HOOC

HOOC

HOOC

We continue.
To develop. Always.

INDEX

HOW IT WORKS

WHAT IS HOOC?

THE COMPANY

HOOC is an international company based in Switzerland. We offer a wide range of services from remote access to alerting and monitoring as well as state-of-the-art solutions in the field of KNX and LoRa.

THE PLAYERS

We are primarily active in the B2B sector. This means that among our direct customers there are hardware developers, system integrators, KNX manufacturers and many more. They act as HOOC resellers or distributors, who then sell our gateways and solutions to the end customer.

THE BUSINESS UNITS

The company's core business includes CONNECTIVITY, CONTROL and COLLABORATION services. Whereas CONNECTIVITY englobes remote access and programming as well as system and site networking, CONTROL covers remote maintenance together with monitoring and reporting solutions. COLLAB then stands for modern alerting and collaboration technology.

THE ESSENTIALS

The core: At the heart of each of our HOOC solutions lies the HOOC Cloud. Here the data of the complete system infrastructure will be gathered and can thus be accessed by the users via an encrypted VPN connection.

TECHNICAL STAFF AND USERS

HOOC CLOUD

CONNECT F   PLC

CONNECT   CONTROL   COLLAB
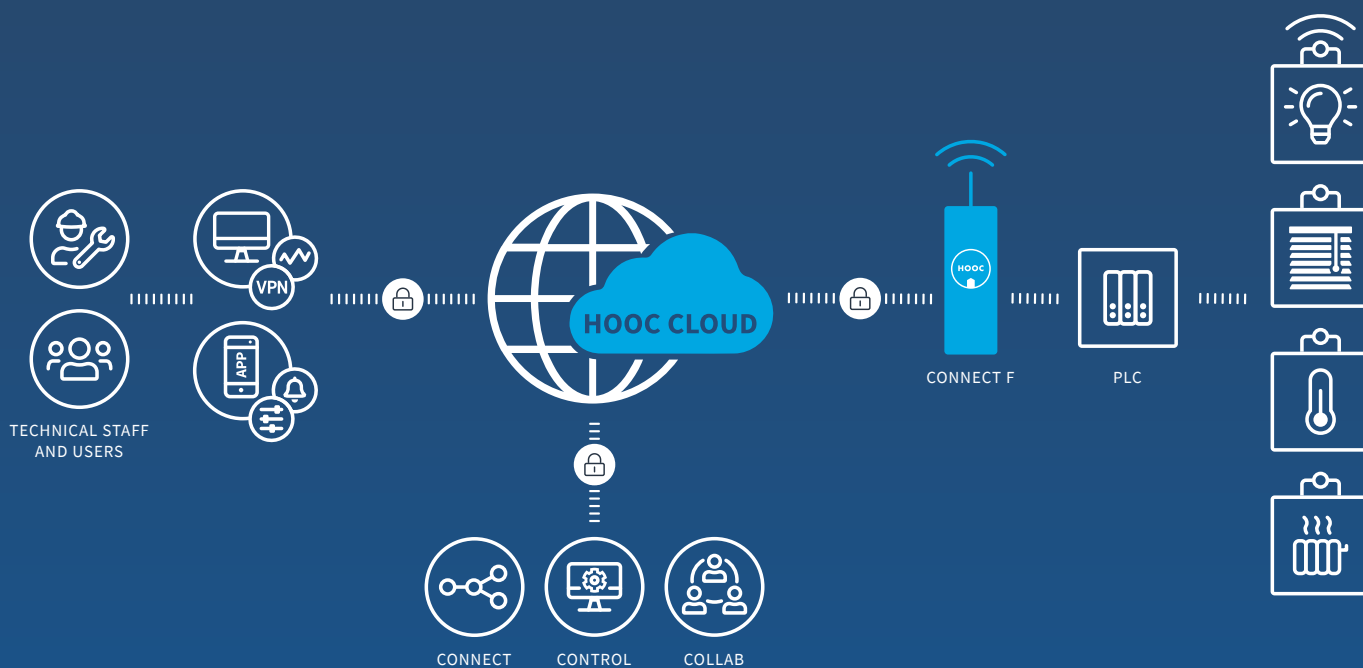
The solution (from left to right): The customer or technical staff member uses either the HOOC ClientApp or the HOOC ManagementPortal in order to gain secure access (via Cloud and gateway) to the programmable logic controller and thus, to the HVAC systems and smart home applications that he needs to program, control or adjust. This high-quality VPN tunnel is not only the basis for HOOC Access, but also for all other HOOC solutions and services.

THE HOOC CLOUD

Every cloud has a silver lining. And let's say, the HOOC Cloud has at least two.

The idea of having its own data somewhere «in the skies» might not always seem that attractive. Therefore, the HOOC Cloud is built differently. Not only does it guarantee a highly encrypted VPN access to your remote technical facilities, sites and systems, but also does it function without any port forwarding or fixed IP addresses.

Furthermore, it offers a so-called smart user management, which allows the client to attribute dedicated and time-limited accesses to his systems. That can mean that an employee will only have access to the technical installations he is in charge of or that an external service provider, for example, will be granted access just for the duration of his deployment.

Resumé: An exciting alternative to conventional cloud solutions. For having your data – not your head – in the cloud(s).

THE HOOC APPS

Life is complicated enough. Use HOOC apps.

Sitting in a car, in a meeting or in your armchair at home? So why would you want to get up in order to turn on your computer when you can control all your systems and installations directly on your HOOC app? Right – you wouldn't.

CLIENT

The HOOC ClientApp for iOS, Windows and Android is the perfect tool for a fast check of the system statuses as well as for simple trend data visualization and the adjusting of set points. It not only gives a quick overview of all sites and users but also a summary of all messages and notifications.

Thanks to the HOOC ClientApp and its secure access functionality, long waits for the VPN connection are today a thing of the past. On the contrary, the connection can be established straight after starting the app and the user can access the different sites directly under « favorites » or under his recent connections. But that's not all: While most of the admin settings are first to be parameterized in the ManagementPortal, alerting rules and notification centre settings can also be easily paused or stopped via the ClientApp.

COLLAB

HOOC Collab is somewhat as the WhatsApp for the building technology. It enables the sending of files and documents and has an integrated chat option.
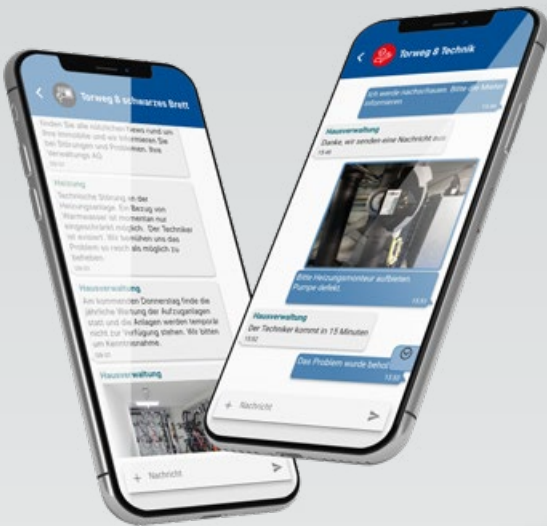
Today, teams and colleagues often communicate in a non-homogeneous way, by randomly using e-mails, SMS, phone calls, etc. As a result, processes and work flows cannot be tracked and hence, not be improved. The HOOC CollabApp, on the other hand, shows an overview of all chats, attached documents and system notifications, so that the client has a much easier time to understand the problem (e.g. a system failure) and how, how quick and by whom it was fixed.

Speaking of promptness: Speed is also key when it comes to logging into the system. Because if your systems fails, you usually want to react immediately. Therefore, the initial authentication can be activated simply via QR code and after that, the access works with no additional input (username and password). As handy as an app gets.

COMPACT

True to its name, the HOOC CompactApp combines in a slimmed-down version the most important HOOC functions in one tool.

What that means is, that especially the smart user management stays a top priority also in the compact version. There is no need to enter additional user data (invitation via QR code) and web access is also fast and uncomplicated thanks to the secure proxy service. In contrast to the system integrator, who might prefer to use the ClientApp, where all his sites are presented at a glance, the end customer will surely opt for the CompactApp, where only his own system will be displayed. Different strokes for different folks.

THE HOOC GATEWAYS

The entrance to your digital future.

**Our HOOC gateways are the link between the HOOC Cloud and your installations
and enable you to control them from a distance.
Every gateway is preconfigured and ready to use upon delivery.**

M for modern mobile communication
HOOC CONNECT M

The Connect M is our gateway for LTE/mobile communication, offering also WLAN/WAN and LAN ports. It is perfect for temporary use during commissioning or for the mobile radio connection of systems without Internet access.

Our multifunctional tool for mobile access.

CONNECT M IS PERFECT FOR

- Temporary use during commissioning
- Remote control of industrial sites
- Connection of systems without Internet access
- Access to isolated networks

F like funky radio technology
HOOC CONNECT F

One could say, that the Connect F is the funkier version of our Connect M. Where the later has a mobile radio interface, the Connect F contains a LoRaWAN radio module instead. Thanks to its low power network technology (LPN), the Connect F allows to transmit sensor data over long distances in an energy-efficient way.

Our functional device for LPN radio technology with WLAN/WAN and LAN interfaces.

CONNECT F IS PERFECT FOR

- Smart city / Smart building / Smart farming
- Retrofitting in the field of building automation
- Temporary measurements and monitoring
- Connection of LoRaWAN sensors

H for hat rail

HOOC CONNECT H

The Connect H is the classic among our gateways. The DIN rail model is particularly suitable for the installation in control cabinets, enclosures and overall for all HVAC applications in the building technology.

Our bestseller for home and HVAC.

CONNECT H IS PERFECT FOR

- Smart Homes
- Building automation
- HVAC controls

L as in lightweight

HOOC CONNECT L

The Connect L is the perfect device for uncomplicated remote maintenance, especially for telephone systems. Thanks to handy size, the Connect L can be installed on any desk or table. With its plug&play system, it is ready to use in less than a minute.

The logical solution in order to take your remote control to a new level.

CONNECT L IS PERFECT FOR

- Remote maintenance of telephone systems
- Remote maintenance of network infrastructure
- Remote maintenance of security technologies
- Remote access for offices
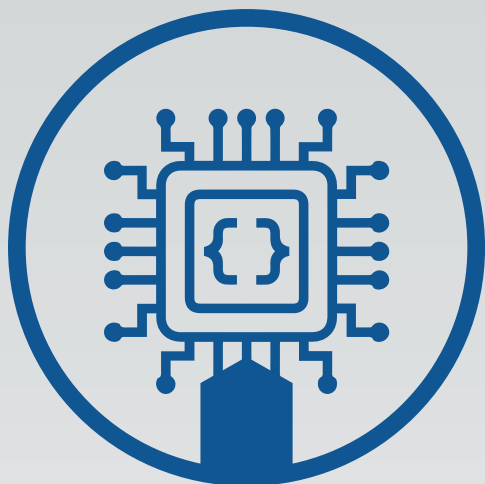
CONNECT

CONNECT

E for embedded systems
HOOC CONNECT E

The HOOC Connect E embedded software is a virtual gateway especially for hardware manufacturers. It allows them to integrate every HOOC solution directly into their system or product. The Connect E is compatible with different platforms (Raspberry Pi, Linux, Mac) and can be downloaded as a binary or docker container directly from the HOOC Cloud.

Our secure embedded software for the implementation into your existing hardware.

CONNECT E IS PERFECT FOR

- The integration into control systems and server environments
- The implementation into all kind of hardware devices
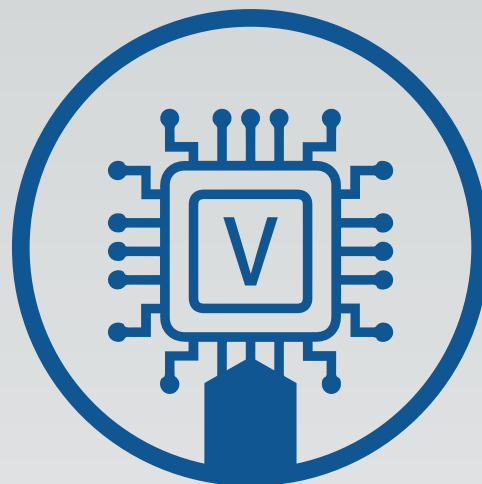
V like virtual
HOOC CONNECT V

Virtual gateways are used wherever several players (suppliers, manufacturers, technicians, etc.) have access to a network. The Connect V can be assigned to separate VLANs and has specific firewall settings. This makes it possible to block or unblock users for a limited period of time or certain functions for specific systems.

Virtual gateways that can be opened or blocked depending on the players and requirements.

THE CONNECT V IS PERFECT FOR

- Separate accesses for suppliers and integrators
- Separate VLAN accesses
- Dedicated access permissions

Modular and scalable

THE HOOC SOLUTIONS

HOOC solutions are not only build according to the highest IT security standards and guarantee perfect user friendliness, but at the same time they are modular and scalable. So instead of looking for an additional (software) solution and another provider for every new problem, why not stay with HOOC? We certainly have what you are looking for. And if not – we are going to develop it.

Seite 16

ACCESS

A highly performing VPN connection, which comes with a Secure Proxy web service and Smart User Management.

Seite 20

ALERT

A new alarming tool that alerts in case of system failures and thereby saves you time, money and hassle.

Seite 26

COLLAB

A trackable solution for sending documents and pictures, as well as for the communication among professionals.

Seite 30

CONTROL

Best remote control for building services, technical facilities or smart homes.

CROSSLINK

Efficient site-to-site VPN and innovative system networking combined in one solution.

CUSTOMIZE
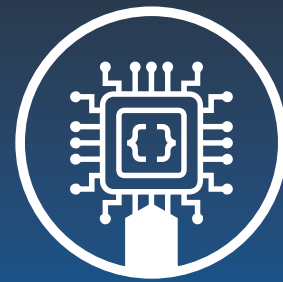
Tailor-made solutions at fair prices.

DATACOLLECT

A two-in-one package for optimal data visualization and intelligent reporting.

EMBEDDED

Our software technology; integrated into your hardware.

LORA

A special LoRaWAN solution with the possibility to send small size data packages over long distances.

HOOC ACCESS

> **The digital era brings chance, change and challenge. When it comes to remote access, investing in the right product nowadays means …**

… INVESTING IN YOUR SECURITY.

Therefore, our HOOC Access not only guarantees a fast, but also an extremely secure state-of-the-art VPN connection.

We can proudly say that our solution meets the highest Swiss security standards and has been tested and certified by independent cyber security experts. It also works by means of a unique HOOC Cloud Service, especially developed by our engineers and computer scientists. And what's best: It can do a lot more than just connect.

WHAT'S IN FOR YOU

HOOC Access offers you …
- a location-independent access for iOS, Android, Windows and Mac
- an intelligent system administration via ClientApp (or ManagementPortal)
- an easy plug&play installation and a ready-to-use service
- a transparent data link layer service (OSI layer 2) for multicast/broadcast traffic
- an unlimited number of users and accesses for as many sites and systems as you need

DID YOU KNOW?

… that HOOC Access also englobes an integrated web access (Secure Proxy)?

… that HOOC Access offers you a Smart User Management, so that you can limit, block, check and track all the connections to your systems and networks?

A THING OF THE PAST

No more …
- unencrypted remote access
- undocumented access
- risky port forwarding
- insecure password sharing by users accessing the same network
- old accesses that have not been deactivated when employees leave
- unnecessary costs due to time-consuming password administration

A MUST HAVE

HOOC Access is a real asset for …
- Industrial manufacturers
- Property managers
- System integrators
- Smart home owners

THE TECHNOLOGY BEHIND HOOC ACCESS

INTERFACES

- Internet connection via LTE/mobile networks
- WLAN/WAN/LAN
- Modbus TCP/IP and KNX IP
- Interfaces to HOOC LoRaWAN sensors
- REST-API
- Integration into existing networks possible

VPN CONNECTION (VIA HOOC CLIENTAPP)

- allows the logging of connections thanks to a special access log
- works with a virtual DHCP server in the HOOC Cloud
- allows an automatic start of various applications
- works with platforms supported by the HOOC ClientApp: Android, iOS, Windows and Mac

DATA SECURITY

- thanks to state-of-the-art encryption
- thanks to two-factor authentication
- thanks to network filter

SECURE PROXY (VIA WEBLINKS)

- is an encrypted web access to systems and websites
- provides permalinks for secure web access without additional password entry
- supports the following protocols: http, https, SSH, VNC (via web browser)

SMART USER MANAGEMENT

- enables customized access permissions
- includes one additional simultaneous access per virtual gateway
- offers additional security features per gateway
- allows to manage different users and user types
- offers the possibility to assign time-limited accesses
- allows to assign accesses in order of people's role and function in the company
- includes the option of blocking/releasing the accesses of higher hierarchy levels

## COMPATIBILITY WITH OTHER SOLUTIONS

- HOOC Alert for alarm messaging in case of system failures
- HOOC Collab with information and chat channel
- HOOC Control for remote control of the technical infrastructure
- HOOC CrossLink for the intelligent cross-location networking of of plants and sites
- HOOC DataCollect for monitoring and reporting

THE HOOC ACCESS MECHANISM

FAST AND SECURE VPN (from left to right): The user (technical manager, operator, etc.) uses his HOOC Client-App in order to log into the system. Via the HOOC Cloud and the gateway, he then gets access to his different IT networks, HVAC systems or home automation solutions.

This highly encrypted VPN tunnel forms the basis for all further HOOC solutions in the fields of Connectivity, Control and Collaboration.

TECHNICAL STAFF AND USERS

VPN OR DIRECT WEB ACCESS

HOOC CLOUD

CONNECT H

CONNECT   CONTROL   COLLAB
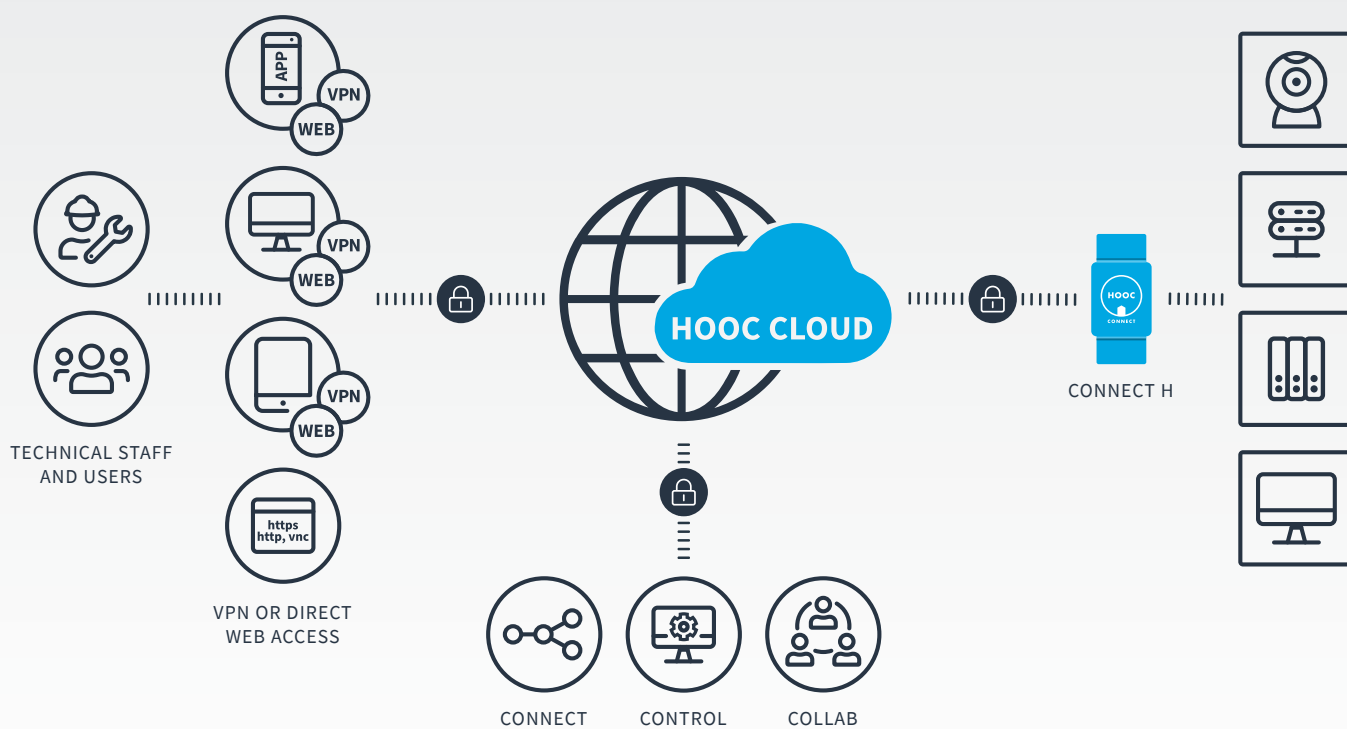
HOOC ALERT

**Suppose your system gave an alarm —
and nobody came.**

DON'T WORRY, BUY HOOC-LY.

Because the only thing we make fun about, is ourselves. Our technology instead, we take very seriously. Therefore, our team of engineers and computer scientists has invested plenty of time in creating HOOC Alert – the smart way of sending alarms in case of a system failure.

Honestly, have you never thought about how great it would be if your plant park could just tell you, where it picks and pinches instead of you spending hours trying to find the cause of defect? If so, you might be happy to hear that thanks to HOOC Alert, your infrastructure is now able to communicate with you. So every time there is a small or larger deviation from the setpoints, you or the person in charge will be either informed, warned or alerted. According to your wishes, this can happen via text message, e-mail, push notification or voice mail. Sounds easy? It is; as much as if it has always existed.

DID YOU KNOW?

… that HOOC Alert also has some specific calendar functions so that you can plan properly which alarm should be sent to whom, when and how?

… that all your infrastructure can send alerts and alarm messages, even multi-site systems (see HOOC CrossLink) and installations without supported interfaces (see HOOC LoRa)?

… that you have the possibility to store your data for up to two years?

… that our services are tested and certified by nationally recognized institutions?

WHAT'S IN FOR YOU

HOOC Alert offers you …
- Secure monitoring and checking of accesses, connections and infrastructure
- Clear traceability of faults and alerts
- Simplified planning of operations, vacation replacements and shift substitutions
- Customized alerting rules, time intervals, labels, escalation levels, localization and many more

A THING OF THE PAST

No more …
- System failures that are not repaired in time
- Malfunctions that remain undetected
- Alarms that are not acknowledged or escalated
- Technical staff who does not feel responsible Processes which are not traceable
- Costs that would not be necessary

A MUST HAVE

HOOC Alert is a real game changer for …
- Communities and administrations
- Technical and facility management services
- Industrial maintenance and building automation

Let's get down to the nitty-gritty of …

THE TECHNOLOGY BEHIND HOOC ALERT

INTERFACES

- Interfaces to Modbus TCP/IP (e.g. Wago, Saia, Beckhoff, Siemens Logo!8/S7)
- Interfaces to KNX
- Interfaces to HOOC LoRaWAN sensors

ALERTING RULES

- Alerting rules can be parametrized
- Alarms can be set according to the deviation from setpoints, median or mean values
- Alerting rules can be composed (e.g. «If temperature is less than x AND heating is operating, than sending of an alert»)
- Individual alarm settings and message transmission can be checked in advance
- Alarms can be classified into different categories (e.g. information, warning and alarm)
- Alerts can be easily identified thanks to different labels (e.g. alert heating / alert ventilation)

ALARM LOG

- Log entries for faults, alarms, escalations, acknowledgements, etc.

ALARM MANAGEMENT

- Alert categories, labels and escalation levels can be parametrized
- Measured values can automatically be inserted into alarm messages
- Escalation rules and message intervals can be individually parametrized
- Alarm messages will be sent repeatedly until they are acknowledged

NOTIFICATION CENTER

- Alarm notifications can be sent by text message, e-mail, push notification or voice mail
- Alarms can automatically be sent to the employees on duty (thanks to an annual calendar representation showing e.g. work- and holidays, vacations, shift schedules)
- General and specific calendar functions facilitate the planning of vacation replacement and shift substitutions

SMART USER MANAGEMENT

- Possibility to manage different types of users
- Possibility to classify alarm recipients into different receiver groups (team plant A / team plant B, etc.)
- Possibility to assign alerting rules according to users and receiver groups
- Possibility to assign alarm recipients according to their shift

LANGUAGE

- Users can adapt the language for the alarm messages
- Users can also choose the language for the user interface of the HOOC ClientApp

HOOC COLLABAPP

- Alarm messages can be sent via push notification
- Messages can be sent on a unilateral way (no response possible)
- Messages can also be sent via chat (send and reply)

HOOC CLIENTAPP

- Any kind of received information, warning and alarm as well as its current status is presented in a general overview
- Alerting rules, alarms as well as notifications can be paused

NOTIFICATION CHANNEL

- Alarm messages can be sent via e-mail, text message, voice mail or push notifications
- Alarm messages can be sent according to predefined rules (In case of a system failure, you can e.g. send a voice call to the night shift, a text message to the facility manager and an e-mail to the external service providers, etc.)

11110001101
ystem Error
000010101001110

Let's get down to the nitty-gritty of …

THE HOOC ALERT MECHANISM

Smart Alarm (from left to right): We have all seen it: The heating goes off, the PLC fails, a pump is defective and the elevator gets stuck … and then it takes hours till somebody feels responsible or even notices it. Thanks to HOOC Alert, its highly performing gateways, secure VPN connection and modern Cloud Service, this kind of annoyance is now a thing of the past. Because with HOOC Alert it is only a matter of seconds, that the technical service on duty will be alerted via e-mail, push notification, voice or text message.

When the person in charge does not acknowledge the alarm, it will be immediately escalated to the next higher level. If necessary, additional alarm recipients, like for example the tenant or the CTO, can also be assigned.

All this does not happen randomly, but according to previously defined alerting rules, alarm categories, labels and escalation levels. And thanks to its specific calendar functions, the alarm message can be sent according to the shift plan and in the language of the alarm recipient. Last but not least, HOOC Alert allows to customize the branding. Hence, it is not only for its individual settings, but also for its personalizable design the perfect smart alarm solution for really every company.

HOOC COLLAB

Your employees and service providers do communicate with each other, but no one really knows who is talking to whom, when and why?

STOP WONDERING, START TESTING!

We promise you: With HOOC Collab things will definitely change. No more misunderstandings and communication chaos.

Thanks to its chat function, HOOC Collab offers you a safe and secure platform where your employees and experts can exchange with each other: whether they need to acknowledge alarms, send maintenance reports, organize reparation services – or simply want to discuss a project or a team meeting. The entire communication flow runs over a single channel and will be tracked in the history log, which will allow procedures and operation methods to be analyzed and optimized as necessary. So that you will never have to wonder again how something was somehow forgotten by someone for some reason.

HOOC COLLAB

WHAT'S IN FOR YOU

HOOC Collab offers you …
- a strongly encrypted and highly secure transmission of information, chats and documents
- additional dashboards in the HOOC ManagementPortal for a detailed overview of the entire information and communication flow
- a quick registration with a QR code
- a clear traceability of processes, disruptions and decisions in the history log

A THING OF THE PAST

No more …
- unclear responsibilities and unread e-mails or queries
- long phone calls and endless WhatsApp messages until a problem is solved
- missing communication or lost/forgotten information
- time-consuming coordination between teams and external service providers

A MUST HAVE FOR

HOOC Collab is a huge plus for …
- Operation or organizational management services
- Real estate management
- Facility management
- Technical services

DID YOU KNOW?

… that you can also brand your HOOC Collab with your own company's design?

… that you have the possibility to store your data up to 2 years?

… that our service is tested and certified by nationally recognized institutions and experts?

Let's get down to the nitty-gritty of …

THE TECHNOLOGY BEHIND HOOC COLLAB

INTERFACES

- API interfaces
- Possibility to connect third-party systems

CHAT FUNCTIONS

- Broadcast channel: Sending of unilateral messages/documents for mere acknowledgement (without interaction, recipients are not displayed)
- Team channel: Bilateral chat function for the professional exchange between all involved actors
- Alarm messages (in combination with HOOC Alert): Sending of fault messages, acknowledging alarms or escalating them

TRACEABILITY

- Overview of all notifications and chats from all groups (dashboard / HOOC ManagementPortal)
- Overview of who has read which message at what time (dashboard / HOOC ManagementPortal)
- Overview of all the notifications from the groups in which the user is active (display / HOOC CollabApp)
- Possibility to save data for up to 2 years

SMART USER MANAGEMENT

- Management of different users and identities
- Import and synchronization of user data
- Login with a standardized or personalized text invitation (PDF or QR code)
- Management of different recipient groups (e.g. team HVAC and team Elevators)

COMMUNICATION CHANNEL

- Sending of push messages in case of system failures or other malfunctions
- Sending of documents, technical data, pictures and images
- Chat and instant messaging
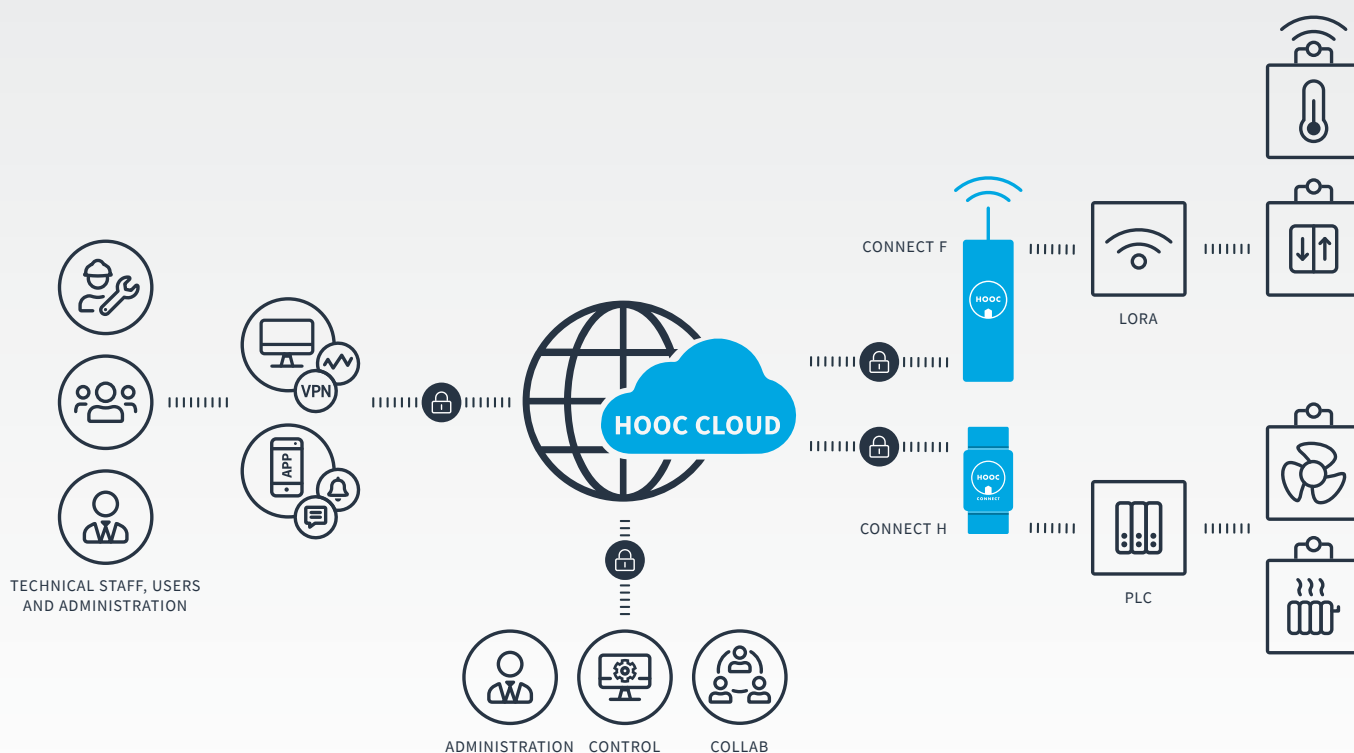- Sending of instructions and tasks

COMPATIBILITY WITH OTHER SOLUTIONS

- HOOC Alert for the smart alarming in case of system failures
- HOOC Control for remote control of technical facilities

THE HOOC COLLAB MECHANISM

Collaboration, communication, cooperation: (from left to right): The user logs in with the HOOC CollabApp or the HOOC ManagementPortal, which are connected to the HOOC Cloud via a secure VPN connection. By means of the HOOC gateways and in combination with other HOOC solutions (e.g. Alert or Control), the status of all systems and installations will be displayed. Besides, the user can be informed by the management about new safety regulations or any other technical instructions (administrative aspect). Thanks to the possibility of adding pictures and documents like test protocols, the client and his service team will be able to maintain their technical infrastructure efficiently (control aspect). As the HOOC Collab solution is based on a strongly encrypted connection, tasks and documents can also be forwarded to external service providers or involved third parties (collab aspect).

TECHNICAL STAFF, USERS
AND ADMINISTRATION

VPN

APP

HOOC CLOUD

ADMINISTRATION   CONTROL   COLLAB

CONNECT F

CONNECT H

LORA

PLC

HOOC CONTROL

Do you sometimes feel like you are rushing from one construction site to the other?

SIT BACK AND RELAX.

Because with HOOC Control you now have your systems and HVAC installations within reach.

With only a few clicks on your HOOC ClientApp, you can easily monitor your sites, change their settings, query states and view trend data. And that all – just in a matter of seconds. And the greatest thing about it: This does not only apply to your new and recent equipment. The KNX, Modbus or LoRa standard enables you to retrofit also your older systems and installations. So that the technology comes to you. Not the other way around.

⊕ WHAT'S IN FOR YOU

HOOC Control offers you …
- a easy handling: View data or change settings with just one click
- a simple visual display that can be personalized (e.g. icons, colours, units of measurement)
- a smart upgrade (retrofit) of different types of older systems
- an access for an unlimited number of users

⟲ A THING OF THE PAST

No more …
- long drives from one site to the other
- time-consuming on-site control and monitoring
- incompatible systems that cannot communicate with each other
- lengthy adjustments of HVAC systems

⌂ A MUST HAVE

HOOC Control is the perfect tool for …
- System integrators in the building technology
- Property management, smart homes and facility management services
- Communities and public institutions

DID YOU KNOW?

… that together with HOOC LoRa you can also measure indoor climate, detect water leaks and monitor doors and windows?

… that you can connect HOOC Control with our HOOC Alert and thus receive alarm messages in case of system failures? That those will be send via e-mail, telephone, SMS or app directly to the person responsible and/or to the technical service?

… that we have a large network of resellers happy to help you with any questions and requests?

Let's get down to the nitty-gritty of …

THE TECHNOLOGY BEHIND HOOC CONTROL

INTERFACES

- Interfaces to Modbus TCP/IP (e.g. Wago, Saia, Beckhoff, Siemens Logo!8/S7)
- Interfaces to KNX
- Interfaces to HOOC LoRaWAN sensors
- HOOC REST API interfaces
- Connection via LTE and WLAN/WAN/LAN
- Integration into existing systems possible
- Data point mapping between Modbus TCP/IP, LoRa and KNX

SMART UI

- Smart UI function for displaying and adjusting data via HOOC ClientApp
- Bidirectional real-time access (read and write) to data points via HOOC CientApp
- Basic trend data display
- Possibility to display or hide certain data points for specific user groups
- Different representation of values (e.g. text, switch, button)

SMART USER MANAGEMENT

- VPN connection to all sites
- State-of-the-art encryption
- Authentication and management of all users
- Registration / administration of different user types
- Attribution of time-limited accesses
- Attribution of function-limited accesses

CUSTOMIZATION

- Choice of language, text colour, icons, etc.
- App branding with the company's design

SECURE REMOTE CONTROL

- Possibility to cover multiple end devices per system
- Data recording in the HOOC Cloud
- Import and export of data points
- Data transport thanks to HOOC fieldbus connector
- Status monitoring of values («OK», «offline», «transient»)
- Typed data points (BOOL, INT, REAL, STRING, etc.)
- Conversion of measured values (linear scaling, inverting)
- Definition of different measurement units (LATEX format)
- Real-time packet monitor and packet memory (for KNX and LoRa)

COMPATIBLITY WITH OTHER SOLUTIONS

- HOOC Alert for the automatic notification in case of system malfunctions
- HOOC DataCollect for visually appealing and detailed data overview as well as for long-term data storage
- HOOC LoRa for smart retrofitting of older systems

THE HOOC CONTROL MECHANISM

Remote control (from left to right): The user (technical manager, operator, end customer, etc.) logs in via the HOOC ClientApp (or the HOOC ManagementPortal), where all the data of his systems is displayed. Hence, he can monitor and control them remotely via the HOOC Cloud and the gateways. Regardless of whether it is a PLC or a KNX system, the user can directly change target values or adjust settings. Thus, HVAC systems can be adjusted remotely, temperatures can be lowered, light sources can be switched on and off, and much more. A special feature of HOOC Control is that together with HOOC DataCollect, it can also generate trend data. Thus, HOOC Control is not only the perfect tool for remote control, but also enables operational planning, file transfer and messaging (Collab).
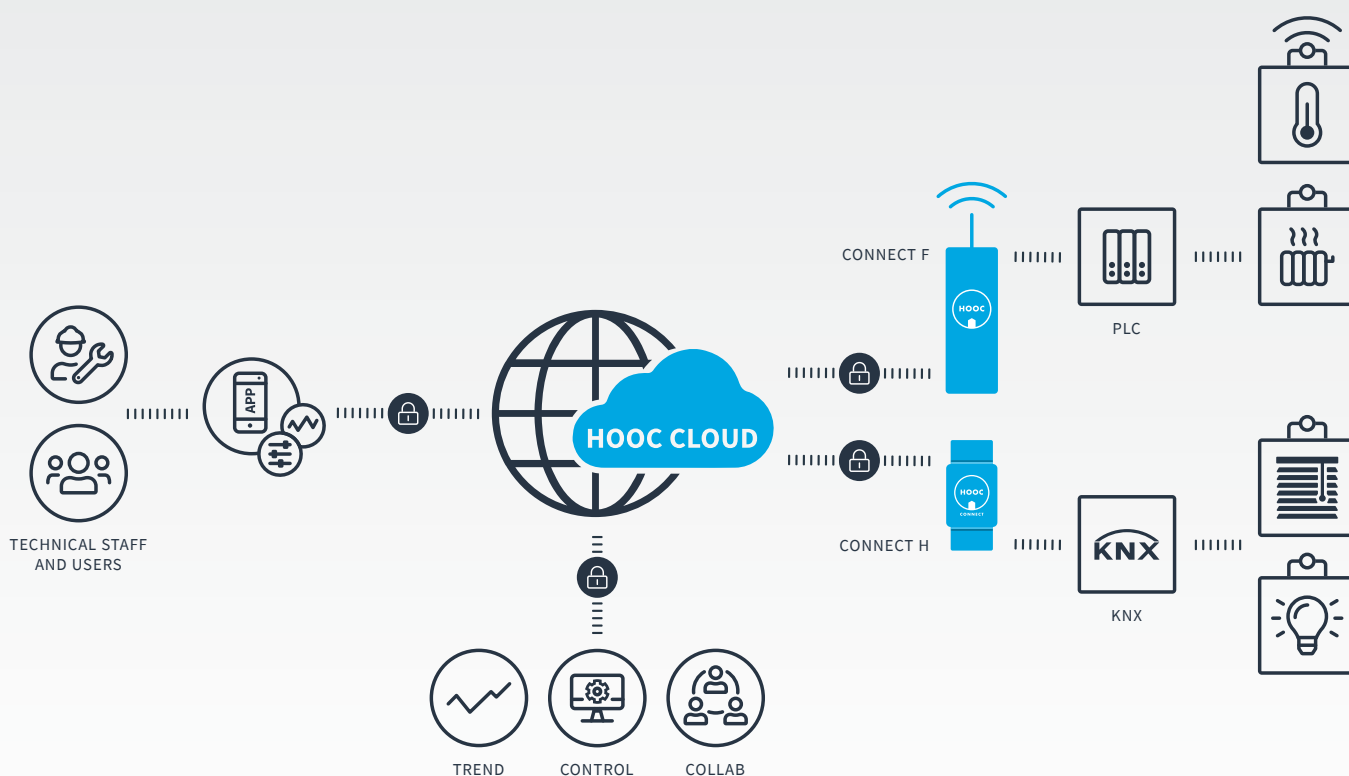
HOOC CROSSLINK

Do you sometimes get the feeling that you have lost control over your systems and multi-site facilities? Did you ever wish you would be …

THE MASTER OF YOUR PLANTS' DESTINY

… again? Then it is time to get you briefed on HOOC CrossLink.

Because thanks to its sophisticated technology, you can permanently interconnect all your technical sites, independently of their location, type or age. CrossLink is composed of two parts. On the one hand, you have the system networking, with which you can centralize data of different installations. On the other, you have the site(-to-site) networking which allows cross-site communication. Therefore, with CrossLink you cannot only access your systems, but potentially orchestrate and adapt your whole technical process.

WHAT'S IN FOR YOU

HOOC CrossLink offers you …
- a simple plug&play solution without the need of adapting the existing infrastructure
- a fast connection even over the longest distances
- a possibility to centralize data
- a transparent cross-location network

A THING OF THE PAST

No more …
- complicated setups of the network infrastructure
- lack of data overview
- costly maintenance services
- time-consuming coordination with third-party providers

A MUST HAVE

HOOC CrossLink is perfect for …
- the visualization of HVAC systems and industrial control systems
- the building technology of residential buildings
- the connection of office locations
- the networking of water supply systems

DID YOU KNOW?

… that you even have the possibility to receive automatic alarm messages in case of system failures (HOOC Alert)?

… that we also offer specific embedded and customized solutions?

Let's get down to the nitty-gritty of the …

TECHNOLOGY BEHIND HOOC CROSSLINK

INTERFACES

- Interfaces to LTE/mobile networks
- Interfaces to WLAN/WAN/LAN
- Connection of third-party systems
- VPN connection to networks, systems and technical infrastructure
- Connection via physical gateways
- Possibility to integrate directly in hardware components (embedded solution)

MANAGEMENT AND SECURITY

- Possibility to run part of the business operation in a specific data center
- Mapping of IP devices of any IP subnet into a central IP subnet with freely selectable IP addresses
- DHCP and network filter
- Attribution of VLAN tags
- Strongly secured connection
- Specially developed HOOC Cloud Service

SMART USER MANAGEMENT

- Two-factor authentication
- Smart Access Management (e.g. time-limited accesses)
- Centralized management of various systems and infrastructures

DEVICE INTERCONNECT (SEDIC)

- System networking
- Data gathering from different plants and systems
- Communication between a central system to decentralized controls and programs
- Connection of control systems with central SCADA system
- No on-site adaptation of IP addresses necessary thanks to IP address mapping
- Access and history logs
- Networking via OSI layer3

NETWORK INTERCONNECT (SENEC)

- Site networking
- Data exchange from different cross-located sites
- Site-to-site VPN
- Support for any ethernet-based protocol including BACnet
- Attribution of IP addresses may be necessary
- Networking via OSI layer 2 for broadcast / multicast traffic

COMPATIBILITY WITH OTHER SOLUTIONS

- HOOC Alert for the automatic warning in case of system malfunctions
- HOOC Collab for instant messaging and data transfer
- HOOC Embedded and HOOC Customize for special customer solutions

THE HOOC CROSSLINK MECHANISM

System and site networking (from left to right): Both services are orchestrated via the HOOC Cloud and the HOOC gateways. It does not matter whether you work with KNX devices, PLC or other technical infrastructure. HOOC Cross-Link offers you a highly secure access to all your systems and sites. Its VPN tunnel is the perfect base for all other HOOC solutions in the era of Connect(ivity), Control and Collab(oration).

HOOC CLOUD

CONNECT   CONTROL   COLLAB
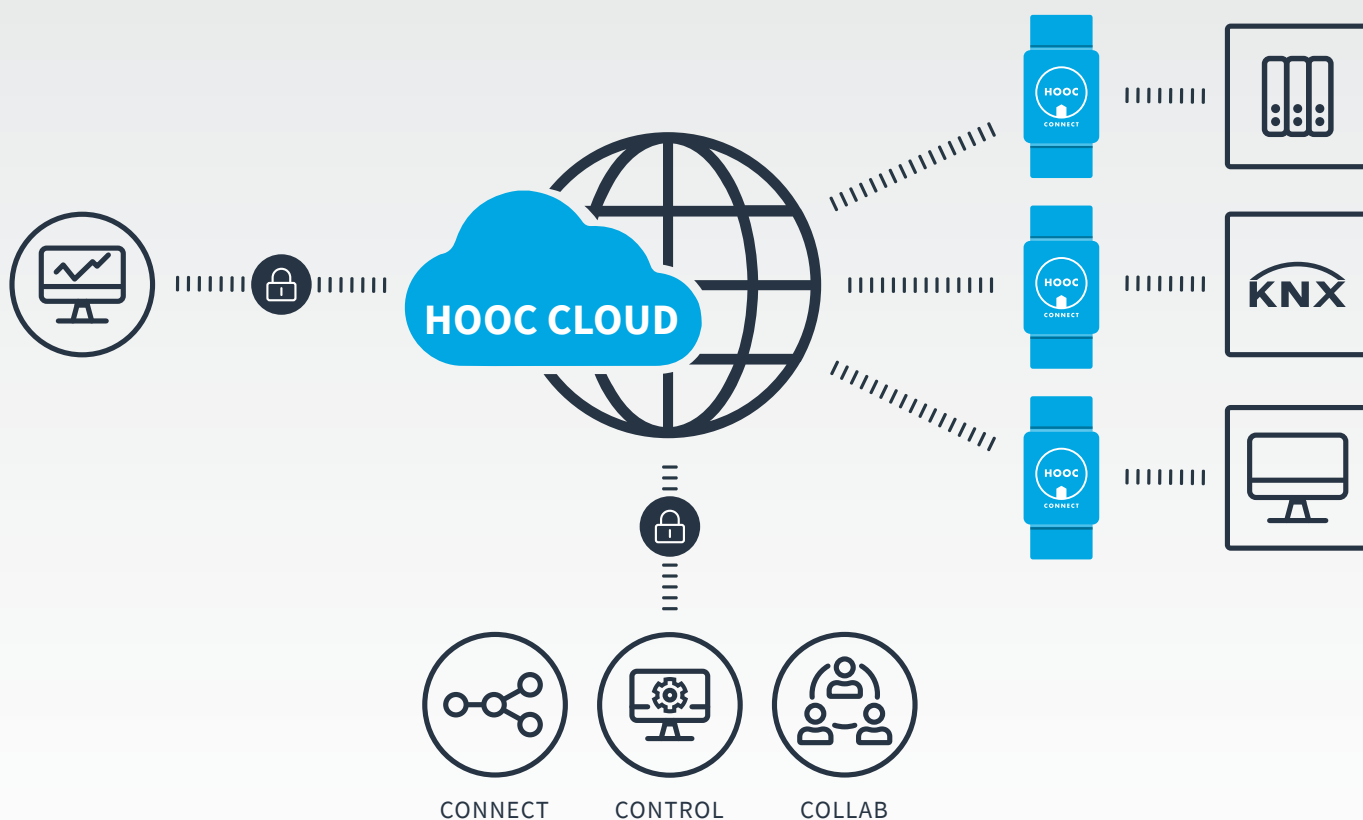
HOOC CUSTOMIZE

**A good idea is worth its weight in gold.
So what are you waiting for?**

LET'S DEVELOP TOGETHER.

Because finding solutions is not just our business, it's our passion.

Especially when it comes to building technology, industrial maintenance and smart city solutions, we love any crazy, so called «Mission impossible». Then where others stop, we come into play. Sounds like fun to you? Then we are definitely your team.

WHAT'S IN FOR YOU

With HOOC Customize you will benefit of …
- a team of experienced engineers, computer scientists and technicians
- an already existing wide variety of solutions which can be adapted or further developed according to your company's needs
- a large knowledge pool in the field of connectivity, control and collaboration

A THING OF THE PAST

No more …
- postponing
- waiting for the right moment

A MUST HAVE

HOOC Customize is the perfect fit for …
- entrepreneurs, intrapreneurs and creative visionaries that always think a little further

DID YOU KNOW?

… that thanks to the HOOC API interface even your most specific requirements can be fulfilled?

… we also offer specific embedded solutions for the integration in existing hardware devices?

… that all our apps can be branded according to your company's specific design?

… that we offer you the possibility to integrate our VPN service directly in to your own apps?

HOOC DATACOLLECT

When it comes to monitoring your data, you only want the best visualization? We too. That's why with HOOC DataCollect:

A PICTURE IS WORTH A 1000 WORDS.

But the monitoring is just the tip of the ice cake; the proof of the pudding lies in the reporting.

Because our HOOC DataCollect is far more than a simple monitoring software for data display. It not only allows collecting and comparing various values in graphically appealing dashboards, but also includes the export, forwarding and processing of relevant data. This makes HOOC DataCollect an interesting tool for operators and engineers, as well as for marketing and finance managers. In short, anyone who needs to check values, analyze and compare figures.

WHAT'S IN FOR YOU

HOOC DataCollect offers you …
- an automatic display and overview of your data
- a versatile and compact display of data trends
- a sophisticated comparison of your values from different plants and locations
- a clear data display of the previous day, month and year
- an automatic dispatch of reports via e-mail

A THING OF THE PAST

No more …
- tedious aggregation of measured values
- complicated gathering of measured data (taking pictures, writing it down, etc.)
- missing figures of certain plants and locations
- resource-intensive creation of overviews and spreadsheets
- laborious analysis of raw data

A MUST HAVE

HOOC DataCollect is ideal for …
- Plant and system monitoring
- Facility management and technical services
- All kind of optimization processes

DID YOU KNOW?

… that HOOC DataCollect also makes long-term storage possible?

… that with HOOC DataCollect you can not only compare actual values with setpoints, but also with median and mean values?

… that our systems are based on the same tested and certified security standards as the Swiss banks?

… that we are one of the technology and price leaders in the field of Connect(ivity), Control and Collab(oration)?

Let's get down to the nitty-gritty of the …

TECHNOLOGY BEHIND HOOC DATACOLLECT

INTERFACES

- Interfaces to Modbus TCP/IP (e.g. Wago, Saia, Beckhoff, Siemens Logo!8/S7)
- Interface to Grafana
- Interface to KNX
- Interfaces to HOOC LoRaWAN sensors
- API interfaces
- Connection to external systems

SAFETY AND SECURITY

- VPN connection over HOOC Cloud
- No port forwarding
- State-of-the-art encryption
- Additional security features such as two-factor authentication

MONITORING

- Visualization of field level data
- Data acquisition of actual values
- Calculation of mean, median, minimum and maximum values
- Comparison of actual and target values
- Overview in Grafana dashboards

SMART USER MANAGEMENT

- Authentication, verification and management of users and connections
- History log

ANALYSIS

- Generating analysis data
- Creating tables and overviews

REPORTING

- Data export into CVS, JSON and Excel files
- Automatic report delivery via mail
- Selection of time intervals for the report delivery (daily, weekly, monthly, yearly)
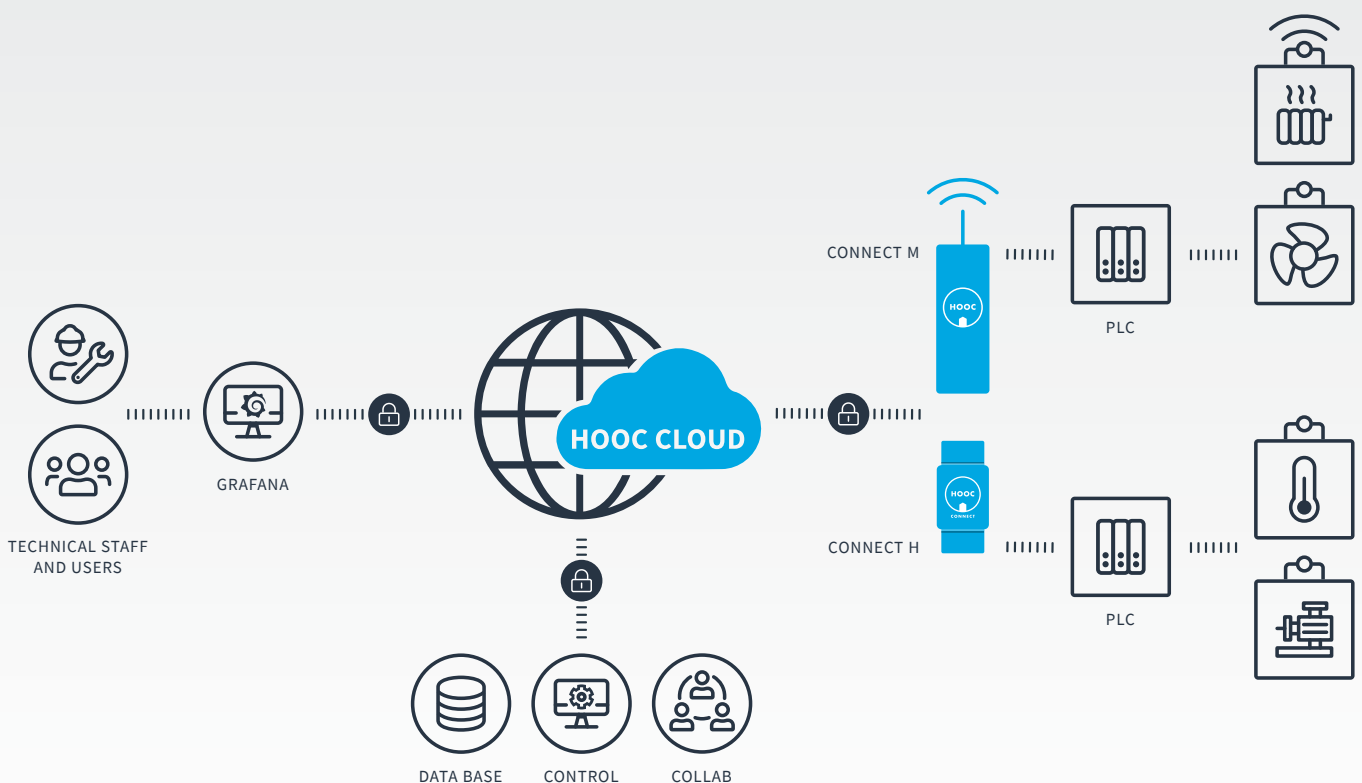- Aggregation of data sets (mean value, difference to last value)
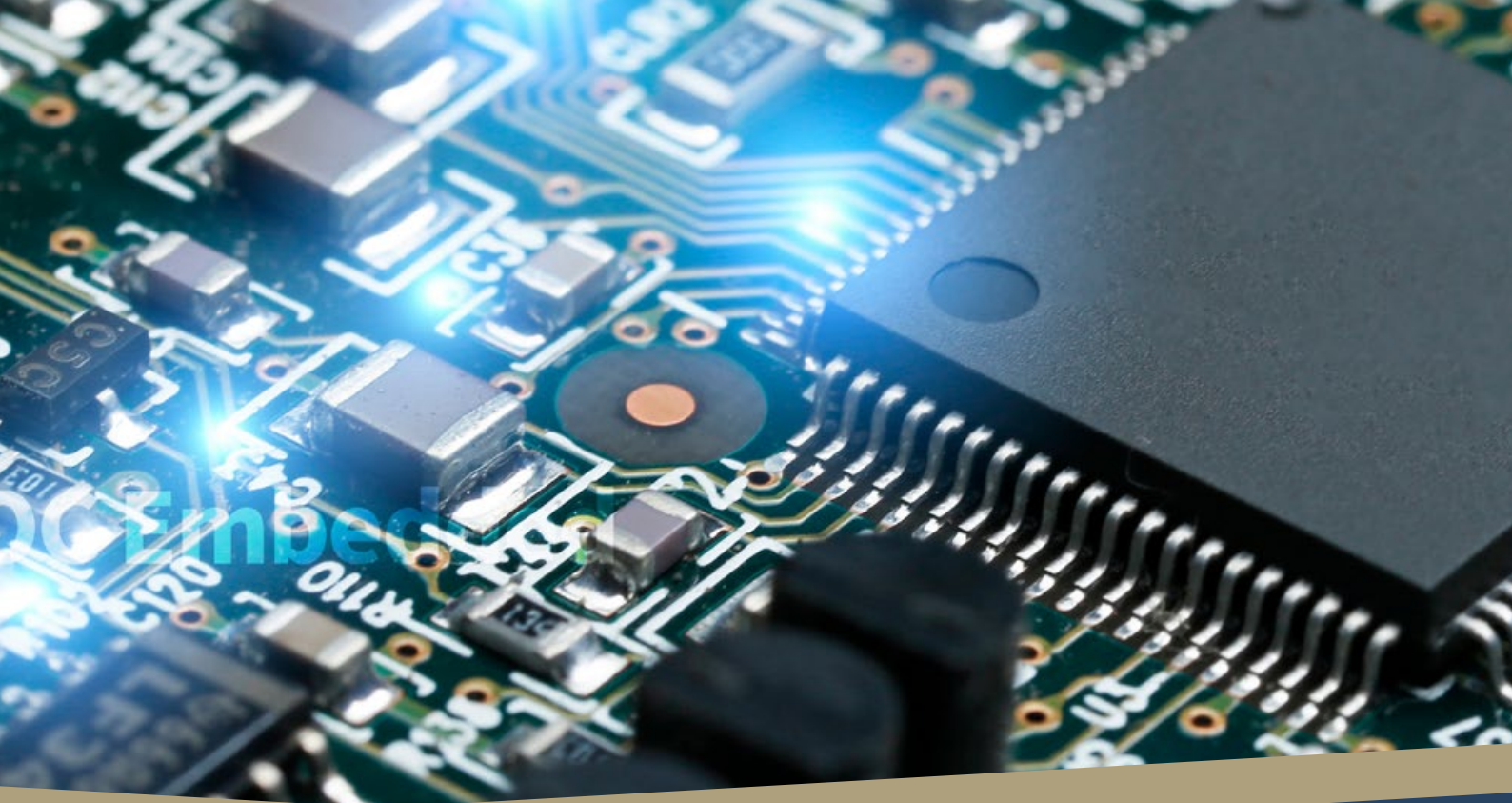
DATA STORAGE AND DATA MEMORY

- Data storage (up to 24 months)
- Storage of sent reports

THE HOOC DATACOLLECT MECHANISM

Data collection, display and dispatch (from left to right): The data will be displayed by the open source platform Grafana, for which the HOOC DataCollect provides an interface and which is directly connected to the HOOC Cloud. Here the different values of one's installation park (heating, ventilation, air conditioning, etc.) are centralized (via the HOOC gateways) and if required, will be stored for up to two years. Besides the monitoring and storage of data, HOOC DataCollect also allows the exporting and reporting of data and values via mail.


TECHNICAL STAFF AND USERS

GRAFANA

HOOC CLOUD

CONNECT M

PLC

CONNECT H

PLC

DATA BASE   CONTROL   COLLAB

HOOC EMBEDDED

Are you looking for that certain something that will make your product even more unique? Then we might have …

THE PERFECT SOLUTION FOR YOU.

HOOC Embedded: Our software, implemented into your hardware.

You already know our gateways and how they work when it comes to VPN, data transfer, remote control, monitoring and reporting? Perfect! Then you might be pleased to hear that our solutions are not only available as physical gateways but also as embeddable version. Costly OEM solutions with minimum order quantities? That was once. Because we offer you individual licenses, where you pay only for the services and functionalities that you really need. You have the hardware and the idea; we have the software you need. And all this at an extremely fair pricing.
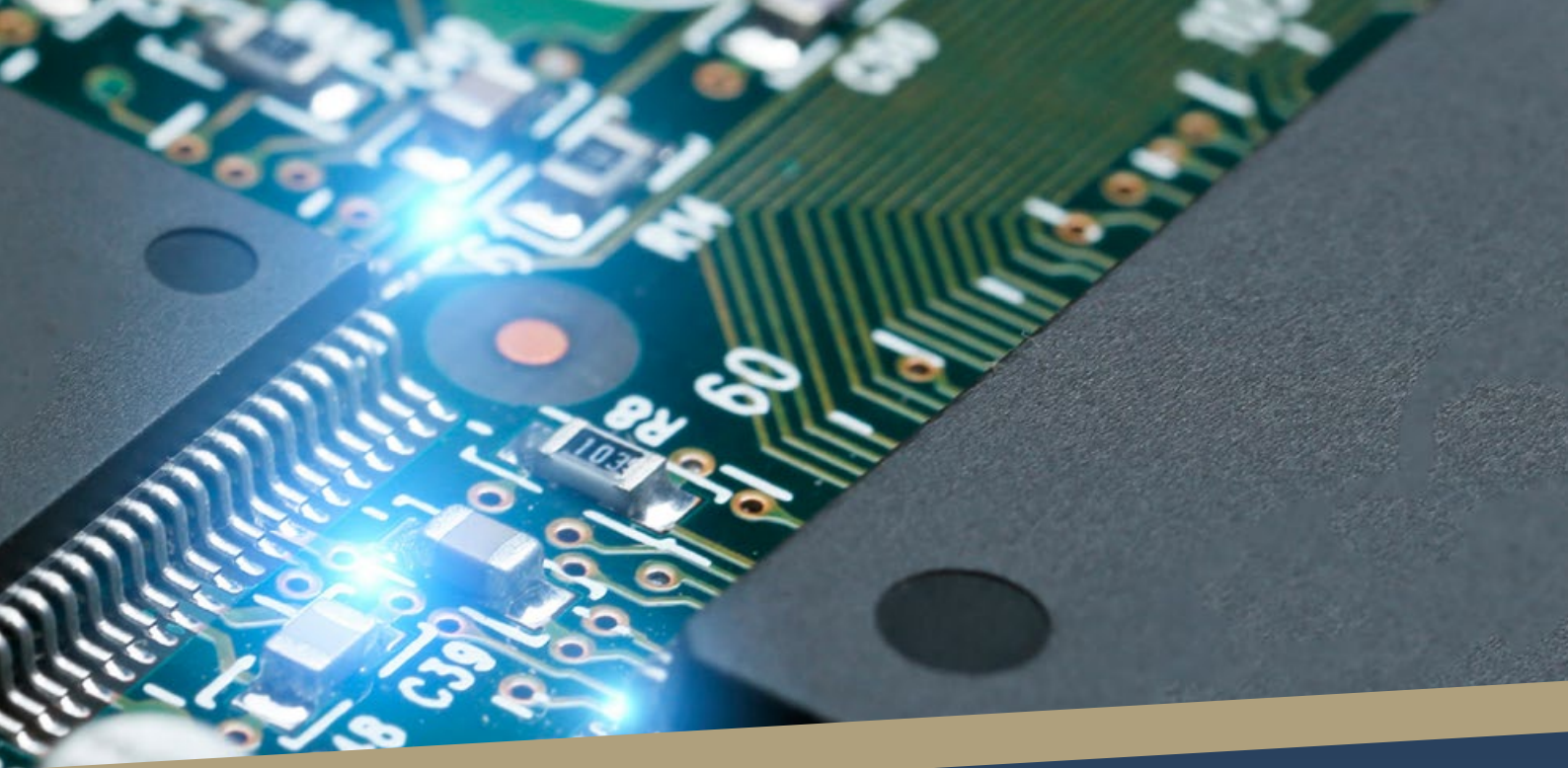
WHAT'S IN FOR YOU

HOOC Embedded offers you …
- a practical software solution for the embedding into existing systems
- an uncomplicated implementation without additional hardware requirements
- the possibility to integrate the solution also into systems with limited computing power and storage capacity
- an unlimited number of fields of application

A THING OF THE PAST

No more …
- acquisition of additional hardware or the necessity of additional interfaces
- minimum purchase order quantities (as with OEM solutions)
- dependencies on various third-party products

A MUST HAVE

HOOC Embedded is a real asset for …
- Manufacturers of industrial control systems and HMI's
- Hardware developers and system integrators
- Manufacturers of smart home solutions
- IT service providers

DID YOU KNOW?

… that thanks to the HOOC API interface even your most specific requirements can be fulfilled?

… that we offer you the possibility to integrate our VPN service directly in to your own apps?

… that our service has been tested and certified by recognized Swiss cyber security experts?

Let's get down to the nitty-gritty of the ...

TECHNOLOGY BEHIND HOOC EMBEDDED

EMBEDDED GATEWAY

- Integration of the HOOC Cloud solution into existing products
- Solution with small footprint
- VPN remote access for applications in the area of remote maintenance, remote control, system and site networking
- API interfaces for secure operation and customer-specific update mechanisms
- Supported platforms: Darwin, Linux (kernel 3.1 and higher), others on request
- Supported processors: ARM V6, ARM V8, AMD 64, MIPS (more on request)
- Integration in e.g. Raspberry Pi, Wago PFC200, OpenWrt platforms
- Deployment as binary for individual integration or as Docker container
- System requirements can be reduced individually (min. 3MB Flash/16MB RAM) depending on the functionality needs

MANAGEMENT AND SCALABILITY

- Connectivity as a service: Individually configurable user and access management
- Automatic software updates
- Downloads for Docker images or binaries available
- Scalability thanks to microservice architecture

SECURITY CONTROL

- Strict separation of networks in the HOOC Cloud
- Agile development, testing, rolling out and monitoring according to DevOps methods
- Special identification and authentication mechanisms
- Secure state-of-the-art encryption and signing algorithm

SAFETY CONTROL

- Performance and failure monitoring
- Access logging
- Security Features

ADD-ONS

- Interfaces to fieldbus protocols like Modbus TCP/IP and KNX IP
- REST API for communication with higher-level applications
- Customer specific API interfaces

COMPATIBILITY WITH OTHER SOLUTIONS

- HOOC Alert for the automatic warning in case of system malfunctions
- HOOC Collab for the secure professional communication between employees and service providers
- HOOC Control for the remote maintenance of systems and installations
- HOOC CrossLink for modern site and system networking
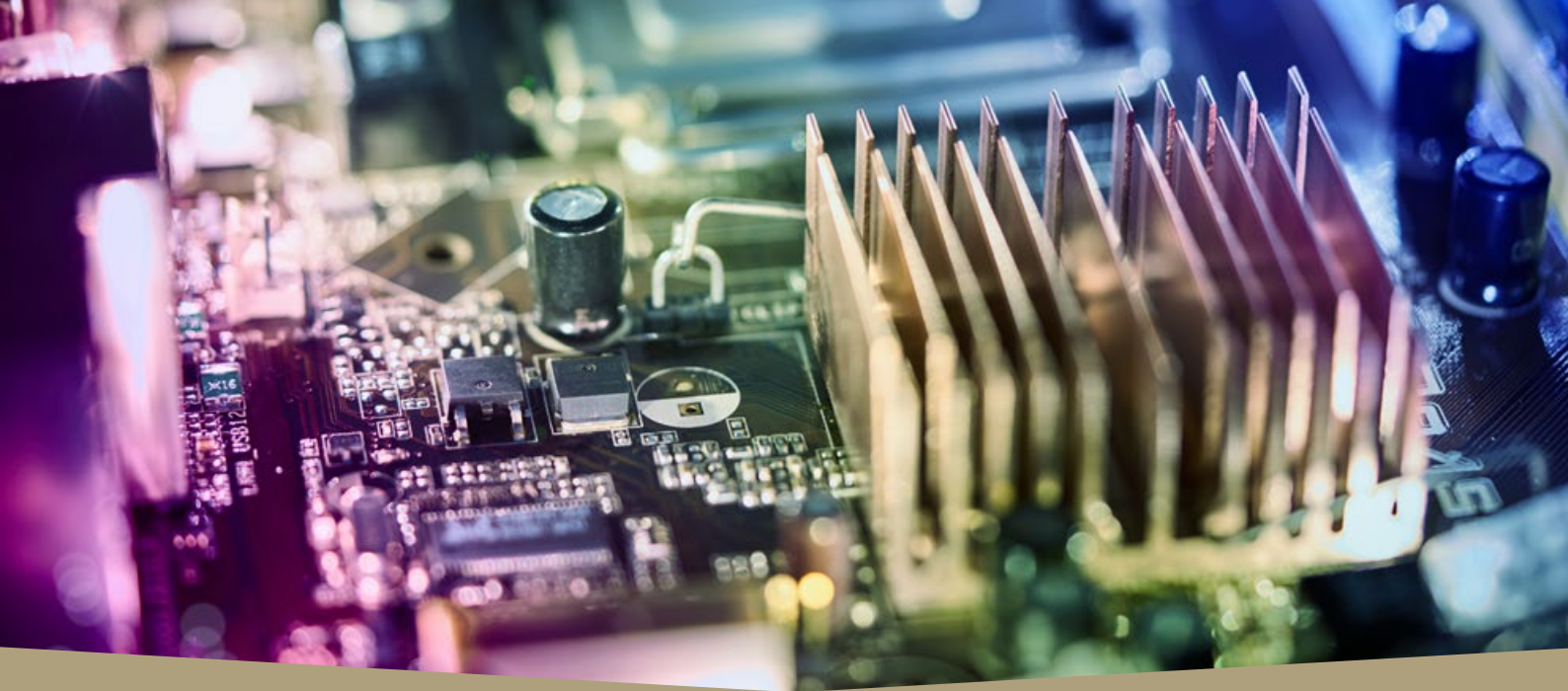
THE HOOC EMBEDDED MECHANISM

Integrated Software (from left to right): The technical manager or operator uses his HOOC ClientApp or the HOOC ManagementPortal in order to log into the system. Via the HOOC Cloud and the company-specific hardware with the integrated HOOC embedded gateway, he then gets access (Connect) to his different IT networks, HVAC systems or home automation solutions, in order to control, adjust or maintain them from distance (Control). Thanks to a special alerting solution, he will be informed in case of system malfunctions and thus, can easily coordinate repair work (Collab).

TECHNICAL STAFF AND USERS

HOOC CLOUD

PLC

CLIENT HARDWARE

CONNECT   CONTROL   COLLAB
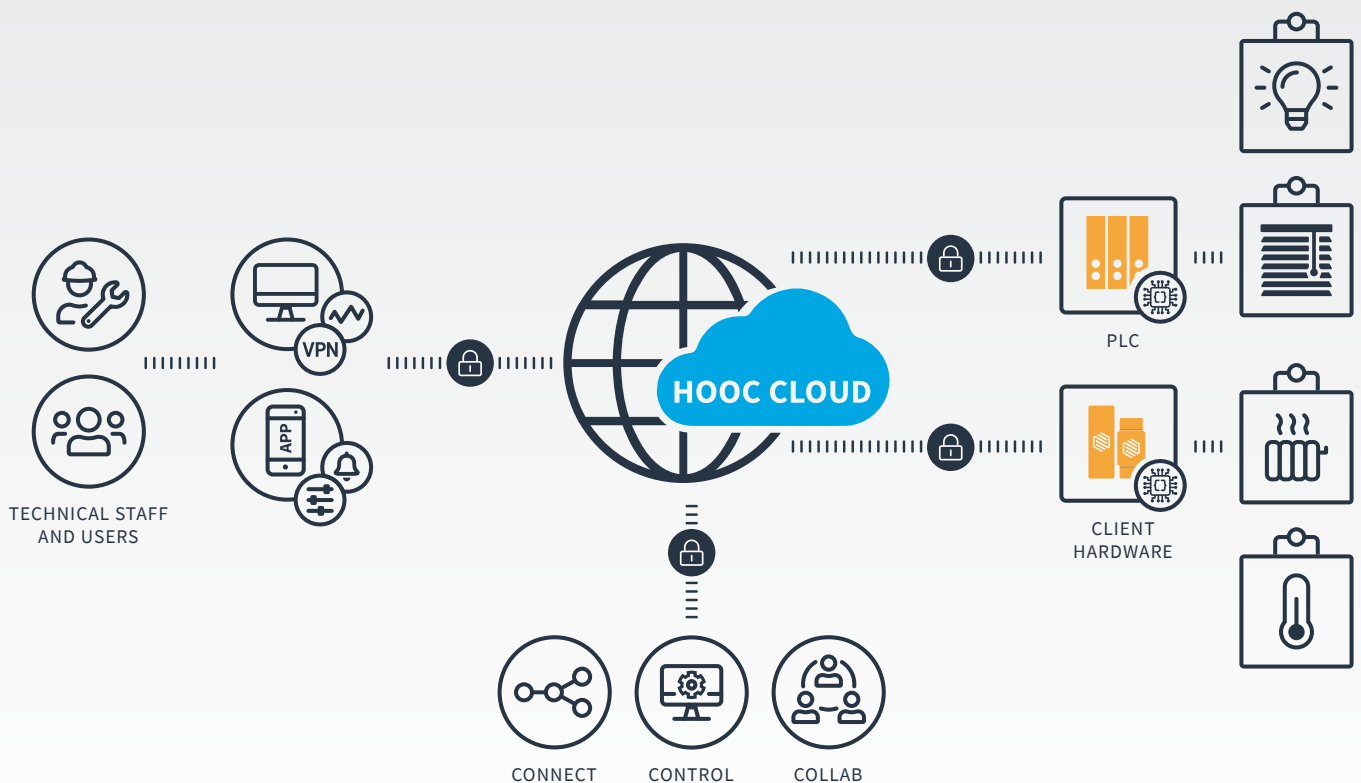
HOOC LORA

> **Over the years, your technical infrastructure has taken on a life of its own and disruptions are almost a daily occurrence? Then, ...**

IT'S TIME TO TRY SOMETHING NEW.

Test our HOOC LoRa solution.

Thanks to its actuators and sensors, you can send small data packages over long distances – regardless of the type and age of the technical infrastructure. Contact your distributor and choose your personal HOOC LoRa (gateway, actuators and sensors). Once the package arrived, connect the gateway to the internet, install the actuator and the sensors to your system and get it started. Due to its «low power / wide area» network, you can now transfer your data at low power over long distances. What makes LoRa so unique is the fact that it offers you a high deep indoor coverage. This means that in enclosed, isolated or large-area spaces (basements, cellars or cities) where other fieldbus protocols with their necessary wiring and cabling can be costly or difficult to install, the radio technology LoRa won't let you down. So whether you use it in the fields of smart factory, smart farming or smart city – HOOC LoRa offers you a suitable alternative to fair prices.
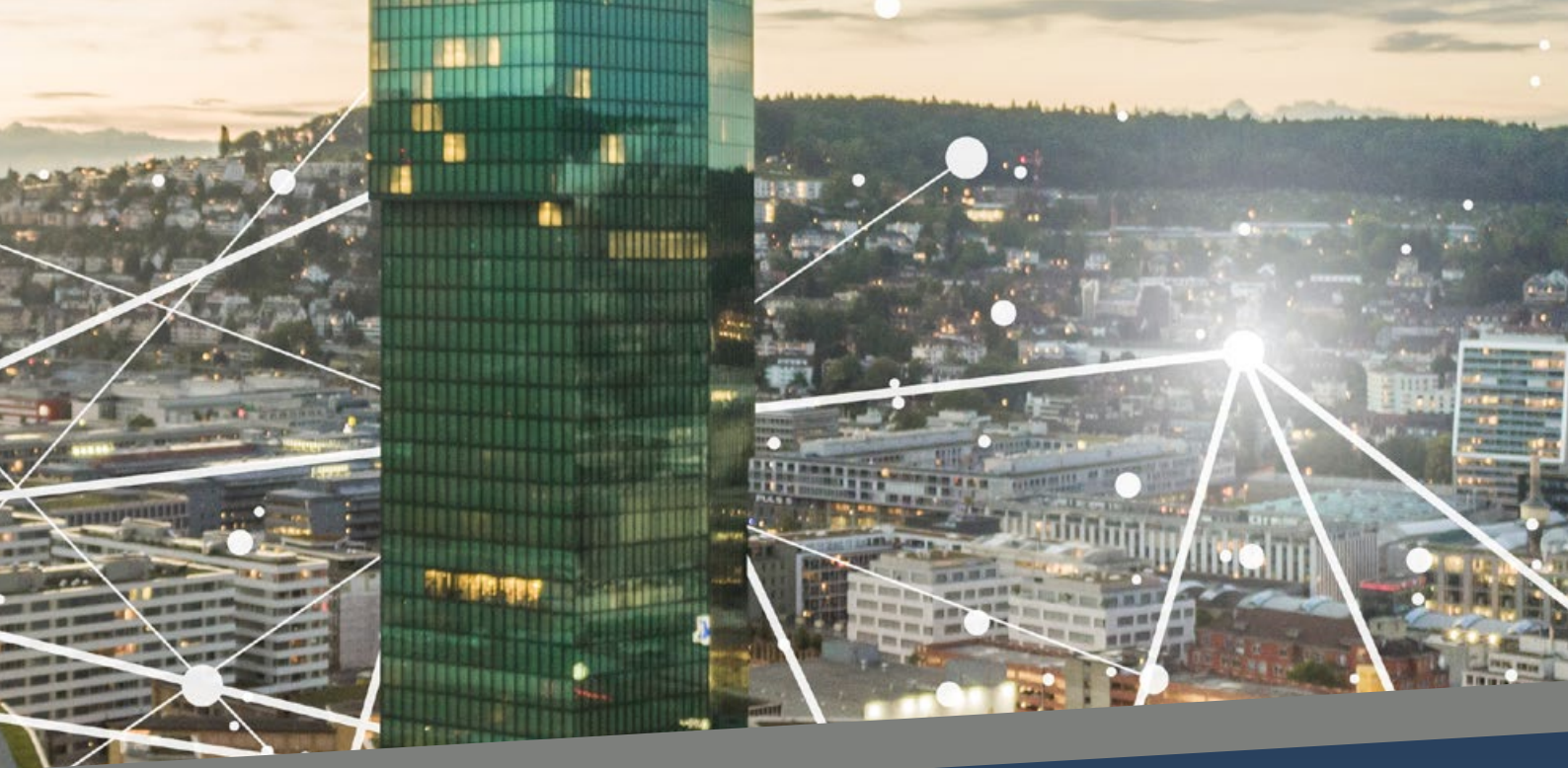
WHAT'S IN FOR YOU

HOOC LoRA offers you …
- a cost-effective transmission of sensor data
- a simple plug&play solution
- a first-level support provided by your distributor
- a wide range of sensors and actuators from renowned manufacturers
- simple and efficient retrofit of your older installations

A MUST-HAVE

HOOC LoRa is a real game-changer for …
- Schools and administrations
- Hotels and resorts
- Smart city, smart farming and smart factory

A THING OF THE PAST

No more …
- annoying malfunctions and unnoticed system failures
- recurring technical problems (cold shower water in residential buildings, unheated school rooms, etc.)
- expensive water damage in basements, garages or parking lots
- unnecessary costs due to inefficient plant management
- long travel distances for on-site monitoring

DID YOU KNOW?

… that you can even automatically inform the technical service in case of system failure (together with HOOC Alert)?

… you can customize our app with your own company branding?

… that we also offer integrated solutions (HOOC Embedded) and customized products (HOOC Customize)?

Let's get down to the nitty-gritty of ...

THE TECHNOLOGY BEHIND HOOC LORA

SENSORS AND ACTUATORS

- pre-configured sensors and actuators
- battery-powered options
- other actuators/sensors on request
- easy registration of LoRa devices in the HOOC ManagementPortal

LORAWAN NETWORK

- a LoRaWAN network provided by HOOC (and operated by its customers)
- a minimization of interference and more data transfer efficiency
- a low power consumption thanks to spread spectrum techniques
- a penetration of buildings down to basements and control rooms (deep indoor coverage)

GATEWAYS

- Connect F: Specific gateway for LoRaWAN radio coverage
- Connect F: Packet forwarder for all HOOC LoRa sensors
- Connect F: Internet connection via LAN or WLAN interface
- Connect M: Mobile network

INTERFACES

- integrated HOOC REST API for real-time access to data points
- customer specific API interfaces
- connection to external systems
- protocol converter (Modbus TCP/KNX) for transmission of measured values to local control systems

DATA MANAGEMENT

- trend data display on the HOOC ClientApp
- data management via the HOOC ManagementPortal
- radio field measurement on the packet monitor (propagation factor, reception power, etc.).
- data storage for up to two years

SMART USER MANAGEMENT

- individual user registration and access authorization
- access log for optimal tracking and tracing
- the possibility of blocking or releasing higher hierarchy levels

RETROFITTING

- connecting old installations with sensors/actuators via LoRa technology
- data exchange between KNX, Modbus, LoRa and local controls thanks to protocol converter
- efficiency increase in data transfer thanks to low-power wide area network

COMPATIBILITY WITH OTHER SOLUTIONS

- HOOC Alert for smart alarming in case of malfunctions
- HOOC Control and DataCollect for intelligent system monitoring
- HOOC Access for remote access (VPN)

THE HOOC LORA MECHANISM

LoRaWan radio connection: The user (technical manager, end customer, etc.) logs in with the HOOC Client-App or the HOOC ManagementPortal. Over the HOOC Cloud and by means of the HOOC gateway, he will then be able to monitor and check his systems (heating, air conditioning, etc.).

All the plant values, user access and system data can be stored for 3 up to 24 months. Thus, LoRaWAN represents an interesting alternative radio technology for remote control as well as a helpful service tool for the exchange among professionals.

TECHNICAL STAFF
AND USERS

HOOC CLOUD

CONNECT F

DATA BASE   COLLAB   CONTROL
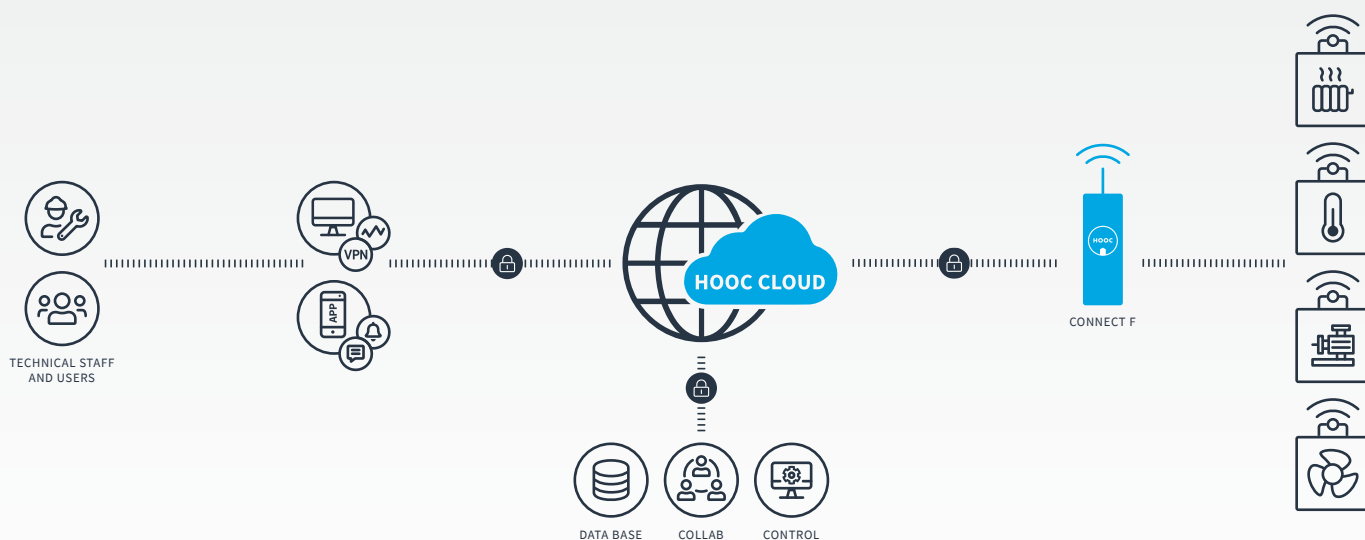
MORE INFOS

For end customers:	Contact one of our distributors
	https://www.hooc.ch/en-us/about-us/partners
For distributors:	Register under
	https://disti-en.promo.hooc.ch

Please find our latest videos, security features and product developments on our social media channels

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