

Studio

by Commend

Your control desk mastered to perfection



Third-party
integration

Video
integration

Modular
construction

Reporting
of events

Audio
recording

Backup
server

Studio Control Desk Management visualise – react – document

Extreme situations such as car accidents or technical failures are just as much part of the job as day-to-day communication in office environments. Studio makes it easy and convenient to stay informed and in charge, to react instantly in case an emergency arises.

All control desk functions of the Intercom Server are displayed on one or several monitors. Interactive icons (on-screen symbols) represent calls and error or alarm messages; they change their colour depending on the required level of attention. Additional windows can be used to display action plans, help texts, protocol details and a variety of other useful information. Status windows can be configured as needed to provide operators with an instant, at-a-glance overview of the entire Studio system, presenting all relevant details of events on-screen as they happen.

Regardless of whether control is automatic or manual, Studio interfaces with all the different output lines from the world of Intercom (gates, doors, heating, lighting, etc.) and supports the integration of third-party devices into its visualisation environment.

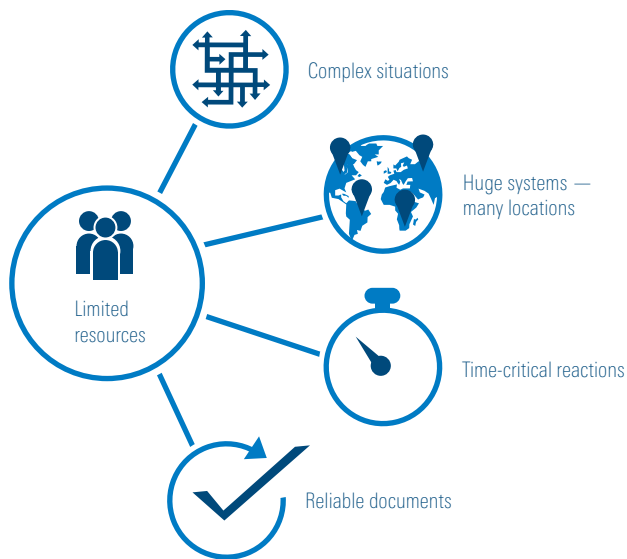
All information at a glance – WHAT, WHEN, WHERE, HOW

To ensure assistance without delay in case of emergencies, the following information is essential: What has happened? When and where has it happened? How is it possible to help the caller? Studio unites all this information within a single software application.

Maps on which markers and icons can be freely positioned help to pinpoint the location of the incident in no time at all. The display switches automatically to the maps showing the locations of ongoing incidents in a pre-definable order of priority. This assists the operator in focussing on the most urgent event at any time. To complement the on-screen support, crystal clear voice communication and integrated video provide further support in assessing the situation correctly and avoiding misunderstandings. "Measure windows" (i.e. on-screen incident response entry for operators) and help texts provide the details that operators need to make the right decision quickly. ComREPORT keeps a detailed log of what happened, when and where it happened and which action was taken by the operator (i.e. how the situation was handled).

An appropriate help function for any situation

Challenges in control desk management



Planset

- Individual user privileges define the ability to access/view plans and icons.
- Depending on their privileges, users can access only specific plansets.
- Plans are organised into plan/map hierarchies (countries, cities, car parks, etc.). These hierarchies can each be assigned to several plans (e.g. car park levels).
- Controlled access to specific plans and all sub-plans or only to specific individual plans.

User privileges

- Users can be divided into individual roles, users and user groups.
- Filters, protocols, etc., can be accessed according to user rights.
- The user language can be set for each user individually.

Basic features

In order to overcome the typical challenges in control desk management, e.g. solving complex situations, reliable documentation as well as time-critical reactions, Studio control desk management offers a wide range of basic functions:

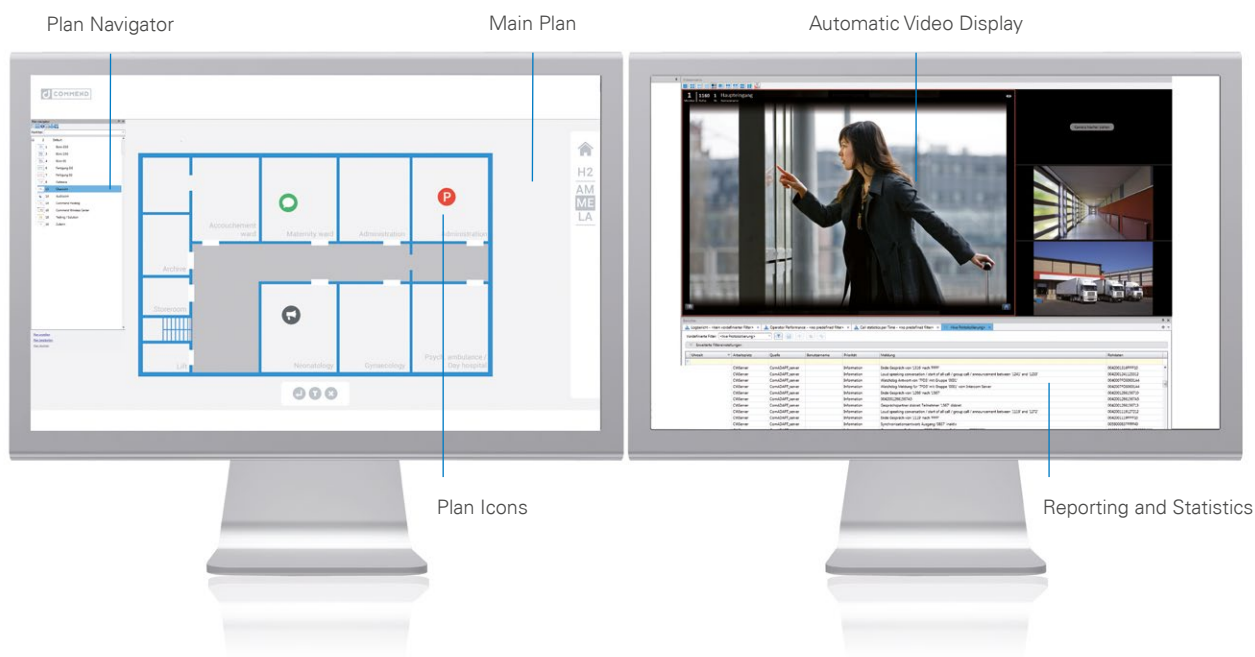
- Automatic switching between plans, flashing on-screen items, zooming, notification sounds and the display of overviews in status windows help operators to focus their attention on important events.
- Various visualisation and alarm options.
- E-mail notification in case of system events.
- Multi-monitor support ensures more clarity and a better overview, with options for saving individual layout profiles and free positioning of plan overviews, status windows, actions, etc.
- Subscriber lists for direct call dialling/ending can be loaded as part of the facility configuration profile or imported from Excel or CSV files.
- State-of-the-art client-server architecture.
- Flexible, scalable licensing model to suit individual requirements.

Video integration

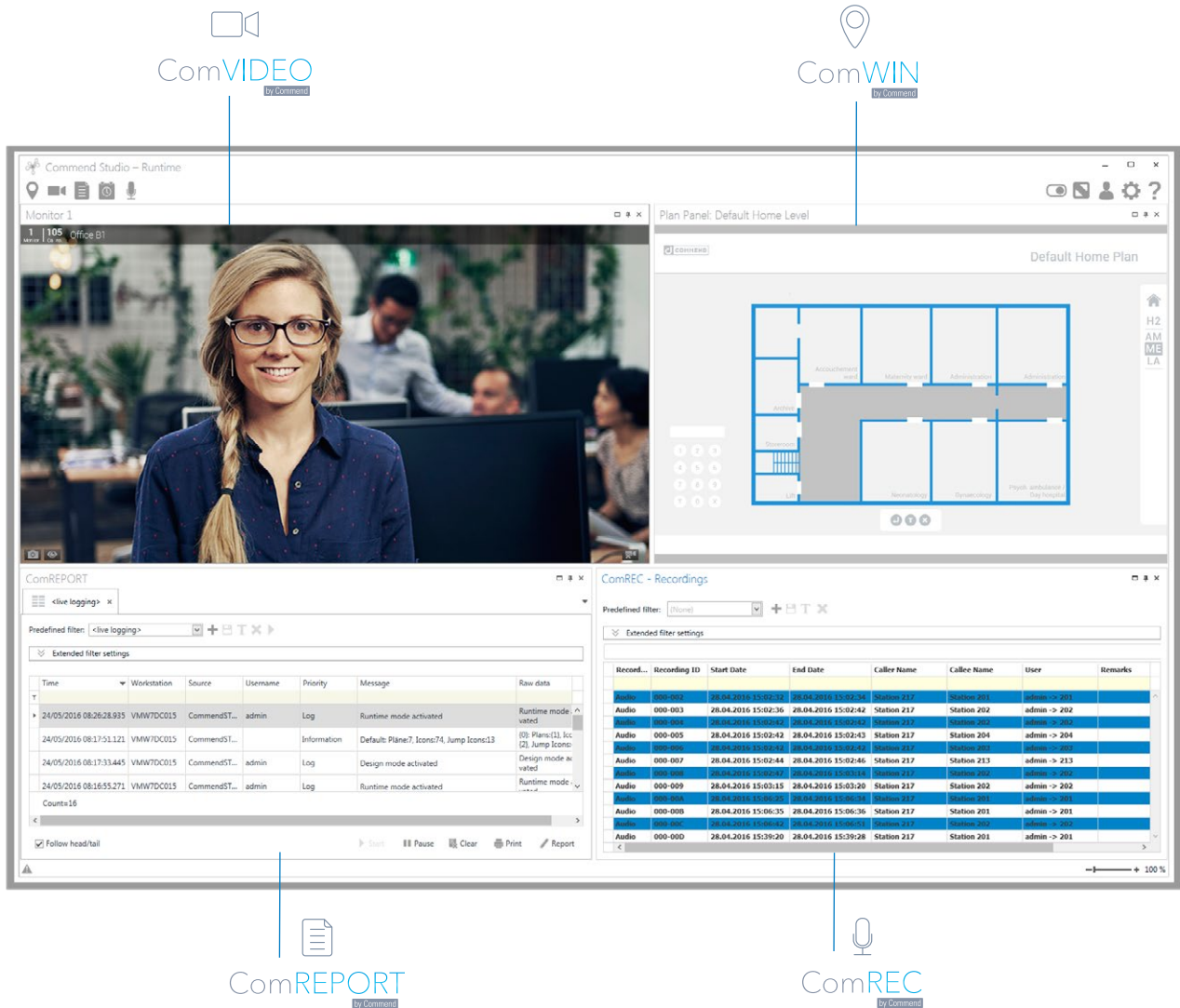
- Main monitor, preview monitors and surveillance monitors (video scanning function).
- Automatic video display on preview monitor for incoming calls.
- Automatic additional video display on master monitor during call.
- Integration of various common Video-over-IP solutions (e.g. Axis, Bosch, Mobotix, etc.; see also "Supported cameras and codecs for ComVIDEO").

Backup server

- In case the connection to the main server is lost, the clients automatically connect to the backup server.
- Once the connection is available again, the clients will automatically connect back to the main server.
- In addition to the main server, a backup server can be configured for each client.



Maximum flexibility due to modular set-up



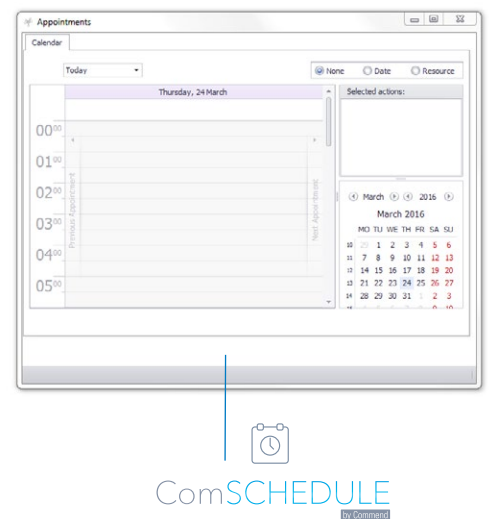
Studio is a powerful family of software products for professional control desk management. Challenges in control desk management such as solving complex situations and time-critical reactions require the visualisation of the Intercom system to fulfil an essential need: providing natural communication in HD audio quality.

The Studio family offers modules and products which make it easy and convenient to stay informed and in charge.

The following modules are part of the Studio family:

- **ComWIN:** Allows for a perfect overview by visualising the system and taking into account the local environment (display of Intercom terminals, controllable devices, etc., on customer specific floor building plans).
- **ComVIDEO:** Provides seamless integration of video communication with a variety of common sources (IP video cameras, surveillance cameras, etc.)
- **ComREPORT:** Logs all system events and offers support for real-time monitoring, filtering and analysis as the base for business and resource planning, reporting, etc.
- **ComSCHEDULE:** Allows for easy scheduling and planning of all control desk functions and actions – from automatic call transfer to all calls, etc.
- **ComREC:** Provides a wide range of opportunities to record, archive and analyse audio recordings; offers the possibility to integrate video data from third-party video management (e.g. Milestone or VDG).

All modules can be used stand-alone or in combination with each other.



Elements of visualisation

Icons

- Individually designable icons (PNG, JPEG, BMP, GIF or XAML format) for indicating any type of situation.
- Icon graphics can be configured and positioned on plans as needed.
- Situations and events can be assigned differently coloured icons to reflect different levels of priority and urgency.
- Sound signals and flashing on-screen elements direct attention to important issues and events.
- Optional integration of video files assigned as icons, as well as animated icons in GIF or XAML formats.



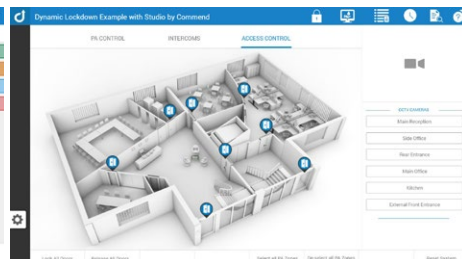
Plans

- Tailor-made, configurable plans (overview plans, vertical plans, construction plans, structural and area plans, etc.) in the highest resolution.
- ComWIN plans allow for displaying any type of buildings, elements, routes or information.
- The Plan Navigator or navigation icons can be used to switch back and forth between the individual plans of a Studio project.
- In case an emergency situation is detected, ComWIN automatically switches to the respective plan.
- It is possible to define additional plans (subplans), which are displayed according to the respective activation status of the icon they are linked to.

Sample plans



Campus



Dynamic lockdown



Gunshot detection



PA control



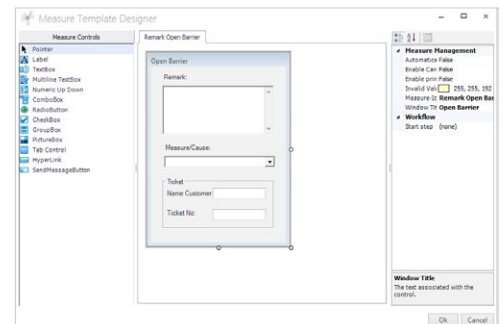
Parking



Rail

Measure management

- Flexible design of dialogues for input of remarks or illustrations of required actions, measures and information.
- Display of documents (HTML, PDF, etc.) or images as a measure.
- Individual illustration of work flows to support the operator.
- Detailed logging of operator input in ComREPORT.



Studio modules

Visualisation

ComWIN

ComWIN is the visualisation module of the Studio family. Using a ComWIN base licence, one ComWIN client can be run on the CommendSTUDIO_server. Further extension of ComWIN is possible by purchasing additional licences for clients (which can be both web or native clients) as well as licences to add more data points. The ComWIN application (ComWIN client) is connected to an external server via the IP network on which the CommendSTUDIO_server service is running. The backup server requires the same licences as the CommendSTUDIO_server.

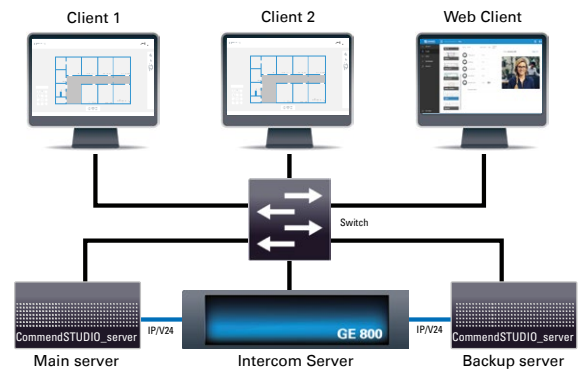
E-WIN-BASE-SPD	Licence: ComWIN base licence, including one visualisation client and 100 data points
E-WIN-CPF	Licence: ComWIN client
E-WIN-DP5-SPD	Licence: ComWIN Extension: 500 additional datapoints

ComWIN Web Client

ComWIN Web Client offers the possibility to easily control the basic ComWIN functions on any computer or mobile device. Commend Intercom terminals can be used with the added benefit of a well-structured visualisation surface but without the need to install additional software on every client.

- Fast implementation of easy-to-use control desks consisting of a desktop station, a monitor and a Web Client.
- Easy to configure and use, enables quick reaction to calls and quick return on investment.
- No training required.
- Full multi-client capability allows for operating and processing several Web Clients and a caller list simultaneously.
- Easy to update via the central server.
- Full access from the convenience of the usual work desk. Studio control desk settings can be applied as needed throughout the system.

The Web Client uses the licences of the ComWIN native client.



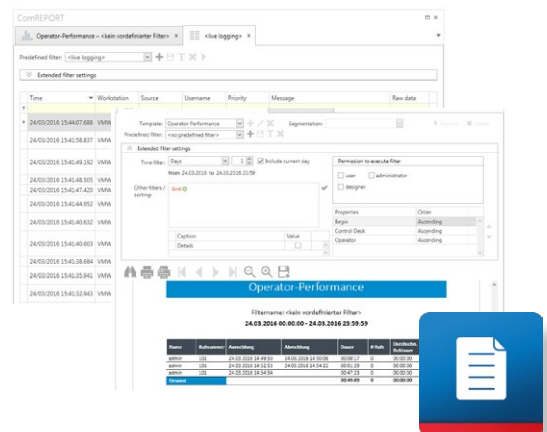
Reporting and statistics

ComREPORT

ComREPORT logs all system events and writes all system messages to an SQL database. This comprehensive system archive can be accessed and compiled into custom reports by means of configurable data filters.

- Consistent logging of all events and data on the Intercom System.
- Statistical data analysis for Intercom systems, Emergency Call system and Call Centre systems.
- Number of calls: Temporal distribution over days/weeks/months/years.
- Call waiting time: Indication of the customer's waiting time before the call was answered.
- Operator performance: Registers the log-in times, calculated average call duration, number of calls processed and call details.
- Full Microsoft® SQL Server support (SQL Server 2014 to 2016).
- Report Designer for designing custom layouts for reports and protocols.

E-RTP-CPF	Licence: ComREPORT client
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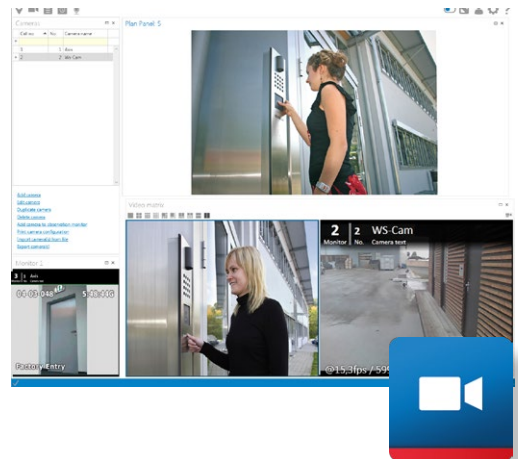
Video viewing

ComVIDEO

This application integrates live video streams from Video-over-IP sources into the security and communication solution. The video images are arranged on-screen in a clearly structured grid for easy viewing.

- Master monitor, preview monitors, surveillance monitors (video scanning function).
- Automatic video display on preview monitor when receiving call requests.
- Automatic video display on master monitor during call.
- Intuitive operation (e.g. switching to another view or camera).
- Integration of many common Video over IP solutions (e.g. Axis, Bosch, Mobotix, Samsung;- see "Supported cameras and codecs for ComVIDEO" for details).

E-VID-CPF Licence: ComVIDEO client



Audio recording

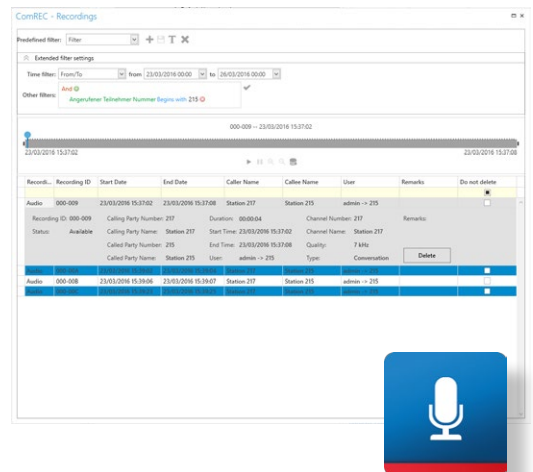
ComREC

ComREC is a software-based recording solution which can handle up to 100 simultaneous recordings and stores them in a single database for further use. The Windows®-based software uses the standard protocol RTP.

- Record RTP audio streams from Intercom Servers and/or directly from supported IP devices.
- Analogue, digital or radio based (6T) subscribers can be recorded via the Intercom Server.
- It is possible to record up to 100 simultaneous audio streams and save up to 10 million recordings; for each IP card, it is possible to use up to five simultaneous clients.
- Audio files are stored in the file system either on the local server or in the network, meta data (call information, timestamp, etc.) are stored in an SQL database (not included).
- In addition to client licences for every ComREC client, a licence for every recording channel on the Intercom Server is required.

E-REC-CPF Licence: ComREC client

L-IP-REC1 For every RTP recording channel on the Intercom Server or Intercom terminal



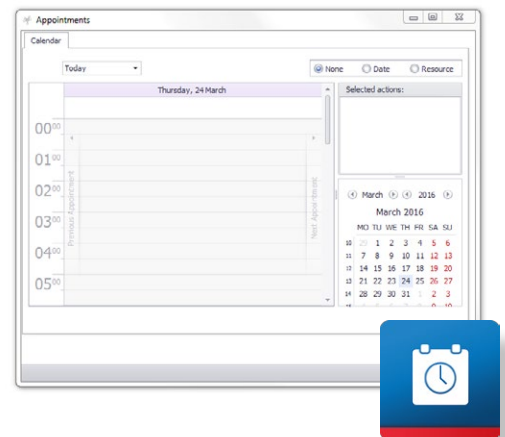
Time-scheduled planning and control

ComSCHEDULE

This application allows operators to define functions and procedures of the Intercom system on a flexible time schedule. For example, ComSCHEDULE can set data points or run various actions in the form of workflow procedures. A wide range of individual solutions is supported, from automated call forwarding during the night shift to fixed-time test calls (e.g. for lift emergency call stations) and controls for announcements. Administering scheduled events and series of events is easy, thanks to dialogue windows and views familiar from applications such as MS Outlook®. The application is integrated into the CommendSTUDIO_server service and can be used without a ComWIN Visualisation licence.

- Scheduling and planning of Intercom functions.
- Support for individual events or event series (easy wizard-based scheduling).

E-SCH-CPF Licence: ComSCHEDULE client



Redundancy and reliability

Studio backup server

Studio systems which require a high reliability can be designed redundantly by using the Studio backup server. Studio Clients automatically connect to the backup server when a connection error to the Studio server is detected. As soon as the connection is available again, the clients automatically connect back to the main server.

- Additional fallback level in case of error
- Automatic switchover and seamless operation

E-ST-BK-SPD	Licence: Studio backup server including 100 data points
E-WIN-BKD5-SPD	Licence: Studio backup server ComWIN extention: 500 data points

Tailored control station solutions

ComSDK

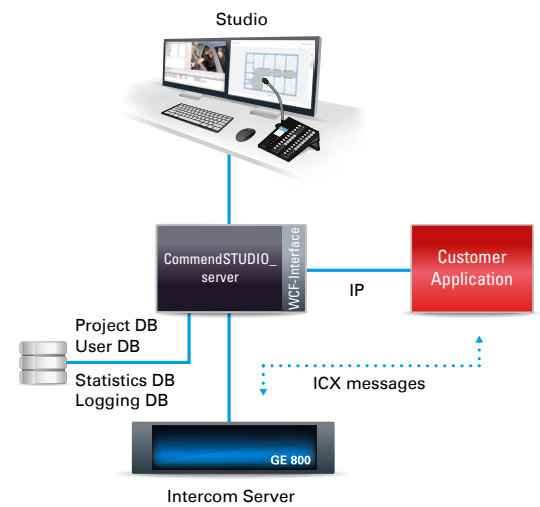
The software interface on CommendSTUDIO_server supports individual solutions to tailor Studio operator workstations precisely to the customer's needs. As a result, it is possible to integrate third-party systems or databases and to implement solutions without ComWIN visualisations.

Application examples

- Individual allocation of reassurance messages to emergency call stations.
- Database registration of monitored persons and automated display of personal details during calls.
- Integration of accounting systems for car park call centres.
- Detention cell telephony: Administration of telephone numbers that the detained person is allowed to call (e.g. lawyer) and automated evidential recording of calls.
- Sending of on-screen messages to displays of Intercom terminals, and management of message templates.
- Automated announcements, generated with text-to-speech function.

One licence per CommendSTUDIO_server may be activated; there is no limit on the number of SDK applications that may be implemented and run in parallel. The application package comes with a full developer's manual of the software interface.

E-SDK-SPF	Licence: ComSDK Software Development kit for one server connection
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Studio interfaces

Video management systems

E-VID-MST-SPD	Licence: Integration of Milestone in ComVIDEO
E-VID-NUUO-SPD	Licence: Integration of Nuuo in ComVIDEO
E-VID-SEE-SPD	Licence: Integration of Seetec in ComVIDEO
E-VID-SAM-SPD	Licence: Integration of Samsung SRD Video Recorder in ComVIDEO
E-VID-VDG-SPD	Licence: Integration of VDG in ComVIDEO
E-VID-GENE-SPD	Licence: Integration of Genetec Omnicast in ComVIDEO



TAPI

E-WIN-TAPI-SPD	Licence: Integration of TAPI in ComWIN
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Parking management systems

Studio interface to PM Systems by Designa, Skidata and Scheidt & Bachmann

E-WIN-DES-SPD	Licence: Integration of Designa in ComWIN
E-WIN-SKI-SPD	Licence: Integration of Skidata in ComWIN
E-WIN-SBA-SPD	Licence: Integration of Scheidt & Bachmann in ComWIN



Fire alarm systems

E-WIN-SHP-SPD	Licence: Integration of Hekatron SHP5 in ComWIN
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Network and file systems

E-WIN-SNMP-SPD	Licence: Integration of SNMP in ComWIN
E-WIN-FIL-SPD	Licence: Integration of file monitoring in ComWIN



OPC client

E-WIN-OPC-SPD	Licence: Integration of OPC in ComWIN
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More interfaces available on request

ComSDK enables the integration of third party systems or databases (see "Tailored control station solutions" for details).



Studio

Technical specifications

Supported cameras and codecs for ComVIDEO

Supported cameras

Acti	- Generic camera
Arecont Vision	- Generic camera
Axis	- Generic camera - Generic video server
Bosch	- Generic camera - Generic video server
Commend	- WS series camera
Dallmeier	- Dallmeier Leo (SDK version 1.2.2.43) - Dallmeier DIS (SDK version 1.2.2.43)
Dedicated Micros	- Generic video driver - Digital Sprite
Generic	- Generic camera
Genetec	- Security Center
Geutebrück	- G-Core (2.0.1.32) - GeVIScope (SDK version 78.975.29)
Heitel	- Heitel video server (Heitel CamControl Server version 1.09)
IQin Vision	- IQeye
Milestone Systems	- Milestone XProtect 2017 R1 (licence E-VID-MST-SPD required)
Mobotix	- Generic camera
Nuuo	- Nuuo Crystal
Samsung	- SDR series (e.g. SDR-1673) (licence E-VID-SAMS-SPD required)
Schneider Intercom	- Generic camera
Seetec SDK Version	- Cayuga version R5 (licence E-VID-SEE-SPD required)
Sony	- Generic camera
VDG	- Sense version 3.2.11 (former DIVA) (licence E-VID-VDG-SPD required)
VideoLAN	- Formats and codeces of the VLC media player (consider "Supported input formats and media" and "Supported codecs") (VLC 2.0.5, VLC 2.0.7, VLC 2.1, VLC 2.2.4)
Vivotek	- Camera series 7000 and 8000

Supported input formats and media

- ASF / WMV / WMA
- AVI
- Creative™ Voice
- FLAC
- FLV (Flash)
- Matroska (MKV)
- MP4 / MOV / 3GP
- MPEG (ES, PS, TS, PVA, MP3)
- MXF
- Nut
- OGG / OGM / Annodex
- Raw Audio (DTS, AAC, AC3/A52)
- Raw DV
- Real
- Standard MIDI / SMF
- WAV (including DTS)
- UDP/RTP Unicast
- UDP/RTP Multicast
- HTTP / FTP
- MMS
- TCP/RTP Unicast

Supported codecs

- Cinepak
- Dirac / VC-2
- DIVX (1/2/3)
- DV (Digital Video)
- H.261
- H.263 / H.263i
- H.264 / MPEG-4 AVC
- Indeo Video v3 (IV32)
- MJPEG (A/B)
- MPEG-1/2
- MPEG-4 ASP, DivX 4/5/6, XviD, 3ivX D4
- On2 VP3/VP5/VP6
- Real Video 1/2
- Real Video 3/4
- Sorenson 1/3 (Quicktime)
- Theora
- WMV 1/2
- WMV 3 / WMV-9 / VC-1 1

System requirements

Hardware requirements for installation

- 20 GB available hard disk space
- ICX connection via TCP/IP or RS-232 to the Intercom Server

Attention:

Make sure that for every project the sufficient disk space in capacity and access speed is available.

Note:

The Intercom Server requires an ICX licence to enable sending of ICX messages from the Intercom Server to the Studio Server.

CPU server/Web Server

- Min. Intel® Core™ i5 processor (from generation "Ivy Bridge", 4 cores)
- Min. 8 GB RAM

CPU client

- Min. Intel® Core™ i5 processor (from generation "Ivy Bridge", 4 cores)
- Min. 4 GB RAM

Graphic card client

- Support of video formats such as MPEG, AVI, etc.

Software requirements

Operating systems

- Microsoft® Windows 10 (x86 and x64) as of version 1703
- Microsoft® Windows Server 2012 R2 (x64)
- Microsoft® Windows Server 2016 (x64)

Attention:

To install Commend Studio on Microsoft® Windows Server 2012 R2, the Windows updates "Update for Windows Server 2012 R2 (KB2999226)" and "Update for Windows Server 2012 R2 (KB2919355)" are necessary. It is generally recommended to install Windows updates as soon as they become available.

Note:

To determine the current version of your operating system, press the Windows logo key and enter "winver".

Database systems

- Microsoft® SQL Server 2014
- Microsoft® SQL Server 2016 (recommended)

Commend Local Licence Server (CLLS)

- Default port of the CLLS: 7070
- Microsoft® Windows 10 (x86 and x64) as of version 1703
- Microsoft® Windows Server 2012 R2 (x64)
- Microsoft® Windows Server 2016 (x64)

Note:

More information on the system requirements of the CLLS can be found in the manual "Commend Licence System".

Commend Studio Web Server

- Microsoft® Windows Server 2012 R2 (x64): Essentials, Standard or Datacenter
- Microsoft® Windows Server 2016 (x64): Essentials, Standard or Datacenter

Attention:

It is recommended to use the Studio Web Client within corporate networks only.

Note:

It is recommended to use Microsoft® Windows Server 2016 (x64) Standard.

Attention:

No support is provided for Studio on versions of Microsoft® Windows that are no longer supported by Microsoft® (see Microsoft® Lifecycle Policy).

Maximum expansion

- Maximum number of icons (standard, jump and function icons) per plan: 1,000 icons (with DirectX), otherwise ≤ 100
- Maximum number of ComWIN clients per CommendSTUDIO_server: 50
- Maximum number of IP video sources in ComVIDEO: 8,000
- Maximum number of appointment series in ComSCHEDULE: 400 appointment series with one-day intervals, 600 appointment series with two-day intervals or 800 appointment series with three-day intervals (with a maximum of five ICX commands per appointment).

Note:

The maximum number of SDK applications depends on the respective requirements of each application, which must be tested.

Network requirements

Specification/bandwidth

- min. 10 Mbit/s synchronised for server and client

Note:

The required bandwidth depends on the number of IP video sources and their configuration (codec, frame rate, resolution). Therefore, the network requirements must be determined for each project separately.

ComREC requirements

Intercom Server

Intercom Server with IP subscriber card feature level D and min. PRO 800 3.2

- VirtuoSIS
- GE 800
- GE 300
- IS 300

Supported IP terminals (for direct RTP audio)

- Conductor
- Series WS
- EE 900A
- ET 908A

Types of licences

- **E-REC-CPF** — Licence: ComREC client.
- **L-IP-REC1** — For every RTP recording channel on the Intercom Server or Intercom terminal.
- One free feature-level-D IP subscriber port for every RTP channel, which can be streamed from the Intercom Server only.

Local temporary hard disk space

- 16 GB
- 1 GB per recording channel

Audio storage requirements

- 1 minute of recording: 0.457 MB
- 1 hour of recording: 27.465 MB
- 24 hours of recording: 659.180 MB
- 365 days of recording: 234.962 GB

Note:

One dataset needs storage space of approximately 11 kB.

Audio playback

Microsoft® Windows Media Player 10 or higher

Network

- IP connection between RTP source and recording server (switched or routed)
- Sufficient bandwidth for RTP audio streams

Note:

The RTP port should be increased by two if more channels are configured. These ports will be used to receive the audio in the audio configuration.

Example: If port 6000 is used, then port 6001 will automatically be used for RTCP.

If an IP card is used for RTP Audio Recording, a maximum of 5 parallel recordings are possible.

OPC interface requirements

- OPC DA V1.0, V2.0, V3.0

Web Client requirements

The Studio Web Client can only be used with an HTML5 ready browser.

Browser: min. Google Chrome (Chromium) 60

Display size of device (e.g. tablet): ≥ 7 inch

Note:

To use the recording, reporting and video functionalities within the Web Client, the respective module licences (ComREC, ComREPORT, ComVIDEO) are required. Please note that the connection speed, the hardware of the client device and the operating system influence the performance of the Web Client.

Quality tested. Reliable. Smart.

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The development and manufacturing processes are certified in accordance with **EN ISO 9001:2015**.



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