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SYMPHONY CLOUD SERVICES

Symphony Cloud is our cloud-based solution platform built on highly scalable hardware, powerful software and extensive features, with the clear aim of harnessing the power of current and future cloud services. Symphony Cloud offers the right service for every size and requirement. Simply sign up through <https://commend.services> to explore all possibilities.



PRIVACY AND SECURITY BY DESIGN

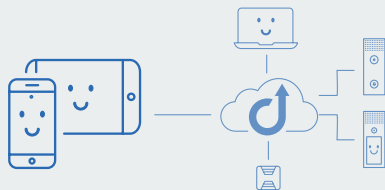
At Commend, cyber security as a core competence has always been given a very high priority. From the initial product idea through implementation and operational support, privacy and security by design (PSBD) is the uncompromising target and promise to our customers against which product features and functions must be measured.

- Enhanced privacy and security.
 - GDPR-compliant.
 - Call data is automatically deleted after 180 days.
 - Activities in the Symphony Web Client.
 - Activities in the Symphony Mobile Client.
 - Snapshots.
 - VoIP reports.
 - IEC/ISO-27001-certified and IEC-62443-4-1-certified development process.
 - Commend has a Cyber Security Board for ensuring the handling and the transparent communication of security vulnerabilities as well as the strategic hardening of Commend systems.
 - Commend is a member of the Center for Internet Security (CIS).
 - JSON Web Tokens.
 - X.509 Commend device certificates.
- Encrypted connections ($\geq$ TLS 1.2).
- Encrypted signaling streams and media streams (SIPS and SRTP).
- Automatic firmware updates, including security patches and improvements.
- Protecting access to the local network in sensitive areas and protection from manipulation attempts by using an optional IP Secure Connector.
- Single sign-on (SSO) using SAML for the web portal, for the Symphony Web Client and for the Symphony Mobile Client.
- System for Cross-domain Identity Management (SCIM) for managing users automatically.
- Configure cookie settings.
- 24/7 failsafe setup.
- Page "Service Status" for a transparent overview of the current state and health of the Symphony Cloud systems and services.
- If the connection to Symphony Cloud is interrupted, Symphony Mesh is a fallback option. Calls can still be initiated between Commend devices in the local network, door openers can still be operated and camera video streams of a door station can still be shown.

GENERAL FEATURES

- Connect and manage intercom devices.
- Notifications about new firmware versions for Symphony MX and Symphony BF devices.
- Notifications about new versions of Symphony Cloud, Ivy Virtual Assistant and Symphony Configuration.
- Symphony MX devices with IEC-60118-4-compliant induction loop for barrier-free communication for people using hearing aids available.
- Configure the language of the web portal.

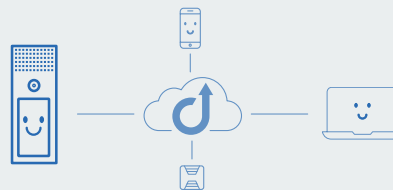
CALL SERVICE



The Symphony Mobile Client is the Symphony Cloud service for answering door calls and unlocking doors conveniently via smartphone or tablet.

Symphony Mobile Client

- Apps for iOS/iPadOS and Android.
- Convenient answering of door calls and door opening from anywhere using smartphones and tablets.
- Operating door openers using the door opener selection or using the DTMF keypad.
- Bidirectional video.
- Direct interaction with preferred contacts marked as favourites and operating door openers on the home screen.
- Quick access to functions, either directly in the push notification or using widget functions.
- Push notifications for events such as pending calls or missed calls, including optional caller snapshots.
- Activity list, including optional caller snapshots.
- Security features such as PIN access lock, Touch ID or Face ID to protect door openers.
- Support of multiple ring groups and operating multiple door openers.
- Light mode and dark mode.
- Automatic adaptation to the available bandwidth.
- Transparent overview of the network quality, the recent call performance, the expected call quality and the download speed.
- Support of different screen orientations such as 180° rotation of the mobile device.
- Customisable ringing tone for incoming calls.
- Customisable do-not-disturb function.
- Customisable lock screen call notifications.
- Support of 3rd-party cameras.
- System configuration.
- Separate role "Mobile Client User".
- iOS/iPadOS: Siri integration and support of action button and shortcuts.



Claimed Command devices operated and centrally managed in Symphony Cloud.

Symphony Cloud devices

- Calls.
 - Calls with and without video, including video preview on receiving stations.
 - Call list for ≤ 20 incoming calls on Symphony MX stations (id5, id8 and od5) configured as receiving stations, including video preview.
 - Add 3rd-party camera to devices.
 - Open doors, gates and barriers.



The Symphony Web Client is probably the world's most flexible, most easy-to-use intercom station – and it does not even need any extra software!

Symphony Web Client

- Independent of operating system.
- Calls can be answered and made conveniently within a web browser anytime and anywhere.
- Worldwide access using <https://webclient.commend.services>.
- Bidirectional video.
- Call queue, including information about a preceding conversation between a caller and an Ivy Virtual Assistant, call transfer and pause options.
- Comprehensive call history, including caller snapshots.
- Easy operation of door openers, gates and barriers.
- Separate role "Web Client user".
- Easy onboarding of new users through an email.



Better together – connecting Symphony Cloud with other systems from leading manufacturers. One of the first integrations are connections to external devices on the public mobile and fixed networks using SIP trunks.

Integrations using SIP trunks

- Connections to public mobile and fixed networks using trunks (Peoplefone, Sipgate, Sip.us and Twilio).
- Receive calls on landline and mobile telephones.
- Operate door openers with after-dialling during a call.
- Call telephones from devices.
- Voicemail detector.



ACTIVE DEVICE MANAGEMENT

A Symphony Cloud service for centralised and remote device maintenance.

Symphony On-Prem/Mesh devices

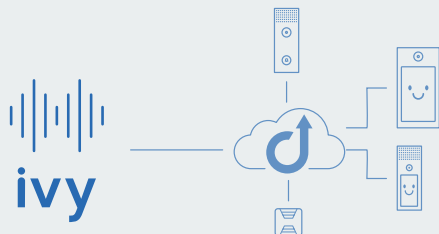
- Claimed Symphony MX devices of a Symphony On-Prem/Mesh system.
- Configure and carry out firmware updates (all updates, security-critical updates or manual updates).

On-Prem/Mesh devices managed in Symphony Cloud

- Claimed Symphony MX devices and Symphony BF devices of a Symphony On-Prem/Symphony Mesh system operated on premise and centrally managed in Symphony Cloud.
- System management.
- Company Dashboard with device status monitoring, including notifications about offline devices in the web portal and through email.
- User management.
- Configure and carry out firmware updates (all updates, security-critical updates or manual updates).
- Reboot devices remotely.

Symphony Cloud devices

- Claimed Commend devices operated and centrally managed in Symphony Cloud.
- Company Dashboard with device status monitoring, including notifications about offline devices and gateways in the web portal and through email.
- Configure and carry out firmware updates (all updates, security-critical updates or manual updates).



IVY VIRTUAL ASSISTANT

Our Conversational AI was developed with one goal in mind: to relieve staff in call centres and control rooms so that they can concentrate on the important issues and incidents.

- Instant call pickup.
- Empty call handling.
- Forwarding to an operator.
- Identification and handling of standard calls/emergency calls.
- Automatic processing of calls with frequently asked questions, for example from the parking, transport or smart-city sectors.
- Conversation flows with customisable responses for high flexibility and more relevant actions and answers such as "Dialogue Start", "End Dialogue Message", "Standard Forwarding Message" and "Emergency Forwarding Message".
- Additional configuration options through the flexible folder structure and application areas.
- Natural conversation in multiple languages.
- Data insights.
 - Instant call history with transcript of conversation with Ivy.
 - Audio playback for call validation.
 - Business intelligence dashboard (Ivy Dashboard) with advanced filtering tools and statistics.
 - Most frequent intents, call resolution rate, user drop-off rate, languages used, call duration, conversation duration, waiting time, calls per day and messages per call.
 - Totals, ranges and averages.
 - Detailed charts with advanced filtering for the call timeline, call heatmap, call resolution, top intents, call distribution and call duration.
 - Full call history export as Ivy report in Excel format.
- Ivy Captions for speech-to-text messages in conversations with Ivy Virtual Assistant for Symphony Cloud devices.



IVY LIVE TRANSLATION

Ivy Live Translation is a cloud-based service that integrates automatic speech-to-speech translation into the Commend intercom infrastructure to deliver an inclusive communication experience for a diverse community. Ivy Live Translation helps to assist travellers at airports, to coordinate transport logistics and to guide passengers on public transit or in smart cities by enabling multilingual support. Ivy Live Translation empowers control room operators to respond more efficiently and with greater confidence.

- Automatic speech-to-speech translation for conversations between callers and operators in real time.
- Automatic speech-to-speech translation for conversations forwarded to operators by Ivy Virtual Assistant in real time.
- For Commend devices in Symphony Cloud systems.
- For Symphony Web Clients in Symphony Cloud systems.
- For Commend devices operated with VirtuOSIS in on-premise solutions and connected through Symphony Bridge.
- Callers and operators can speak their own languages when talking to each other.
- Optional untranslated original audio before the conversation is translated.
- Support of most world languages and all major European languages.
- Inclusive communication experience for travellers at airports, for hotel guests, at logistics hubs and for passengers on public transit or in smart cities by enabling multilingual support.
- Dedicated conversation flows "Ivy Live Translation (Single Button)" and "Ivy Live Translation (Multiple Buttons)" with customisable responses for high flexibility and more relevant actions and answers such as "Dialogue Start", "End Dialogue Message", "Standard Forwarding Message" and "Emergency Forwarding Message".
- Data insights.
 - Instant call history with transcript of conversation with Ivy.
 - Audio playback for call validation.
 - Business intelligence dashboard (Ivy Dashboard) with advanced filtering tools and statistics.
 - Languages used, call duration, conversation duration, waiting time, calls per day and messages per call.
 - Totals, ranges and averages.
 - Detailed charts with advanced filtering for the call timeline, call heatmap, call distribution and call duration.
 - Full call history export as Ivy report in Excel format.
- Ivy Captions for speech-to-text messages in conversations translated using Ivy Live Translation for Symphony Cloud devices.
- Bidirectional video.
- View "Captions" and view "In Call" for a maximised video stream.



SYMPHONY BRIDGE

This bridge gives the on-premise-solution world access to the services of Symphony Cloud, such as the Symphony Mobile Client for iOS/iPadOS and Android, the Symphony Web Client for convenient call management in the web browser or our AI-based Ivy services. This way, completely new solutions are possible that combine the best of both worlds. Even large existing systems that have been providing proven services for many years can thus be expanded with new functions. With a Symphony On-Prem solution and Symphony Bridge, all these new possibilities are just a click away.

- Connect on-premise servers to the world of Symphony Cloud services.
- Full range of VirtuoSIS features available, including extensive integrations and control desk management options.
- Innovative Symphony Cloud features like AI-based services, regular updates and an even higher level of security.
- Intercom devices in VirtuoSIS solutions can establish calls to the Symphony Mobile Client.

- Calls can be forwarded simultaneously to multiple intercom devices operated with VirtuoSIS and to Clients and answered by any recipient.
- Open platform – 3rd-party SIP stations interface smoothly with VirtuoSIS to use Symphony Cloud services. Use Commend devices for full and tested compatibility.
- Devices and WAN devices in VirtuoSIS solutions can be assigned to projects and sites for a better overview of the entire intercom system.

SYSTEM AND DEVICE CONFIGURATION



System management

- System structures, hierarchies and folders (“Company”, “Project” and “Site” for regions, locations and buildings).
- Customisable keys for adding existing attributes, information or metadata from a customer.
- Configure company logos.
- User-specific company labels in various colours for better overview and filtering of companies.
- Account management for comprehensive overview of projects for system integrators and administrators.
- Create and reassign intercom systems and projects to other companies or users such as from system integrator to owner or when changing property managers.
- Automatic detection of devices in the local network using the Symphony Mobile Client.
- Securely add Symphony Cloud devices and On-Prem/Mesh devices using claiming codes and configure the system before it is installed on site.
- Securely add Symphony Cloud devices, Symphony On-Prem/Mesh devices and offline devices using Symphony Uplink in the local network without scanning or entering claiming codes.
- Integrate mobile devices easily into the system infrastructure via QR code scan or links.
- Give secure access to a specific user via the separate role “Mobile Client user”.
- Centrally manage Symphony Mobile Clients and Symphony Web Clients.
- Automatic assignment of device properties for multiple call scenarios.
- Support of different time zones within one system.
- Company Dashboard.
 - Centralised hub for monitoring and managing user, device and project activities.
 - Real-time overview of critical information.
 - Monitoring for facilitating audits, compliance and troubleshooting.
 - Device status information (online or offline).
 - Device firmware status information.
- User overview.
- Subscriptions overview.



User management

- Manage user roles and permissions.
- Distinction between roles with configuration and viewing permissions.
- Company-wide, project-wide or site-wide sharing of permissions for collaborative configuration of systems such as in a building management team.
- Temporary assignment of permissions to access systems for maintenance and support.
- Possibility to limit access to restricted information for higher level of data security.

SYSTEM AND DEVICE CONFIGURATION

Symphony On-Prem devices

- Claimed Symphony MX devices of a Symphony On-Prem system.
- Initial system configuration using the quick start assistant of Symphony Configuration in the web portal of Symphony Cloud.
- Configure connections to SIP servers.
- Authenticate devices.
- Settings for calls using a SIP server are automatically applied to all devices connected to the SIP server.
- Configure devices via Symphony Configuration in the web portal of Symphony Cloud.
- Configure devices as call initiators or call receivers.
- Support of Symphony MX stations.
- Configure different layouts and buttons for Symphony MX stations with touch screen.
- Configure contacts with images, including for 3rd-party devices and non-claimed Commend devices.
- Configure call settings.
- Configure SIP settings.
- Configure display brightness and turning the display off after a configurable time for Symphony MX stations with touch screen.
- Configure a custom background image from the project library or an image from the Commend library for Symphony MX stations with touch screen.
- Configure network settings of the device manually, including a fall-back to the last functioning network configuration.
- Configure audio settings, including presets for the audio environment.
- Configure LED settings and save the settings as device-model-specific templates.
- Configure the language of the device.
- Edit a setting for several devices at the same time.
- Carry out manual firmware updates.
- View recent call history (all calls and missed calls) in the view "Idle" of Symphony MX receiving stations with touch screen.
- Clean Voice from Noise for AI-based background noise suppression for Symphony MX stations.
- Reboot devices remotely.

Symphony Mesh devices

- Claimed Symphony MX devices of a Symphony Mesh system.
- Initial system configuration using the quick start assistant of Symphony Configuration in the web portal of Symphony Cloud.
- Configure devices via Symphony Configuration in the web portal of Symphony Cloud.
- Configure devices as call initiators or call receivers.
- Support of Symphony MX stations.
- Configure different layouts and buttons for Symphony MX stations with touch screen.
- Configure contacts with images, including for 3rd-party devices and non-claimed Commend devices.
- Configure call settings.
- Configure SIP settings.
- Configure display brightness and turning the display off after a configurable time for Symphony MX stations with touch screen.
- Configure a custom background image from the project library or an image from the Commend library for Symphony MX stations with touch screen.
- Configure network settings of the device manually, including a fall-back to the last functioning network configuration.
- Configure audio settings, including presets for the audio environment.
- Configure LED settings and save the settings as device-model-specific templates.
- Configure the language of the device.
- Edit a setting for several devices at the same time.
- Carry out manual firmware updates.
- View recent call history (all calls and missed calls) in the view "Idle" of Symphony MX receiving stations with touch screen.
- Clean Voice from Noise for AI-based background noise suppression for Symphony MX stations.
- Reboot devices remotely.

On-Prem/Mesh devices managed in Symphony Cloud

- Claimed Symphony MX devices and Symphony BF devices of a Symphony On-Prem/Symphony Mesh system operated on premise and centrally managed in Symphony Cloud.
- Initial system configuration for Active Device Management using the quick start assistant of Symphony Configuration in the web portal of Symphony Cloud.
- Configure devices for Active Device Management via Symphony Configuration in the web portal of Symphony Cloud.

SYSTEM AND DEVICE CONFIGURATION

Symphony Cloud devices

- Claimed Commend devices operated and centrally managed in Symphony Cloud.
- Initial system configuration using the quick start assistant of Symphony Configuration in the web portal of Symphony Cloud.
- Configure devices via Symphony Configuration in the web portal of Symphony Cloud.
- Configure devices as door stations or receiving stations.
- Support of Symphony MX stations, of selected Symphony BF stations, of modules and of I/O devices.
- Configure different layouts for Symphony MX door stations with touch screen.
 - Contact management: Contacts organised in directories and subdirectories.
 - Call buttons: Default layout.
- Configure contacts with images.
- Configure call buttons.
- Configure different grids for call buttons.
- Configure end-call button for Symphony MX door stations with touch screen.
- Configure display brightness and turning the display off after a configurable time for Symphony MX stations with touch screen.
- Configure a custom background image for Symphony MX stations with touch screen.
- Configure audio settings, including of accessories with audio functions.
- Configure the push-to-talk function for Symphony MX stations (id8) and for Symphony MX stations (id5 and od5) with the accessory ID5 DKGM or ID5 DKHSGM.
- Configure the language of the device.
- Passive device status monitoring.
- Edit a setting for several devices at the same time.
- Carry out manual firmware updates.
- Change device names.
- Configure outputs for door openers, including from supported I/O devices, triggered by device states.
- ≤ 2 door openers per door station.
- Functions directly available in the view "Idle" of Symphony MX receiving stations with touch screen.
 - Show camera video stream of a door station.
 - Operate a door opener.
 - View recent call history (all calls and missed calls).
- Clean Voice from Noise for AI-based background noise suppression for Symphony MX stations.
- Reboot devices remotely.
- Call management.
 - Configure ring groups (contact lists for multiple scenarios) and connect them to contacts and call buttons.
 - Configure call forwarding rules for specific days, dates and time periods.
 - View VoIP reports of call activity (call history, caller snapshot and dial status).

TECHNICAL SPECIFICATIONS

CALLS

Conversation duration: max. 10 min

AUDIO CODECS ¹⁾

Symphony MX devices,
Symphony Mobile Client,
Symphony Web Client:

Opus (up to 20 kHz)

Symphony BF devices, de-
vices connected through
Symphony Bridge: ¹⁾

G.722 (7 kHz)

Landline telephones and
mobile devices connected
through SIP trunks: ¹⁾

G.711 a-law (3.5 kHz), G.711 u-law (3.5 kHz)

BANDWIDTH PER DEVICE

Upstream: min. 1 Mbps

Downstream: min. 1 Mbps for every device in the ring
group ²⁾

3rd-party video streams: number depends on the specifications of
the 3rd-party camera and the available
local bandwidth between camera and re-
ceiving station

FIRMWARE UPDATE FILE SIZES PER DEVICE ³⁾

Symphony MX: 350 MB to 450 MB

Symphony BF: 7 MB

ACCESS TO WEB PORTAL 'COMMEND.SERVICES' ⁴⁾

Web browser: latest version of Google Chrome

NETWORK CONFIGURATION ⁵⁾

Internet connection: for every device ⁶⁾, mobile device and
gateway

Operation: DHCP mode

SYMPHONY BRIDGE ⁷⁾ ⁸⁾ ⁹⁾

Gateway (connected to Symphony Cloud)

Servers: VirtuoSIS, S6 or S3

Licences: L-SYM-BRIDGE and L-SIS-11 or L-SIS32-11

Software: min. VirtuoSIS version 11.1.6

On-Prem intercom server (networked with gateway)

Servers: VirtuoSIS, S6, S3, GE 800, GE 300,
G8-IP-32, IS 300 and/or GE 700U

Firmware: min. PRO 800 6.4 Build 3

Connection between gate- NET, LAN, GEV, CNET-W, CNET-E1 and/
way and On-Prem intercom or SO
server:

IVY

Concurrent calls: max. 5 per Ivy Virtual Assistant

Initial response time: typical 1 sec, max. 3.5 sec

Flow templates

Basic:

- Customisable responses "Dialogue Start", "End Dialogue Message", "Standard Forwarding Message" and "Emergency Forwarding Message".
- Instant call pickup for instant forwarding.
- Empty call handling.
- Identification and handling of standard calls/emergency calls.

Emergency:

- Customisable responses "Dialogue Start", "End Dialogue Message", "Standard Forwarding Message" and "Emergency Forwarding Message".
- Instant call pickup for instant forwarding.
- Empty call handling.
- Identification and handling of emergency calls.
- Default responses pre-configured for emergency use cases.

Parking:

- Customisable responses "Dialogue Start", "End Dialogue Message", "Standard Forwarding Message" and "Emergency Forwarding Message".
- Instant call pickup.
- Empty call handling.
- Identification and handling of standard calls/emergency calls.
- Default responses pre-configured for parking use cases.

Transport:

- Customisable responses "Dialogue Start", "End Dialogue Message", "Standard Forwarding Message" and "Emergency Forwarding Message".
- Instant call pickup.
- Empty call handling.
- Identification and handling of standard calls/emergency calls.
- Default responses pre-configured for transport use cases.

¹⁾ IN MIXED SCENARIOS, THE AUDIO CODEC WITH THE HIGHEST AUDIO BANDWIDTH SUPPORTED BY BOTH COMMUNICATING ENTITIES IS USED FOR A CALL. E.G. IN A CALL BETWEEN A SYMPHONY MOBILE CLIENT AND A LANDLINE TELEPHONE CONNECTED THROUGH A SIP TRUNK, AN AUDIO BANDWIDTH OF 3.5 KHZ IS USED.

²⁾ Per ring group, a maximum of 32 devices can simultaneously receive incoming calls (with or without early media).

³⁾ IF THE NETWORK CONNECTION IS POOR, UPDATE FILE PACKETS MAY BE TRANSMITTED SEVERAL TIMES.

⁴⁾ THE WEB PORTAL "COMMEND.SERVICES" IS NOT SUPPORTED BY WEB BROWSERS ON MOBILE DEVICES.

⁵⁾ A DHCP SERVER MUST PROVIDE THE NETWORK CONFIGURATION SUCH AS IP ADDRESS, SUBNET MASK, STANDARD GATEWAY AND DNS SERVER FOR EVERY DEVICE. EXCEPTION: DEVICES CONNECTED THROUGH SYMPHONY BRIDGE DO NOT REQUIRE A DIRECT ROUTE TO THE INTERNET.

⁶⁾ No Internet connection is required for devices that are behind the gateway.

⁷⁾ FURTHER INFORMATION ABOUT SYMPHONY BRIDGE CAN BE FOUND IN THE PRODUCT MANUAL "INTERCOM SERVER CONFIGURATION" AND IN THE PRODUCT MANUAL "VIRTUOSIS SETUP GUIDE".

⁸⁾ ALL SYM-BRIDGE CARDS MUST BE SELECTED IN THE SAME VIRTUOSIS INSTANCE. A MAXIMUM OF 14 CARDS CAN BE USED. THE CALL NUMBER OF A SYM-BRIDGE CHANNEL CAN ONLY BE ASSIGNED TO 1 CALL TARGET OR 1 RING GROUP.

⁹⁾ MAKE SURE THAT THE CURRENT FIRMWARE VERSION IS INSTALLED FOR DEVICES CONNECTED THROUGH SYMPHONY BRIDGE.

IVY

Demo:	- Customisable responses “Dialogue Start”, “End Dialogue Message”, “Standard Forwarding Message” and “Emergency Forwarding Message”. - Instant call pickup. - Empty call handling. - Identification and handling of standard calls/emergency calls. - Default responses pre-configured to demonstrate Ivy Virtual Assistant.
Ivy Live Translation (Single Button):	- Customisable responses “Dialogue Start”, “End Dialogue Message”, “Standard Forwarding Message” and “Emergency Forwarding Message”. - Instant call pickup. - Empty call handling. - Default responses pre-configured for using Ivy Live Translation.
Ivy Live Translation (Multiple Buttons):	- Customisable responses “Dialogue Start”, “End Dialogue Message”, “Standard Forwarding Message” and “Emergency Forwarding Message”. - Instant call pickup. - Default responses pre-configured for using Ivy Live Translation.

LANGUAGES FOR:	CONVERSATIONS WITH IVY VIRTUAL ASSISTANT	TRANSLATED CON- VERSATIONS	IVY CAPTIONS
Arabic (Saudi Arabia)		✓	✓
Bahasa Indonesia		✓	✓
Bulgarian		✓	✓
Catalan	✓	✓	✓
Chinese (Mandarin)		✓	✓
Croatian	✓	✓	✓
Czech		✓	✓
Danish		✓	✓
Dutch	✓	✓	✓
English	✓	✓	✓
Estonian		✓	✓
Finnish		✓	✓
French	✓	✓	✓
German	✓	✓	✓
Greek		✓	✓
Hindi		✓	✓
Hungarian	✓	✓	✓
Italian	✓	✓	✓
Japanese		✓	
Latvian		✓	✓
Lithuanian		✓	✓
Norwegian (Bokmål)		✓	✓
Polish	✓	✓	✓
Portuguese	✓	✓	✓
Romanian		✓	✓
Russian		✓	✓
Serbian		✓	✓
Slovak		✓	✓
Slovenian		✓	✓
Spanish	✓	✓	✓
Swedish		✓	✓
Turkish		✓	✓
Ukrainian		✓	✓
Vietnamese		✓	✓

TECHNICAL SPECIFICATIONS

DEVICES AND HARDWARE REVISIONS COMPATIBLE WITH SYMPHONY CLOUD

The following devices and hardware revisions are compatible with Symphony Cloud.

SYMPHONY MX DEVICE MODEL	MIN. REVISION	CAN BE CLAIMED AS SYMPHONY CLOUD DEVICE	CAN BE CLAIMED AS DEVICE MANAGED IN SYMPHONY CLOUD	CAN BE CLAIMED AS SYMPHONY ON-PREM/MESH DEVICE
AFLS H, AFLS H P	AA	✓	✓	✓
ID5 TD, ID5 TD CM	AD	✓	✓	✓
ID5 TD-B	AJ	✓	✓	✓
ID5 TD CM-B	AL	✓	✓	✓
ID8 TD(-B), ID8 TD CM(-B)	AA	✓	✓	✓
IM1, IM3, IM6	AA	✓	✓	✓
IM1-EXT	AA	✓	✓	✓
OD1(-B), OD1 CM, OD1 V, OD1 V CM, OD5 TD CM, OD10 TD CM	AA	✓	✓	✓
OD1 CM-B	AB	✓	✓	✓
OD5 TD CM-B, OD10 TD CM-B	AF	✓	✓	✓
WS 301V CM, WS 303V CM, WS 311V CM, WS 311V CM DA	AC	✓	✓	✓
SYMPHONY BF DEVICE MODEL	MIN. REVISION	CAN BE CLAIMED AS SYMPHONY CLOUD DEVICE	CAN BE CLAIMED AS DEVICE MANAGED IN SYMPHONY CLOUD	
AF 20H, AF 50H, AF 125H, AF 250H, AF 500H	AA			✓
AFLS 10H CW, AFLS 10H PW	AD		✓	✓
AFLS 10H HG	AE		✓	✓
AFLS 10H SC W	AA		✓	✓
EF 962H, EF 962HM	AC		✓	✓
ES 962H, ES 962HM	AC		✓	✓
ET 908H, ET 908H-I, ET 908HMI, ET 908HMI-I	AC		✓	✓
ET 962H, ET 970H	AD		✓	✓
ET 962HR, ET 970HR	AC		✓	✓
SIP-WS 201P, SIP-WS 203P, SIP-WS 201V, SIP-WS 203V	AC		✓	✓
SIP-WS 201V CA	AG			✓
SIP-WS 211V, SIP-WS 212V	AC			✓
SIP-WS 211V DA	AE			✓
SIP-WS 800F, SIP-WS 800P	AD			✓
SIP-WS 800F MD	AC			✓
SIP-WS 800V	AE			✓

Accessories:

- IP Secure Connector IP-CON: Rev. AB.
- AL 10-16, LS8, LS15, LSM.
- cm1. This camera can be used with a Symphony Cloud system only.
- EB1A, EB1E1A, EB2E2A, EB3E2A-AUD, EB8E8A. These I/O modules can be used with a Symphony Cloud system only.
- EPOS IMPACT SC 665, EPOS IMPACT 1060. These headsets can be used with a Symphony Cloud system only.
- ID5 DKGM. This gooseneck microphone can be used with a Symphony Cloud system only.
- ID5 DKHS, ID5 WMHS. These handsets can be used with a Symphony Cloud system only.
- ID5 DKHSGM. This gooseneck microphone and handset can be used with a Symphony Cloud system only.
- ID8 GM.
- MIC 480.

The information on the hardware revision of the device can be found on the label on the rear.

The devices must have the current firmware. Further information on firmware updates can be found in the product manual of the device.

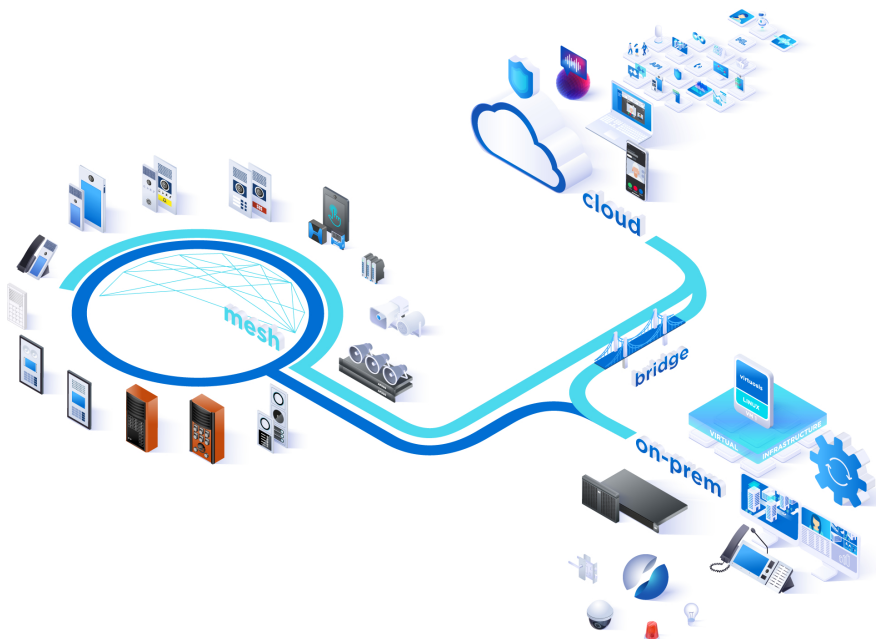
SYSTEM REQUIREMENTS

Symphony MX devices: ¹⁾	min. firmware version 03.02.01.65 ²⁾ min. firmware version 03.08.01.14 ³⁾ min. firmware version 04.06.01.21 ⁴⁾	¹⁾ To be able to use the devices and mobile devices with Symphony Cloud, these have to be claimed through the web portal or in the Symphony Mobile Client.
Symphony BF devices: ¹⁾	min. firmware version 05.00.02.11 ²⁾ min. firmware version 05.01.01.02 ³⁾	²⁾ For devices that should be operated and managed in Symphony Cloud, the minimum firmware version is required for claiming.
Mobile devices: ¹⁾	Android: min. version 8.0 iOS/iPadOS: min. version 15.6	³⁾ For devices that should be operated on premise and managed in Symphony Cloud, the minimum firmware version is required for claiming. ⁴⁾ For devices that should be used as Symphony On-Prem/Mesh devices, the minimum firmware version is required for claiming.

SYMPHONY TOPOLOGY

Symphony MX devices and Symphony BF devices can be used in the following operating modes:

- Symphony Mesh
- Symphony On-Prem
- Symphony Cloud
- Devices managed in Symphony Cloud



Symphony Mesh

Devices can communicate with other devices independently of a SIP server. A direct connection with SIP devices from other manufacturers is possible. Symphony MX devices can be configured via Symphony Configuration in the web portal of Symphony Cloud, using the web interface of every device or Set-UP. Symphony BF devices can be configured using the web interface of every device or Set-UP only. Internet access is required for configuring devices via the web portal of Symphony Cloud. No Internet access is required for configuring devices using the web interface or Set-UP, for initiating calls, receiving calls and operating door openers. Symphony MX devices receive firmware updates through Symphony Cloud as configured in the web portal, using the web interface of every device or Set-UP. Symphony Mesh is mainly suitable for basic and cost-efficient solutions.

Symphony Mesh can be combined with Symphony On-Prem. Symphony Mesh can be used as a fallback option for Symphony On-Prem or Symphony Cloud.

Symphony On-Prem

Devices are operated with VirtuoSIS. In addition to the Symphony Control Desk Service, functions and devices from the intercom world can be used. Symphony On-Prem is mainly suitable for comprehensive solutions and the integration of Symphony MX devices and Symphony BF devices into existing systems.

Symphony On-Prem can be combined with Symphony Mesh and, through Symphony Bridge, with Symphony Cloud. When Symphony On-Prem is combined with Symphony Mesh, the server functions are not available for the devices operated in mesh mode.

Symphony Cloud

Devices are operated via Symphony Cloud and can communicate with other devices in Symphony Cloud at any location worldwide. Internet access is required. Devices can only be configured via Symphony Configuration in the web portal of Symphony Cloud. Symphony Cloud is mainly suitable for door/gate communication.

Symphony Cloud can be combined with Symphony On-Prem through Symphony Bridge.

Devices managed in Symphony Cloud

Devices are claimed to be operated with Symphony On-Prem or Symphony Mesh. Devices can be configured using the web interface of every device or Set-UP only. Devices receive firmware updates through Symphony Cloud as configured in the device management of Symphony Cloud. The device status is monitored in Company Dashboard of Symphony Cloud.

CONFIGURING THE FIREWALL FOR SYMPHONY CLOUD

All network traffic is bidirectional. If the outgoing network traffic is blocked by default, the firewall must be configured as follows to be able to use devices with Symphony Cloud.

SERVICE	PROTOCOL	PORT NUMBER (LOCAL)	PORT NUMBER (SYMPHONY CLOUD)	HOST (LOCAL)	DESCRIPTION
DNS	TCP/UDP	Dynamic	53	Symphony MX devices	DNS name lookup
HTTP	TCP	Dynamic	80	VirtuoSIS (hostname or IP address), devices, mobile devices, web portal	Certificate revocation list
HTTPS	TCP/TLS	Dynamic	443	VirtuoSIS (hostname or IP address), devices, mobile devices, computers with Web Client, web portal, Ivy Dashboard, page "Service Status"	Claiming, configuration, uploading log files, downloading the device firmware, logging, call signalling, Ivy Dashboard, documentation, VoIP reports, state of Symphony Cloud services
HTTPS	TCP/TLS	Dynamic	8088	Devices, mobile devices, web portal	Logging
MQTTS	TCP/TLS	Dynamic	8883	VirtuoSIS (hostname or IP address), devices, mobile devices	Claiming, configuration, Symphony Configuration (Symphony On-Prem/Mesh devices)
NTP	UDP	Dynamic	123	Devices	System clock synchronisation
SIPS	TCP/TLS	Dynamic	5061	VirtuoSIS (hostname or IP address), devices, mobile devices	Call signalling
SRTP	UDP	10000 to 50000 ¹⁾	10000 to 50000	VirtuoSIS (hostname or IP address), devices, mobile devices, computers with Web Client	Media transmission (only active during calls)
STUN	UDP	Dynamic	3478	Mobile devices, computers with Web Client	Gathering ICE (Interactive Connectivity Establishment) candidates in SDP (Session Description Protocol) for media signalling

¹⁾ In VirtuoSIS, the range of port numbers can be configured.

The devices, the mobile devices, the computers with Web Client and VirtuoSIS must have the current system time.

If the connection to Symphony Cloud is interrupted, Symphony On-Prem/Mesh calls can still be initiated between devices in the local network using the link-local IPv6 addresses.

The hosts of Symphony Cloud may change through the upscaling of the infrastructure or through the implementation of new features. An overly restrictive firewall configuration for the hosts may affect the functionality of future features.

Further information can be found at [Extended firewall configuration on cLibrary](#).

AVAILABLE SUBSCRIPTIONS

In a mixed system, subscriptions are required for paid Symphony Cloud services only.

Symphony Cloud Services

SERVICE	SUBSCRIPTION REQUIRED	LICENCE NAME	LICENCE DESCRIPTION	AVAILABLE FOR		
				SYMPHONY CLOUD DEVICES	ON-PREM DEVICES MANAGED IN SYMPHONY CLOUD	SYMPHONY ON-PREM/MESH DEVICES
Active Device Management	Yes	E-CC-ADM-CTF	Yearly subscription for 1 Symphony Cloud Active Device Management connection, per device ¹⁾	✓	✓	✓ ²⁾
Device configuration incl. Symphony Configuration	No	-	-	✓	³⁾	✓
Call management Symphony Cloud	No	-	-	✓		
Call service for Symphony Cloud devices	Yes	E-CC-CTF	Yearly subscription for 1 Symphony Cloud connection, per device	✓		
Call service for Symphony On-Prem/Mesh devices	No	-	-			✓
Call service for external devices using SIP trunks	Yes	E-CC-CTF	Yearly subscription for 1 Symphony Cloud connection, per external device connected through a SIP trunk	✓		
Symphony Bridge	Yes ⁴⁾	L-SYM-BRIDGE	Licence for Symphony Bridge	✓	✓ ⁵⁾	
Call service for Symphony Mobile Client	Yes	E-CC-CTF	Yearly subscription for 1 Symphony Cloud connection, per Symphony Mobile Client	✓		
Call service for Symphony Web Client	Yes	E-CC-CTF	Yearly subscription for 1 Symphony Cloud connection, per 1 Symphony Web Client user ⁶⁾	✓		
System management	No	-	-	✓	✓	✓
User management	No	-	-	✓	✓	✓
Single-sign on	Yes	E-CC-SSO-STN	Yearly subscription for single sign-on (SSO) to Symphony Cloud per customer system incl. 1 identity server ⁷⁾	✓	✓	✓

¹⁾ The subscription includes Symphony Cloud devices claimed to be operated and managed in Symphony Cloud and on-prem/mesh devices managed in Symphony Cloud.

²⁾ This refers to automatic firmware updates using Symphony Cloud.

³⁾ The devices can be configured using the web interface of the device or Set-UP.

⁴⁾ Symphony Bridge is licenced through VirtuoSIS.

⁵⁾ This refers to calls between devices of a Sympony On-Prem system and devices of a Symphony Cloud system.

⁶⁾ If the same Symphony Web Client is provided to multiple users, every user needs 1 Symphony Cloud subscription.

⁷⁾ The subscription includes an unlimited number of users using SSO and an unlimited number of email domains.

AVAILABLE SUBSCRIPTIONS

In a mixed system, subscriptions are required for paid Symphony Cloud services only.

Ivy Services

SERVICE	SUBSCRIPTION REQUIRED	LICENCE NAME	LICENCE DESCRIPTION	AVAILABLE FOR		
				SYMPHONY CLOUD DEVICES	ON-PREM DEVICES MANAGED IN SYMPHONY CLOUD	SYMPHONY ON-PREM/MESH DEVICES
Ivy Virtual Assistant and Live Translation - Ivy Tier 30 ¹⁾ ²⁾ ³⁾	Yes	E-CIVYTI30-CTF	Yearly max. 30,000 call minutes or max. 60,000 empty calls ⁴⁾ per Ivy Virtual Assistant, yearly ground fee, 1 data insights user	✓	✓ ⁵⁾	
Ivy Virtual Assistant and Live Translation - Ivy Flex ¹⁾ ³⁾ ⁶⁾	Yes	E-CIVYFLEX-CTF	Yearly ground fee per Ivy Virtual Assistant	✓	✓ ⁵⁾	
		E-CIVY1K-CPF ⁷⁾	1,000 call minutes or 2,000 empty calls			
		E-CIVY10K-CPF ⁷⁾	10,000 call minutes or 20,000 empty calls			
Ivy Virtual Assistant and Live Translation - Per calling device ³⁾	Yes	E-CIVY365-CTF	Yearly max. 365 call minutes per calling device, incl. + 20% fair use	✓	✓ ⁵⁾	
		E-CIVY6K-CTF	Yearly max. 6,000 call minutes per calling device, incl. + 20% fair use			
Ivy Virtual Assistant and Live Translation - Add-ons ³⁾	Yes	E-CIVYINS-CTF	Yearly 1 additional data insights user	✓	✓ ⁵⁾	
		E-CIVYKAPI-CTF	Yearly 1 knowledge API interface			

¹⁾ Billing per 30 seconds (min. 30 seconds/30-second increments).

²⁾ Beyond the included minutes and empty calls, additional fees apply.

³⁾ Ivy Virtual Assistant and Live Translation can be combined in a conversation.

⁴⁾ Commend guarantees that any empty call is counted as 30 seconds only (1 call minute equals 2 empty calls).

⁵⁾ Through Symphony Bridge.

⁶⁾ "Ivy Virtual Assistant and Live Translation - Ivy Flex" is limited to max. 30,000 call minutes or max. 60,000 empty calls per year. For higher volumes, contact your local Commend sales organisation.

⁷⁾ Single payment.

Further information can be found at:

- <https://www.commend.com/en/products/symphony-cloud-intercom/>
- https://manuals.commend.com/symphony-cloud/online-help_en-uk/
- clibrary.commend.com (product manuals and data sheets for devices and intercom servers)
- myGPT channel "Symphony Cloud"

Services are available through

<https://commend.services/>

<https://webclient.commend.services>

Service status is available through

status.commend.services

Commend products are developed and manufactured by Commend International GmbH in Salzburg, Austria.

Our development and manufacturing processes are **certified** in accordance with **EN ISO 9001:2015, IEC 62443-4-1** and **ISO 14001:2015**. Since mid-2020, Commend International GmbH has been **certified** in accordance with **EN ISO 27001:2022**.



The design and/or specifications of products are subject to change without prior notice. All errors excepted.