

YCS 200...210: Mobile Building Services (MBS)

Mobile Building Services (MBS): Room operation, room reservation and Indoor Navigation via app

SAUTER Mobile Building Services (MBS) is a SAUTER Cloud solution that is offered for various applications for buildings and premises. In combination with the Mobile Room Control (MRC) app available for smartphones and tablets, it can control room conditions in apartment, hotel and office buildings. The easy-to-use app – even from outside the room or building – and the related user comfort help fulfil the requirements of planners and builders for a state-of-the-art building. In addition, reservations for meeting rooms, mobile workstations, parking spaces or equipment items (assets) can be made. Of course, e-mail invitations can be made directly from the MRC app including room reservations. Guests outside the organisation also receive temporarily valid access codes for the meeting period.

With the integrated Indoor Navigation, employees and guests can be navigated to the corresponding meeting rooms or mobile workstations. The navigation path with the current location is called up directly in the MRC app or from the invitation itself.

Features

- Connects the local building management, including the integral room automation, with the room operation via smartphone or tablet
- Control of lighting, temperature, window blinds and ventilation (depending on the building equipment)
- Direct access to information such as caretaker services, cafeteria schedule and other information
- Direct notification from the MRC app of caretaker services and other services such as comfort notifications, repair and cleaning requests, meeting room beverage orders, hotel and boarding house service requests
- Reservations for meeting rooms, mobile workstations, parking spaces or equipment items (assets)
- E-mail invitations including reservations directly from the MRC app
- Guest invitations: Sending temporary access codes for the agreed meeting period
- Integrated Indoor Navigation for employees and guests via MRC app
- Access and rights management via unique access codes for each device based on user profiles and dedicated room assignments
- Room identification and user access via iBeacon badges for smartphones and tablets (iOS and Android)
- Perfect for use in office buildings with meeting rooms and mobile workstations, hotels with business facilities, suites and rooms, as well as upscale apartment buildings
- High level of security and up-to-date functionality thanks to Microsoft Azure technology
- MRC app available free of charge in the Google Play Store and the Apple App Store



Overview of types

Type	Description
YCS200F300	MRC app subscription per apartment (1-5 access codes per apartment), price per apartment per year, annual subscription based on monthly use of the master access code per apartment, invoice date 1 year after project activation by basic subscription, automatically renewed
YCS200F320	MRC app subscription (without indoor localisation), price per device (badge) per room, annual subscription based on monthly use of access codes (badges), invoice date 1 year after project activation by basic subscription, automatically renewed
YCS210F300	MRC app subscription (with indoor localisation via iBeacon), price per device (badge) including access profile for rooms, annual subscription based on monthly use of access codes (badges), invoice date 1 year after project activation by basic subscription, automatically renewed
YCS200F200	MBS Cloud Basic subscription for up to 50 rooms/apartments, annual subscription with automatic renewal
YCS200F210	MBS Cloud Basic subscription for up to 150 rooms/apartments, annual subscription with automatic renewal
YCS200F220	MBS Cloud Basic subscription for up to 300 rooms/apartments, annual subscription with automatic renewal
YCS200F230	MBS Cloud Basic subscription for up to 500 rooms/apartments, annual subscription with automatic renewal
YCS200F240	MBS Cloud Basic subscription for up to 1000 rooms/apartments, annual subscription with automatic renewal

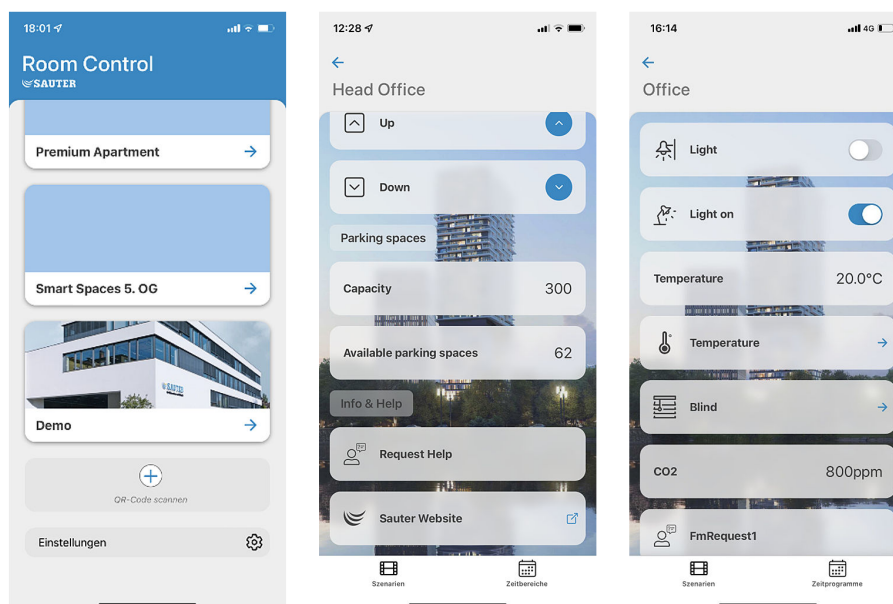


Type	Description
YCS210F200	MBS Cloud Basic subscription for office with indoor localisation for up to 50 iBeacons, annual subscription with automatic renewal to use YCS210F300 access codes
YCS210F210	MBS Cloud Basic subscription for office with indoor localisation for up to 150 iBeacons, annual subscription with automatic renewal to use YCS210F300 access codes
YCS210F220	MBS Cloud Basic subscription for office with indoor localisation for up to 300 iBeacons, annual subscription with automatic renewal to use YCS210F300 access codes
YCS210F230	MBS Cloud Basic subscription for office with indoor localisation for up to 500 iBeacons, annual subscription with automatic renewal to use YCS210F300 access codes
YCS210F240	MBS Cloud Basic subscription for office with indoor localisation for up to 1000 iBeacons, annual subscription with automatic renewal to use YCS210F300 access codes
YCS210F250	MBS Cloud Basic subscription for office with indoor localisation for over 1000 iBeacons, annual subscription with automatic renewal to use YCS210F300 access codes
YCS211F200	MBS Cloud Booking option, subscription per MS Exchange Online
YCS220F200	MBS Cloud Indoor Navigation option, subscription for up to 100 iBeacons
YCS220F210	MBS Cloud Indoor Navigation option subscription for up to 200 iBeacons
YCS220F220	MBS Cloud Indoor Navigation option subscription for up to 300 iBeacons
YCS220F230	MBS Cloud Indoor Navigation option subscription for up to 500 iBeacons
YCS220F240	MBS Cloud Indoor Navigation option subscription for up to 1000 iBeacons
YCS221F000	RTLS engineering support for Indoor Navigation per day excl. expenses for on-site work

Area of application

End user

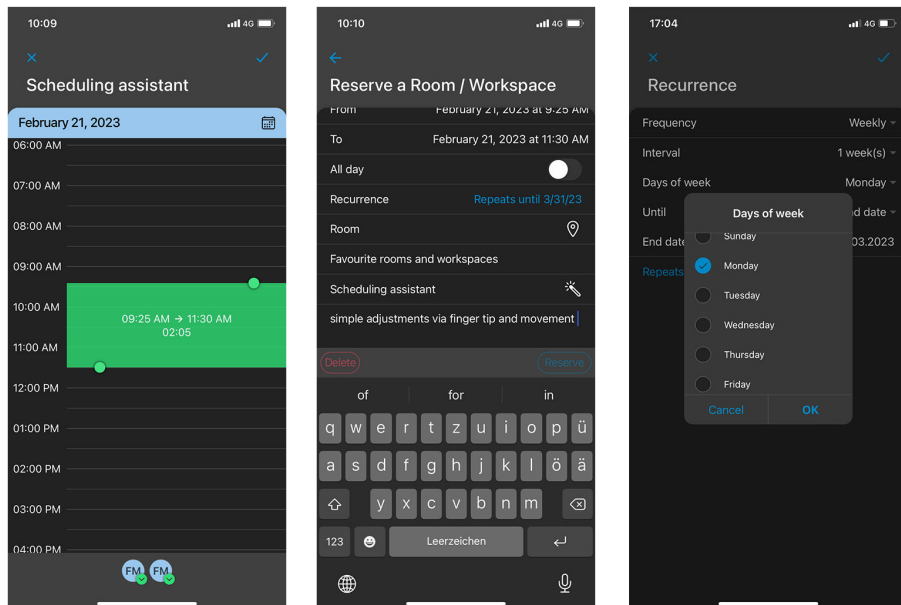
The end user uses the MRC app to display and control room functions such as lighting, window blinds, temperature etc., depending on the apartment and room equipment. In addition, meeting rooms, mobile workstations, parking spaces and assets can be reserved and invitations sent directly from the MRC app (including reservations). With the optional Indoor Navigation, the invited employee or guest can be guided to the reserved room or space. The app is available for iOS and Android.



Display and control of room functions

- Guest access with temporarily valid access code according to the meeting times
- Reservation assistant with time selection/time shift by touch and definition of recurring meetings
- Overview of reservations and services
- Secure authentication is provided by an access code that is made available via the MBS management console for each device. Only this key enables operation via the MRC app
- The end user in their capacity as main tenant, owner or employee can, in turn, assign access rights to family members, friends or subtenants via the MRC app
- Other functions include the quick activation of specific programmes via icons, such as access to canteen information and websites, and the direct reporting of faults to the facility management

- With iBeacon badges, individual rooms can be automatically identified with the smartphone and the linked MRC view displayed with the available operating options
- End users can override the defaults from the building management system with their own time programmes and scenes
- Individually configurable standard view, dark mode and adoption of corresponding iOS/Android setting



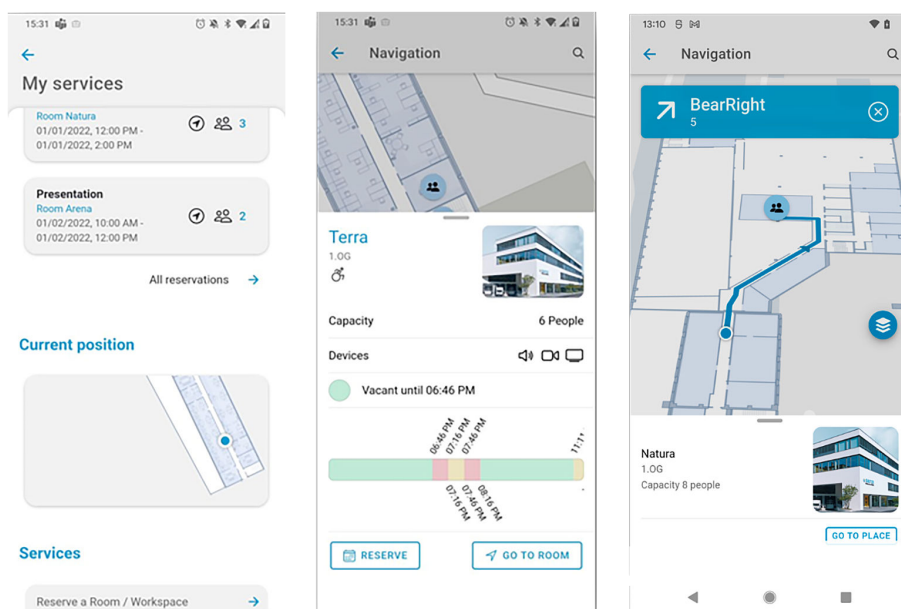
Reservation functions and dark mode display

Indoor Navigation

The “Indoor Navigation” service is available as an optional additional subscription (YCS220F2*0). The service is independent of the basic subscription (rooms or iBeacon) and the badges used, but requires one of the two variants.

A prerequisite is an iBeacon structure in the building that provides the following functions in the MRC app:

- Navigation assistant with building plan and current location
- Navigation to the reserved room or destination from the meeting overview or directly from the meeting invitation



MRC overview page with navigation services

Facility manager

The facility manager (operator) uses the MBS management console located in the SAUTER Cloud to administer the access rights of end users. Here they maintain additional information on the individual users and grant the access rights via a QR code. The QR code is automatically generated in the system and can be sent to the end user by e-mail according to the stored contact data.

- In the event of a change of tenant, the facility manager has the option of deleting the user access and all accesses associated with it. In the office area, for example, the user management is carried out by an authorised employee. This ensures that predecessors no longer have access after a change of tenant or owner
- The validity of the QR code can be timed in accordance with rental agreements and notice data as required
- When using iBeacons for room assignment, employee badges can be created that are linked to a profile. This way, the employee automatically has access to the rooms defined in the profile.

Invoicing model

The invoicing is via a subscription that is invoiced annually by SAUTER, usually with the facility management.

The subscription consists of two components:

- A basic fee for the operation of the MBS management services
- A variable portion based on the number of access codes (badges) used for apartments and rooms as well as users in the office building

The facility manager can pass on the fees for using the MBS management services and the app to the end user, for example via service charge billing per tenant, company or apartment. The fees are based on user reports that can be individually adapted to the use or rental period.

Requirements

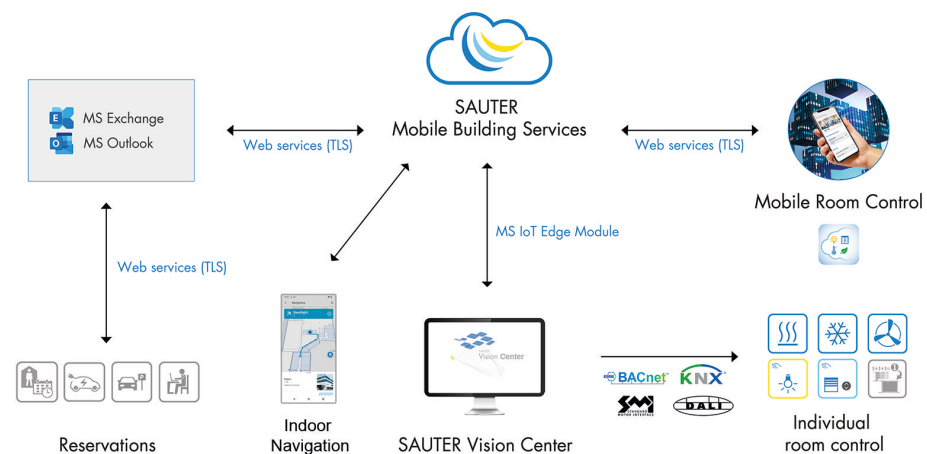
- SAUTER Vision Center (SVC) as a local building management system (BMS)
- SVC OPC UA server licence
- Connection of the local BMS via the MS IoT Edge module to the internet via router with appropriate security measures
- Smartphone or tablet with access to the SAUTER Cloud
- Engineering of the MBS solution via CASE Vision
- Microsoft Exchange Online / Microsoft 365 for reservation services

Schematic layout

The access to the individual applications is via a browser and is thus independent of the operating system, the hardware or the location.

The SAUTER Cloud is based on the Microsoft Azure IoT Technology Suite (Platform as a Service) and is protected against data manipulation and read access via TLS. Certificates and current encryption technologies from Microsoft are used.

The interface to the MBS solution is SAUTER Vision Center with the MS IoT Edge module. It ensures secure bidirectional communication for selected information via MQTT or AMQP.



Communication within the building

Communication within the building is via the BACnet, SAUTER novaNet, OPC UA, Modbus/RTU, M-Bus, KNX, Dali and SMI protocols. Further information can be found under the topics SAUTER Integral Room Automation and SAUTER Vision Center – Building Intelligence Hub.