station becomes free.

Tracing malicious callers (MCID). With this feature, malicious callers can be identified in the public network. This feature must be requested from the public network operator.

Attendant consoles

Hicom Attendant C

An optiset E system telephone can be used as an attendant console. This makes it possible to deal with outside calls if direct inward dialing has not been set up. In direct inward dialing mode, the position can be organized as an information, intercept, or night service station.

You can make use of special features in addition to the conventional telephone functions. These are:

- night service
- telephone directory
- number of queued calls (can be set up on up to six telephones in the system)
- release for call waiting
- hold
- call key 1
- call key 2
- disconnect

In addition, a key can be set up with the "error key" feature.

The attendant console can be contacted internally via a second number.

Undialed lines and calls on hold can be processed.

If the number of subscribers on hold reaches a preset level, calls will be forwarded to a specified destination. This will also take place when the length of time a call is queued exceeds a specified limit.

Operation is also possible without an attendant console. In such cases, the subscriber assigned to a line will be regarded as an attendant console.

Hicom Attendant BLF

The busy lamp panel (BLF) is an additional module principally for Hicom Attendant C. It has ninety LEDs and freely programmable function keys. The individual LEDs are assigned on the telephone or via Hicom Assistant E. The status of the subscribers is displayed (free, busy, called).

Hicom Attendant P

This software package emulates the Attendant Console on your PC screen. All switching functions can be activated and performed with your keyboard and mouse.

Braille console

Optical displays are translated into Braille by an add-on device connected to the PC. This enables visually impaired employees to perform all switching tasks.

These features ensure rapid manager / secretary communication.

- Camp-on at manager's telephone can be activated using secretary telephone
- Secretarial function transfer
- Call transfer to the secretary telephone
- DSS keys for manager/secretary
- Conference corner telephone with parallel call signaling to the manager's telephone
- A private line can be set up for either the manager or the secretary

System administration by the customer can be undertaken either on the telephone (Hicom Assistant TC) or with Hicom Assistant C.

Hicom Assistant TC allows the customer to perform administration tasks on any optiset E telephones with a display. The optiset E memory telephone is recommended as this has an alphanumeric keypad (e.g for entering station names etc.)

Hicom Assistant C is a customer tool that runs under Microsoft® Windows and is installed on the PC connected to the system via an RS-232 or S_0 interface.

Other powerful PC-based service tools are available to support the service technician in installing and administering the communication system. The service technician can also change settings within the communication system via a remote connection. Regardless of the method used, the customer data is always guaranteed maximum protection in accordance with the applicable data protection laws.

Relocate

With this feature, optiset E telephones can be relocated without the necessity to change the system programming. A relocated terminal retains its extension number and the user features set. This feature ensures that customers have the freedom to move users around, without the need for an engineer to visit.

Data protection / data security

To protect the communication system and customer data against unauthorized access, the Service menu can only be entered by means of individual user IDs. This ensures that it is possible at all times to establish who has carried out what system modifications at what time.

The system administration is made up of the following:

- **User data:** Access via the Service menu, using individual user ID and password to protect customer data, such as speed-dialing destinations and call-charge information. The owner of the communication system can make smaller system settings with a specified scope.
- **System data:** Access via the Service menu, using user ID for system administration and password. This area of data is protected by password and may only be accessed by trained personnel. Apart from a few exceptions, any system setting is possible.
- Password concept with individual identification and authenticity.
- System access via telephone, service tool, and remote is controlled.
- Administrative procedures can be logged.

User solutions

Mobile communication

Hicom cordless EM

An integrated solution, based on the DECT standard, for comprehensive coverage of the entire company premises by using mobile telephones.

Automatic call distribution (ACD)

Hicom Agentline Office

Distributes incoming calls automatically to specific groups of agents. Statistical evaluation and user-friendly graphical displays provides customers with the ability to plan their human resources efficiently.

Computer-driven telephony (CTI)

Smartset

This PC software allows users to dial numbers from the PC and also records incoming internal and external (ISDN) calls in a caller list. When a call is received, the software runs a comparison with the PC address book to identify the caller, and if a match is found, will display the entry associated with this number. Other PC programs can also be activated by using the incoming ISDN number.

Hicom CTI TAPI

A driver software package, developed to allow the integration of PC's and digital system telephones via an industry standard interface. This means that TAPI compliant applications are thus easily supported.

Data applications

Hicom LAN Bridge

This optional board for the Hicom 150 E OfficeCom communication system, extends access to the public network, to PCs networked via Ethernet LANs. Hicom LAN Bridge changes your Hicom system into a hub for voice, data and video communication and satisfies the requirements applicable to the exchange of small and medium-sized data volumes.

Multimedia applications

To bring managers and teams closer together, a variety of multimedia applications can be combined with Hicom 150 E to form a convenient video conference system. Applications from various manufacturers are available for this purpose.

Call charge management

Cosima TC/TeleData Office

Cosima TC and TeleData Office are PC-based programs for recording and assigning incoming and outgoing call data. It can also analyse call records on a station, trunk, or department basis.

Branch solutions

Hicom 150 E in the hotel

Caracas Desk

Caracas Desk is a cost-effective communication solution for small and medium-sized hotels operating without computer based hotel solutions. The easy-to-use reception terminal, Memory Desk, ensures that all important daily hotel functions and tasks are quickly and efficiently executed. The guest thus benefits from an optimised and convenient service (only for OfficeCom).

Caracas Inn

This Windows based PC software pakkage meets the requirements for medium sized hotels, and supports features such as check-in/check-out, call charge recording and wake-up functions.

Caracas Link

A standardised hotel interface guaranteeing the reliable connection of user-friendly front-office solutions to Hicom 150 E.

Least cost routing

Hicom 150 E uses this function to automatically control the path used for an outgoing call. The path can be routed via the public network, various network carriers or a private network. The system scans pre-programmed routing tables for the most cost effective route for the external call.

Outgoing call attempts are routed in accordance with these routing table steps. These tables analyse the digits dialled by the user and determine the call number to be dialled by the system.

The LCR feature is designed to make the best use of the varying tariffs offered by the different network carriers. Depending on the time of day and day of the week, this feature automatically selects the most cost-effective route for an outgoing call.

Networking

Our local sales units will be able to provide you with details of the features that are possible in the type of networking concerned and the relevant networking protocol.

Digital nailed connection

Corporate communication networks can be set up between several Hicom systems, using digital S_0 or S_{2M} nailed-up connections, with the CorNet N protocol, and between Hicom and other systems with the QSig protocol. The systems are connected to each other via public and / or private lines.

Virtual network

A virtual network from Hicom systems via S_0 or S_{2M} dial-up lines is advisable from an economic point of view in situations where nailed connections are not viable on account of low traffic levels or if the full range of services offered by a nailed connection is not required.

Telephones

The following optiset E digital system telephones (two-channel $U_{P0/E}$ interface) are available for various workstation requirements:

optiset E entry

Low-cost entry-level solution for digital communications.

optiset E basic

Basic configuration for voice and data communication. Includes the ability to connect one optiset E adapter

optiset E standard

Display telephone, ideal for users who make extensive use of the system and its many features.

optiset E comfort

Professional solution for voice and data communication. As optiset E standard, but including the ability to add key modules and up to 2 optiset E adapters

optiset E conference

The system telephone with a professional hands-free device with full duplex amplifier.

optiset E memory

The "Top of the Range" model for telephone users who need the large display, and internal electronic directory package. This telephone can support up to 2 optiset E adapter modules, and up to 4 optiset E key modules

optiset E key module

Add-on device for optiset E telephones (16 function keys with LED), for name keys or service functions. Up to four add-on devices can be connected to one optiset E telephone.

Adapters

The wide range of optiset E adapters available offers a high level of flexibility when it comes to meeting the requirements of the workstation in question.

These include:

optiset E acoustic adapter

For connecting telephone accessories, e.g. loudspeaker, second handset and add-on microphone.

optiset E analogue adapter

For connecting an analogue telephone, answering machine, or group 3 fax machine etc.

optiset E contact adapter

With two floating connections (60 V/5 Watt) for controlling external devices, such as lamps and secondary bells. These can be used to signal the status (ringing and/or busy) of the associated telephone.

optiset E data adapter/optiset E control adapter

For CTI applications (PC-supported telephony).

optiset E ISDN adapter

For connecting ISDN terminals on the desktop (e.g. PC with S_0 card or desktop video conferencing equipment etc).The adapter can support up to 2 "B" channels using up to 128Kb of information.

optiset E headset adapter

For connecting headsets to the optiset E telephone.

optiset E headset plus adapter

For connecting up to two headsets and provides a 600 ohm tape recording port.

optiset E phone adapter

For connecting an additional optiset E telephone. This telephone works totally separately from the "host" telephone i.e. it has its own extension number and features etc.

System interfaces

On the trunk side

Euro-ISDN

- S_0 basic rate access with DSS1 protocol. (ISDN2)
- S_{2M} primary rate access (ISDN30)

Loop start

- Analog trunk connection (Loop calling, Unguarded clear).

On the user side

Analog

- a/b for connecting analogue terminals, e.g. telephones, group 2 and 3 fax machines, modems etc.

Digital

- $U_{P0/E}$ for connecting digital two-channel system telephones.

Euro-ISDN

- S_0 subscriber bus for up to 8 ISDN devices (e.g. group 4 fax machine, ISDN PC card) and for connecting Hicom cordless S base stations.

Additional interfaces

V.24

- For connecting a service PC, call charge computer, call detail printer.

V.24 with CSTA protocol

- For connecting Hicom Agentline Office, hotel applications, etc.

E&M interface (OfficePro only)

- Analog nailed (tie line) connection
- Announcement before answering

S_{0FV}, S_{2MFV} with CorNet N and QSIG protocols

- Digital nailed (tie line) connection

TMOM board (OfficePro only)

- Enhanced radio paging equipment

Technical data

Hicom 150 E OfficeCom configuration

Analog station (a/b) max. 84

Digital station ($U_{P0/E}$) max. 48

Additional stations via optiset E phone adapter and local power supply. N.B. limitation in the final capacity stage when using specific adapter combinations.

Cordless station Hicom cordless EM (up to 64 enhanced portable handsets).

Total stations: max. 156 (incl. Hicom cordless EM feature handsets)

Trunk connections (loop start, ISDN) and/or nailed connections (digital) max. 60 channels
Mixed configurations possible on the trunk side with analogue (loop start) and ISDN ports.

Reduce the above station configuration if more than one S_{2M} trunk group (corresponds to 30 channels) is connected.

Line types S_0, S_{2M}, loop start

Colour of housing warm grey

Dimensions H x W x D (in mm)
450 x 460 x 200

Weight approx. 8.0 kg fully equipped

Software Version 2.2

Hicom 150 E OfficePro configuration

Analog station (a/b) max. 250

Digital station ($U_{P0/E}$) max. 250

Cordless station Hicom cordless EM (up to 64 enhanced portable handsets).

Total stations: max. 156 (incl. Hicom cordless EM feature handsets)

Trunk connections (loop start, ISDN) and/or nailed connections (analog/ digital) max. 120 channels
Mixed configuration possible on the trunk side with analogue (loop start), E&M and ISDN ports.

Reduce the above station configuration if more than one S_{2M} trunk group (corresponds to 30 channels) is connected.

Line types S_0, S_{2M}, loop start, E&M

Colour of housing ergo grey

Dimensions H x W x D (in mm)
490 x 410 x 390

Weight approx. 22 kg fully equipped

Software Version 2.2

Power supply

The systems are designed for mains connection as standard. An optional uninterruptible power supply unit (UPS) bridges power failures.

Nominal input voltage (AC) 88 - 264 V

Nominal frequency 50/60 Hz

Battery power supply (DC) -48 V

Environmental/operating conditions

Temperature +5 °C to +40 °C

Relative humidity 5 – 85%

Ranges

Up to 300 m between Hicom 150 E and the optiset E telephone.

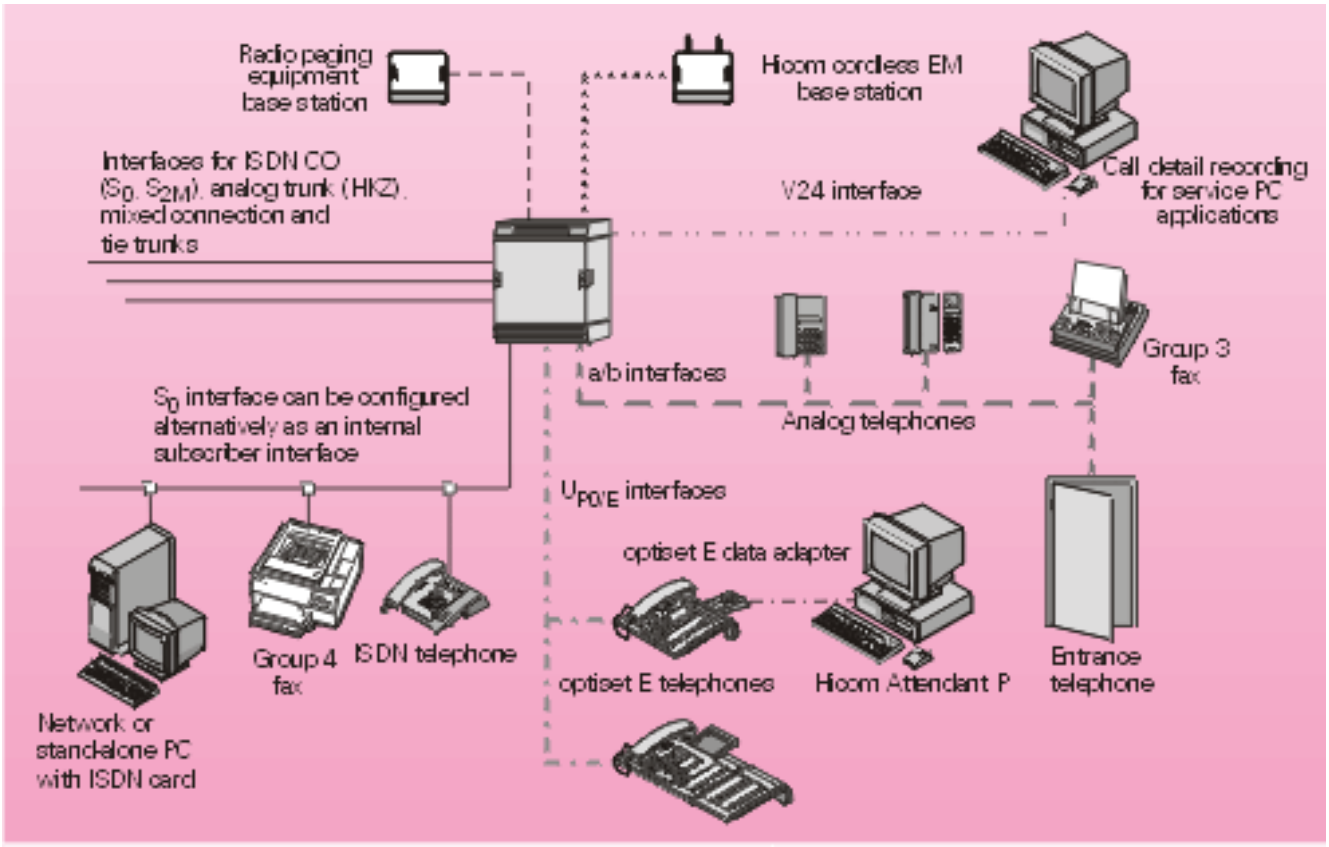
Approx. 1000 m with plug-in power unit, depending on the line network.

Between networked Hicom systems on company premises:

S_0 nailed connection: approx. 1000 m

S_{2M} nailed connection: up to 250 m, depending on cable used.

System configuration



Distributed by:

Data sheet 05/99 • Reference No. A31002-M1500-A130-2-7629 • Printed in the Federal Republic of Germany • 53167 DA 0699 5.0

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