

Passion for Secure Communication

SIP stations by Commend are designed to always connect you to the right contact person – whether at the car park gate or entrance door, at the bus stop or information/emergency call terminal.

Reliably and in perfect speech quality.



Perfect HD Voice
Speech quality



Action
Sequences



Output
Control



Input
Monitoring



Location Identification
Messages



Large
Feature Set



Easy
Configuration



Low
Energy Costs



Automatic Voice Message
Playback

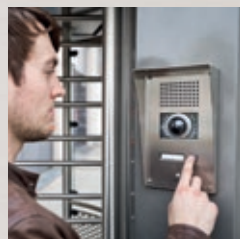


Security
through Redundancy

Entry and Exit Gates



Doors and Gates



Ticket Machines



Help Points



Public Address



Compatible with SIP PBX Server

Commend | Digium | Cisco | Avaya | Alcatel | Mitel |
Siemens | 3CX | Starface | Aastra | Kamailio | FreeSWITCH
| ELMEG | Unify | AVM | Innovaphone | and many more ...

Serverless Communication

Intercom stations and SIP capable telephones
interface seamlessly into an intelligent, independent
communication network without the need for a
controlling server.

Doors and entrances

Greet your guests and customers with automatic welcome messages in perfect speech quality.



Vandal-resistant Intercom stations for outdoor areas



Vandal-resistant DDA/ADA compliant Intercom stations with pictogram labels and hearing aid induction loop amplifier



Intercom stations for indoor areas

Easy call handling

Fast, uncomplicated call handling – whether by touch-operated Commend Intercom station Duetto or using a SIP capable telephone by a third-party manufacturer.



Parking lots and barrier gates

Making sure there is always someone to help in case something goes wrong – providing instant assistance in case of ticket trouble, queries or other issues.



Modules for installation into barrier gates and ticket vending machines



Vandal-resistant Intercom stations for retrofitting into barrier gates and bollards

Duetto – flexible and versatile

Duetto supports users in processing calls, providing instant access to all functions. The corresponding video or CCTV camera image is shown automatically during the call.

Custom configurable user interface

Using the web interface, you can easily arrange and adjust the user interface to suit your preferences for optimum support in your everyday work. Custom configure your own GUI layout and place direct dialling buttons on the screen to put all your frequently needed functions at your fingertips.

Information and emergency calls

Offer assistance and security at public transport stops, tunnels and town centres.

Providing extra security and control

Commend is the preferred brand when it comes to security, speech quality, durability and individual process control.



Flexible call forwarding

In case the central Intercom station is unattended or unavailable, incoming calls are forwarded automatically in a pre-defined order of priority. Calls can also be forwarded to several recipients simultaneously to ensure they are answered as quickly as possible.

- SIP Stations or SIP Telephones
- Commend Mobile Client
- Landline or mobile number



Compact vandal-resistant
Emergency Call Stations



Vandal-resistant Information
Terminals and Emergency Call
Stations



Modules for
project-specific
Help Points

Public Address

Locate persons in buildings via a group call, create a pleasant atmosphere with music feeds, or use the system for important announcements.



Horn loudspeaker for outdoor
Public Address ensures
extra-loud announcements



Projector loudspeaker
for a **full-bodied Public Address**
sound in indoor areas



Ceiling-mounted loudspeaker
for **unobtrusive installation**



Smart communication solutions

Intercom stations and SIP capable telephones form an intelligent communication network of their own that needs no separate server.



Serverless

The system for small-sized applications

- Bi-directional call connections
- Call forwarding over the telephone network via gateway/router
- Re-dialling, e. g., for opening doors
- Quick and easy to set up and start up
- Cost-efficient and ideally suited for small-sized applications



One common language

SIP is a common standard protocol that allows Intercom stations, telephones and systems of various manufacturers to work together.

Intelligence inside – More than just voice communication

Intelligent solutions is where our systems come into their own, helping to meet individual customer needs and requirements.

High speech quality even in extremely noisy environments is a basic requirement. Where security, customer-specific requirements and control functionality are concerned, Commdem is the obvious choice. With the help of action sequences, the solutions adapt precisely to customers' processes and workflows. See the following pages for details on action sequences.

Relays, attendant contacts and http commands for control functions

- Doors, shutters, gates and barriers open effortlessly at the touch of a button (Intercom station, landline or mobile telephone) or via a third-party system (http command).
- Controlling subsections such as signal lamps and third-party systems.
- Attendant contacts for additional indication of operating states such as Error, Ringing, Active Call, etc (e. g., automatic activation of flashing light to indicate an outgoing call at an Emergency call station).

With Server Support

Adding value with server support

In addition to 'serverless' functions, the use of servers will provide the following additional functions:

- Automatic call assignment and call queueing
- Support for Mobile Client app within mobile network, including video streams and control functions, e.g. door control
- Integration into Command Server like VirtuoSIS
- Integration into existing VoIP/SIP-PBX systems
- Multi-site networking
- High availability through server redundancy and line-monitoring
- Easy maintenance of large-scale systems through provisioning



Mobile Client
3G / LTE

Quickly assigning call connections and reducing waiting times

Server integration enables incoming calls to be assigned instantly and automatically to the next available operator (e. g., at a call centre). This way, waiting times for callers are reduced to an absolute minimum.

Easy maintenance of systems with many Intercom stations

Provisioning enables time and effort-saving simultaneous deployment of configurations and firmware for functional updates to all Intercom stations within the network.

Enhanced security

When calling for help at an Emergency Call Station, people must be able to rely on the call getting through under any circumstances. This is where server redundancy comes in. If a server fails, another one takes over to ensure that the call is put through without any interruption. Status details (e.g., connection errors) can be relayed to monitoring programs via SNMP so they can be dealt without delay.

Multi-site networking

Multiple building sites, branch offices, public transport stations, etc. can be networked and managed via a central point of control.

Ready for your server

Commend SIP stations can be used with Commend Servers as well as with a wide range of SIP PBX systems.

We are constantly conducting comprehensive tests with SIP servers of different manufacturers. The growing list of supported brands ensures full, uncompromising compatibility.

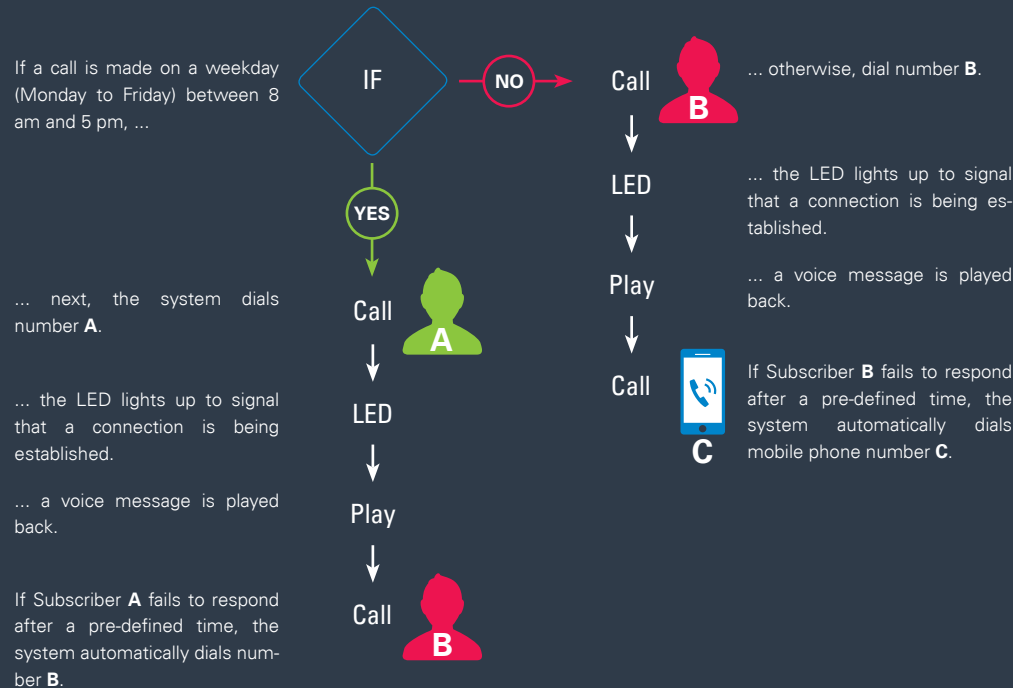
| | | | | | | | |
|---------------------------------------|--------------------|--|---------------------------|-------------------------------|-----------------------|---|--------------------------------|
| Commend Software / Hardware Server | Digium Asterisk | Cisco Cisco Call Manager Cisco Unified Communication Manager | AVM Fritz!Box | Alcatel OmniPCX Enterprise | Mitel | Siemens Hipath 4000 Hipath 3000 + HG 1500 | Kamailio Kamailio (OpenSER) |
| Innovaphone Virtual Appliance IPVA | Unify OpenScope | 3CX 3CX for Windows | Starface Starface free | Aastra MX-ONE | ELMEG elmeg ICT880 | Avaya Aura | FreeSWITCH |

Stations with a server's intelligence

Action Sequences

The Intercom stations can be programmed with Action Sequences to enable a variety of functions and processes. No server required!

Call, Relay, IF-THEN, PLAY, LED and http-request functions can be combined into a single sequence as needed. It is also possible to run multiple sequences.



Examples

- If a call is not answered within a pre-defined time, it is relayed automatically to the next receiving station in the chain.
- Incoming calls can be forwarded to any number of receiving stations. Optionally, the call (usually an emergency call) can also be forwarded to up to 22 receiving stations simultaneously without the need for a server.
- Depending on the type of call, various modes can be activated automatically – e. g., flashing blue signal light for emergency calls, normal signal light for information calls, etc.
- Scheduling actions for specific weekdays or times
- Automatic playback of pre-recorded voice messages
- Controlling outputs within an action sequence
- Triggering specific action sequences by an input signal, or waiting for an input signal (e. g., air lock).

... and many other possible combinations.

Features and Benefits



Optimum speech intelligibility

A loud, clear and beautifully crisp voice signal ensures a natural communication experience for visitor and client calls – even in challenging situations and environments

- OpenDuplex® enables simultaneous speaking and listening at high volume levels
- **Suppression of interfering background sounds** such as traffic noise
- Easy to hear, thanks to **higher volume capacity** than standard SIP stations
- Switched Duplex for situations with extreme ambient noise (e. g., tunnels)
- **HD Voice speech quality** at 7 kHz audio bandwidth



Promptly at your service

Automated voice messages for welcoming visitors or reassuring emergency callers

Pressing the call button at an entrance or emergency call station triggers the playback of a customised voice message, reassuring the caller that someone will be available shortly to assist them.



Always at your service, thanks to redundancy

Functions for enhanced security

- Intercom stations can log in at multiple servers simultaneously.
- Calls are transmitted via the active server.
- If none of the servers can be reached in an emergency, the system can try to establish a serverless connection – e.g., by setting off a call to all Intercom stations on the network.



Low annual electricity costs

A nice contribution to the environment

When it comes to low power consumption, Commend's SIP stations are second to none.

- Approx. 1.5 Watts in standby mode, and only 2 Watts in call mode, depending on the volume level
- Power can be supplied via PoE or an external power adapter



Wide range of functions

- Intercom directory
- Connection ports for external amplifier and loudspeakers
- Connection ports for add-on modules (loudspeaker, direct dialling buttons, handset)
- SNMP for Intercom station network monitoring



Which terminal is the call coming from?

Location identification messages provide information for users at the control desk or query point

An optional **location identification message** (e. g., "Emergency Call Station at Subway Station West Park") can be defined per Intercom station. The identification message is played back automatically when the operator at the control desk or query point takes the call. This way, the operator knows immediately where the call is coming from without having to ask. This is particularly important if there is no visualisation system installed at the Control Desk or Query Point, or if the call is relayed to a mobile phone.



Loudspeaker/Microphone Monitoring

Functionality for enhanced security

This causes the SIP Station to emit an unnoticeable audio test signal through the loudspeaker, which is picked up and analysed by the microphone. If the test signal does not arrive in the required quality (e. g., due to chewing gum blocking the microphone), the Intercom station will notify the receiving station accordingly. This ensures constant availability without the need for regular manual inspections, which goes a long way towards saving costs.



Announcements and Public Address – Multicast

Intercom stations can be used for centralised announcements to locate persons, provide general information or issue warnings. The sound can be played either through all Intercom stations and loudspeakers or only specific ones. Music feeds can also be played back over the loudspeakers to create a pleasant atmosphere.



Controlling and being controlled

Using http commands, Intercom stations can communicate with remote IP I/O modules and systems (e.g., for building management). It is possible to remotely trigger actions at specific Intercom stations, which in turn can be used to trigger actions at third-party systems. The inputs of remote IP I/O modules can be monitored and their outputs can be switched as needed.



Scheduled actions

Actions such as turning on the light or unlocking a door can be scheduled for specific times.



The App for users on the go

With the Commend Mobile Client App, calls can be answered anywhere, whether in the building or while away. The corresponding live CCTV video stream is shown automatically, while doors and gates can be opened at a simple tap of the finger.

- Calls can be put on hold and forwarded as needed
- Support for HD Video and Bluetooth headsets
- Incoming calls automatically trigger a video connection (e.g., showing the person standing in front of the door where the call was made)
- Push notifications
- No server required within your WLAN environment
- Operation in mobile network requires SIP server



Easy to configure

The Intercom stations are designed specifically for easy, convenient configuration over the special Web Interface. A few clicks is all it takes to perform an update and even set up complex action sequences. For large-scale installations, the provisioning function helps to deploy configuration settings automatically and conveniently to thousands of connected Intercom stations at once.



Simply compatible

SIP Stations integrate seamlessly into existing Commend security and communication systems as needed. This allows for adding features such as announcements, audio recording, interfacing with external systems (e. g., visualisation), and many more.



A clear voice with HD Voice

Speech signals are transmitted in **7 kHz HD Voice** quality, ensuring a clear, natural sounding communication experience. Two loudspeakers equipped with special membrane support **high volume levels** (up to 99 dB) and **active background noise suppression** to ensure ultimate speech intelligibility even in case of loud ambient noise.



Weatherproof

The **robust high-grade steel design, together with the high-quality technical components and IP rating IP66** ensure a long product life even in extreme outdoor conditions. The cameras are dustproof and protected against rough environmental conditions, such as heat, cold, ice and rainwater, from a drizzle to strong water jets.



Strong protection

The Intercom stations are also vandal-resistant (IK09 protection rating). This is made possible by a front plate made from 3 mm stainless steel (V2-A), a poke protection mechanism, special security screws, and tamper contacts.

Sabotage detection

Any attempt to open the Intercom station will be detected and will set off an alarm.

- Alarm sounds or pre-recorded messages will be played back
- The camera will record an on-site image and send it by e-mail
- An alarm message will be sent to a receiving station
- A call to the Control Desk will be established automatically



Full Overview

Team Camera, consisting of an optical array, sensor and co-processor, which work together to deliver sharp images with a wide dynamic range to make sure nothing escapes the eyes of the observer.

- Wide 150° (diagonal) viewing angle
- SIP Video for H.264 and Motion JPEG (MJPEG) video streams
- Video functions (HDR, white balance, color balance, filter, etc.)

The flat, scratchproof camera lens is protected against vandalism.



Light for the night

Twelve white LEDs make a big difference by making colours and details visible to users even at night.

The LED illumination can be adjusted to individual requirements. For example, it can be activated permanently at night to make Emergency Call stations easier to find.



Unmistakable clarity

In addition to the two loudspeakers, **two digital MEMS microphones** ensure high audio quality and perfectly clear speech intelligibility.

The microphones are the device's 'ears' that enable intelligent audio functions.





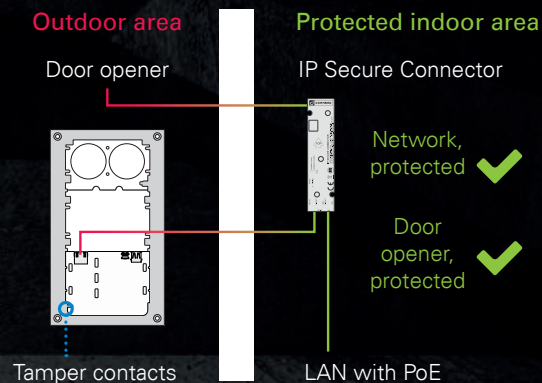
IP network protection at doors

Many IP-based outdoor Intercom stations have a potential weakness. When they are forced open, the network port and therefore access to the internal network and door opener contacts is exposed, making the system vulnerable to manipulation. Solutions by Commend provide reliable protection against this scenario.

Maximum protection for network and door opener

Mounted safely indoors, the Commend IP Secure Connector ensures a fully secured installation.

Any unauthorised attempt to open the Intercom station – e.g., to access the Ethernet cable or door opener contacts inside – will cause the IP Secure Connector to cut the Intercom and LAN connections. This way, manipulation attempts can be prevented while ensuring full protection for the network and door opener.



This eliminates the ability to access the network or open doors or shutters.

In professional environments our Intercom stations comply with the IEEE802.1X standard (authentication and authorisation) to provide additional network protection.

Outdoor areas – Resistant against weather and vandalism



IP Secure Connector

IP-CON

Network protection and sabotage resistance is provided by the optional IP Secure Connector, which can also supply power via PoE+.

- 3 inputs for floating contacts
- 2 relay outputs



I/O Extension Module

EB3E2A-AUD

Module for extending Intercom stations with add-on I/O and audio ports. The extension module connects easily via USB cable and is immediately ready for use.

- 3 inputs for floating contacts
- 2 relay outputs
- Integrated amplifier for direct connection of a loudspeaker
- Various options for connecting audio devices (e.g. line in/out, microphone, loudspeaker output and handset)



Power Injector

PA 25W POE-DC

The optional Power Injector is a compact, convenient solution for applications where the required power cannot be supplied via PoE (Power over Ethernet). It supports a wide direct current input range of 24 – 48 V and is fully IEEE 803.3af/at compliant. The Power Injector connects easily to the Intercom station via Ethernet cable.

| | Door Station | | DDA/ADA compliant Door Station | Emergency Call Station |
|-------------------------------------|---|----------------|---|-------------------------|
| Product | WS 301V CM | WS 303V CM | WS 311V CM DA | WS 311V CM |
| Keypad | 1 call button | 3 call buttons | 1 call button with bell symbol | 1 emergency call button |
| Backlit keypad | | • | • | • |
| Camera | Video camera with wide 150° (diagonal) viewing angle, high-luminosity F 2.0 diaphragm, resolution 1280 x 960 pixels, H.264 and Motion JPEG (MJPEG) video streams, 30 fps (frames per second) | | | |
| Special features | – | | Integrated induction loop as per IEC 60118-4; LEDs and pictograms | – |
| Front panel | Vandal-resistant, 3 mm V-2A steel, poke protection and special security screws | | | |
| IP rating | IP 66 | | | |
| IK rating | IK 09 | | | |
| Microphone | 2 digital MEMS microphones with integrated multi-functional LEDs | | | |
| Loudspeakers | 2 x 8 Ω loudspeakers, sound pressure 99 dB/1 W/1 m | | | |
| Speech quality | 7 kHz HD Voice, OpenDuplex®, noise cancelling, very high volume thanks to built-in 2.5 W Class „D“ amplifier | | | |
| Inputs/Outputs and audio interfaces | Extension Module EB 3E2A-AUD (optional) with 3 inputs for floating contacts and 2 relay outputs, Line In/Out, with ports for external loudspeakers and a handset | | | |
| Interfaces | 1 x USB and 1 x Mini-USB for connecting external devices | | | |
| IP protocol | SIP, IPv6, IPv4, TCP, UDP, HTTP, RTP, DHCP, SNMPv2, STUN | | | |
| Codecs | G.722, G.711 A-law, G.711 μ-law | | | |
| Cabling | min. Cat. 5 | | | |
| Ethernet | 1 x 10/100/1000 MBit/s (Full/Half Duplex) Auto MDIX | | | |
| Power supply | PoE or local via PoE Injector PA 25W POE-DC (available separately) | | | |
| PoE – Power over Ethernet | PoE IEEE 802.3af, PoE+ IEEE 802.3at Class 3 | | | |
| Operating temperature | –40 °C to +65 °C (–40 °F to 149 °F) | | | |
| Additional installation material | Flush-Mount Kit WSFB 50V; Flush-Mount Kit (flush with wall surface) WSFB 50V SS FL; Surface-Mount Kit WSSH 50V; Rain Protection Roof WSRR 50V. | | | |
| Extension options | Extension Module EB 3E2A-AUD – 3 inputs, 2 relay outputs, audio interfaces | | | |
| Dimensions | Flush-mounted using WSFB 50V – W 164 x H 279 x D 14 mm; flush-mounted (flush with wall surface) using WSSH 50V SS FL – W 164 x H 279 x D 0 mm; surface-mounted using WSFB 50V – W 164 x H 279 x D 50 mm | | | |

Outdoor areas – Resistant against weather and vandalism



Door Station with camera



Door Station



Master Station



Emergency Call Station



DDA/ADA compliant Door Station



Call and Emergency Call Stations

| Product | SIP-WS 201V CA | SIP-WS 201V | SIP-WS 203V | SIP-WS 800V | SIP-WS 211V | SIP-WS 212V | SIP-WS 211V DA | EF 962H | EF 962HM | |
|----------------------------------|---|------------------------------------|----------------|-------------------------------------|-------------------------|---|---|--|---|--|
| Keypad | 1 call button | 1 call button | 3 call buttons | Full keypad | 1 emergency call button | 1 emergency call button and 1 call button | 1 call button | 1 call button | 1 emergency call button (mushroom button) | |
| Backlit keypad | • | • | | • | • | | • | – | | |
| Display | – | – | | LCD graphic display 128 × 64 pixels | – | | – | – | | |
| Camera | Axis colour video camera, H.264 (MPEG-4 Part 10/AVC) and M-JPEG video streams, max. resolution 1280 × 720 pixels (720p) | – | | – | – | | – | – | | |
| Special features | Integration into 3 rd -party Video Management Systems (VMS) | – | | – | – | | Integrated induction loop as per IEC 60118-4, LEDs and pictograms | LED pictograms | | |
| Front panel | Vandal-resistant, 3 mm V-2A steel, poke protection and special security screws | | | | | | | | | |
| IP rating | IP 66 | IP 66 | | IP 66 | IP 66 | | IP 66 | IP 54 | | |
| IK rating | IK 09 | IK 09 | | IK 07 | IK 09 | | IK 07 | – | | |
| Input | 3 inputs for floating contacts | | | | | | | 2 inputs for floating contacts | | |
| Output | 2 relay outputs (switching contacts) | | | | | | | 2 relay outputs (switching contacts) | | |
| Line Out | For connection of loudspeaker module | | | | | | | – | | |
| Microphone | Omnidirectional electret microphone for up to 7 m (23 ft) speaking distance | | | | | | | | | |
| Loudspeakers | 2 × 8 Ω loudspeakers | | | | | | | 1 × 8 Ω loudspeaker | | |
| Audio quality | 7kHz HD Voice, OpenDuplex®, noise cancelling, very high volume thanks to integrated Class „D“ final amplifier | | | | | | | | | |
| IP protocol | SIP, IPv6, IPv4, TCP, UDP, HTTP, RTP, RTCP, DHCP, SNMPv2, STUN | | | | | | | | | |
| Codecs | G.722, G.711 A-law, G.711 µ-law | | | | | | | | | |
| Cabling | min. Cat. 5 | | | | | | | | | |
| Ethernet | 2 x 10/100 MBit/s (Full/Half Duplex) Auto MDIX | | | | | | | 1 x 10/100 MBit/s (Full/Half Duplex) | | |
| Power supply | PoE | 24 VDC ± 2 V, 500 mA or PoE | | | | | 24 VDC ± 2 V; 500 mA | PoE | | |
| PoE – Power over Ethernet | Standard IEEE 802.3af; terminal device power consumption: Class 0 (0.44 W – 12.95 W) | | | | | | – | IEEE 802.3af standard compliant | | |
| Operating temperature range | –25 °C to +60 °C (–13 °F to 140 °F) | –20 °C to +70 °C (–4 °F to 158 °F) | | | | | | | –20 °C to +70 °C (–4 °F to 158 °F) | |
| Additional installation material | Flush-Mount Kit WSFB 50V; Flush-Mount Kit (flush with wall surface) WSFB 50V SS FL; Surface-Mount Kit WSSH 50V; Rain Protection Roof WSRR 50V. | | | | | | | Basic housing GUEF 962 for flush-mounting and surface mounting required, Surface-Mount Box EF 62, EF 62W | | |
| Extension options | Direct dialling button modules WSDD 59V, WSDD 53V, loudspeaker modules WSLM 56V, WSLM 52V | | | | | | | – | | |
| Dimensions | Flush-mounted using WSFB 50V – W 164 × H 279 × D 14 mm; flush-mounted (flush with wall surface) using WSSH 50V SS FL – W 164 × H 279 × D 0 mm; surface-mounted using WSFB 50V – W 164 × H 279 × D 50 mm | | | | | | | Flush-mounted W 110 mm × H 151 mm Surface-mounted W 110 × H 151 × D 84 mm | | |

Indoor areas — Clean rooms and medical care — Reception / offices / control desks



Master Station



Door Station



Clean Room Intercom station



Clean Room Intercom station



Duetto – Compact Intercom station with touch screen

| Item | SIP-WS 800P | SIP-WS 201P | SIP-WS 203P | SIP-WS 800F | SIP-WS 800F MD | SIP-EE 980 | SIP-EE 980 CM |
|----------------------------------|---|---------------|----------------|--|--|---|---|
| Keypad | Full keypad | 1 call button | 3 call buttons | Full keypad | Full keypad | Touch Screen | |
| Backlit keypad | • | • | | • | • | – | |
| Display | LCD graphic display 128 × 64 pixels | – | | LCD graphic display 128 × 64 pixels | LCD graphic display 128 × 64 pixels | 7" TFT Touch Display 800 × 480 pixels; IPS | |
| Camera | – | – | | – | – | – | HD-ready video camera 3.1 megapixels |
| Special features | – | – | | – | Antiseptic membrane surface, specially designed for clean rooms | SIP video, video control over http, customisable user interface, gesture control, ambient light sensor | |
| Front panel | Polycarbonate | | | Polycarbonate with sealed membrane surface (no holes), resistant against cleaners and disinfectants | | Polycarbonate | |
| IP rating | IP 66 | IP 66 | | IP 66 | IP 66 | IP 20 | IP 20 |
| IK rating | – | – | | – | – | – | – |
| Input | 3 inputs for floating contacts | | | | | 2 digital inputs for floating contacts | |
| Output | 2 relay outputs (switching contacts); | | | | | 2 digital outputs for Open Drain | |
| Line Out | For connection of loudspeaker module | | | | | Line-in/Line-Out, switchable via headset port | |
| Microphone | Omnidirectional electret microphone for up to 7 m (23 ft) speaking distance | | | | | 4 MEMS microphones with directional characteristic | |
| Loudspeakers | 2 × 8 Ω loudspeakers | | | | | 1 × 8 Ω loudspeaker | |
| Audio quality | 7kHz HD Voice, OpenDuplex®, noise cancelling, very high volume thanks to integrated Class „D“ final amplifier | | | | | | |
| IP protocol | SIP, IPv6, IPv4, TCP, UDP, HTTP, RTP, RTCP, DHCP, SNMPv2, STUN | | | | | SIP, IPv6, IPv4, TCP, UDP, HTTP, RTP, RTCP, DHCP, RTSP, SIP, STUN | |
| Codecs | G.722, G.711 A-law, G.711 μ-law | | | | | | |
| Cabling | min. Cat. 5 | | | | | | |
| Ethernet | 2 x 10/100 MBit/s (Full/Half Duplex) Auto MDIX | | | | | 1 x 10/100 MBit/s (Full/Half Duplex) Auto MDIX | |
| Power supply | 24 VDC ± 2 V, 500 mA or PoE | | | | | PoE (Power over Ethernet) or external 24 VDC power supply (power adapter) | |
| PoE – Power over Ethernet | Standard IEEE 802.3af; terminal device power consumption: Class 0 (0.44 W – 12.95 W) | | | | | Standard IEEE 802.3af; terminal device power consumption: Class 3 (6.49 – 12.95 W) | |
| Operating temperature range | –20 °C to +70 °C (–4 °F to 158 °F) | | | –20 °C to +60 °C (–4 °F to 140 °F) | | 0° C to +50 °C (32° F to 122° F) | |
| Additional installation material | Flush-Mount Kit WSBF 50P and Surface-Mount Kit WSSH 50P, Desktop Kit WSDK 50P | | | | | Desktop Kit EE DK9; Wall-Mount Kit EE SH9 | |
| Extension options | Loudspeaker Modules WSLM 56P, WSLM 52P, Handset Module WSHS 50P | | | Loudspeaker Modules WSLM 56F, WSLM 52F, Handset Module WSHS 50P | | Handset EE HS9, Headset HS1 | |
| Dimensions | Flush-mounted with WSBF 50P – E 165 × H 280 × D 13 mm; Surface-mounted with WSSH 50P – W 165 × H 280 × D 51 mm | | | | | Desktop Kit – W 270 × H 142 × D 70 mm; Wall-Mount Kit – W 270 × H 138 mm × D 38 mm | |



Modules for customised Intercom stations

Loudspeakers with direct IP network connection

| Item | SIP-ET 908A | SIP-ET 908A-1 | SIP-ET 908MI | SIP-ET 908MI1 | ET 962H | ET 970H | AFLS 10H HG | AFLS 10H PW | AFLS 10H CW |
|-------------------------------------|---|------------------------|--|------------------------|---|--|--|------------------------|---|
| Keypad | Ready for connection of a keypad with 18 keys or three single buttons | | | | Ready for connection of three single buttons | | | | |
| Input | 3 inputs for floating contacts | | | | 2 inputs for floating contacts | | | | |
| Output | 2 relay outputs (switching contacts); | | | | 2 relay outputs (1x make contact, 1x break contact – 1 of them as change over contact) | | | | |
| Special features | 2 horizontal RJ45 jacks | 2 vertical RJ45 jacks | 2 horizontal RJ45 jacks | 2 vertical RJ45 jacks | 1 RJ45 jack | | Horn Loudspeakers | Projector Loudspeakers | Ceiling Loudspeakers |
| IP rating | – | | | | – | | IP 66 | IP 54 | IP 54 |
| Amplifier | 2.5 W Class "D" amplifier | | | | 10 W Class "D" amplifier | | | | |
| Integrated loudspeaker | – | | | | 1 × 8 Ω Loudspeakers | – | – | | |
| Sound pressure | – | | | | 85 dB/1 W/1 m | – | 118 dB/1 m | 101 dB/1 m | 105 dB/1 m |
| Connection for external loudspeaker | 4 – 50 Ω | | | | 8 – 50 Ω | 4 – 50 Ω | – | | |
| Microphone | Microphone input for electret microphone or dynamic microphone | | Microphone input for electret microphone or dynamic microphone, including build-in electret microphone MIC 480 | | Integrated electret microphone | Integrated electret microphone, including add-on electret microphone MIC 480 | Integrated Electret microphone MIC 480 | | Microphone input for add-on electret microphone MIC 480 |
| LED | Possibility for connection of a multi-functional RGB LED | | | | Light pipe and plexiglass LED cover, optionally as light guide for the multi-functional RGB LED | | Possibility for connection of a multi-functional RGB LED | | |
| Audio quality | 7kHz HD Voice, OpenDuplex®, noise cancelling, very high volume thanks to integrated Class „D“ final amplifier | | | | | | | | |
| IP protocol | SIP, IPv6, IPv4, TCP, UDP, HTTP, RTP, RTCP, DHCP, SNMPv2, STUN | | | | | | | | |
| Codecs | G.722, G.711 A-law, G.711 μ-law | | | | | | | | |
| Cabling | min. Cat. 5 | | | | | | | | |
| Ethernet | 2 x 10/100 MBit/s (Full/Half Duplex) Auto MDIX | | | | 1 x 10/100 MBit/s (Full/Half Duplex) Auto MDIX | | | | |
| Power supply | 12 – 24 VAC or 15 – 35 VDC, 500 mA or PoE | | | | PoE | | | | |
| PoE | Standard IEEE 802.3af; terminal device power consumption: Class 0 (0.44 W – 12.95 W) | | | | | | | | |
| Operating temperature range | –40 °C to +70 °C (–40 °F to 158 °F) | | | | –40 °C to +70 °C (–40 °F to 158 °F) | | –20 °C to +70 °C (–4 °F to 158 °F) | | |
| Dimensions | W 65 × H 130 × D 18 mm | W 65 × H 130 × D 21 mm | W 65 × H 130 × D 18 mm | W 65 × H 130 × D 21 mm | W 87.5 × H 109 × D 45 mm | | W 180 mm × D 230 mm | ø 145 mm × D 210 mm | ø 167 mm × D 112 mm |

The design and/or specifications of products may be subject to change for improvement without prior notice. Errors excepted.

Series WS – Vandal-resistant

Series WS – Polycarbonate

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Series EF

Duetto / EE 980

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Feel free to contact our experts for further details about our solution.

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