This document describes the components, characteristics and advantages of the Mobile Access solution offered by Bosch.

The application allows seamless access by managing the credentials remotely and by using a mobile phone for authentication in front of an access reader.

The Mobile Access solution consists out of several components that interact with each other. To set up a complete system the following components are needed:

Software
- Choice of AMS software license (PLUS, LITE, PRO). Please see the AMS Datasheet for more information.
- Mobile Access software license (includes Credential Management to manage employee data).
- Optional: Visitor Management (to manage visitor data).
- End-user app called "Bosch Mobile Access" (available free via the App store) to store the virtual credentials.
- Installer app called "Bosch Setup Access" to manage configurations of the reader.

Hardware
- LECTUS select reader with BLE (Bluetooth® Low Energy)
- AMC2-RS485 Controller
- Accessories as applicable

The LECTUS select reader with BLE can be configured to accept:

- A reading distance from 5 cm to 10 m (may vary depending on phone types used and the installation environment).
- In addition, biometric identification can be used on the smartphone.

The enrollment services Visitor Management and Credential Management (part of the Mobile Access software license) enable the management of virtual cards, called mobile credentials. The configuration of access authorizations is done in the Access Management System AMS or in the Access Engine BIS ACE.

Mobile Access includes the following features with benefits for the operator, building owner or end-user:
- Integration of the smartphone as an access medium, expanding the classic access control card.
- Remote management of access rights by sending a virtual entry token (a virtual card, to use in the app) to a visitor or employee.
- Different user types (visitor, employee) can be managed in the browser via Visitor or Credential Management.
- Allows reader configuration.
- Adjustable communication range that allows access over long distances for different applications.
- Different mobile credentials, corresponding to different sites, can be stored in one mobile application.
- Configurable biometric identification, such as touch ID and face ID.
**System overview**

The Mobile Access application is a supplement to the classic card in the Access Control System. The organizational administrator registers a user or a group of users either in the Visitor Management or in Credential Management front end. Depending on the enrollment type, the user receives an e-mail or a QR code to complete the registration. The user can then authenticate in front of a reader through the mobile application.

The diagram shows the communication chain between the elements of the Access Control System with Mobile Access solution by Bosch.

![Diagram of the Access Control System with Mobile Access solution](image)

**Fig. 1:** Diagram of the Access Control System with Mobile Access solution

A  Visitor Management or Credential Management
B  Access Management System (AMS) or Building Integration System - Access Control Engine (BIS-ACE)
C  AMC2-4R4CF controller(s)
D  LECTUS select reader(s)
E  Bosch Mobile Access applications

### Functions

**Licensing options**

You can order one of the available packages and always extend the number of mobile credentials with extension licenses. The mobile credentials can be reused multiple times. For more information on the available packages options, refer to ordering information.

**Multifactor authentication options**

The authentication options are:

- **Card mode:** In this model, the app runs in the background so the screen can be locked.
- **2-factor authentication after presenting the smartphone:** hold the unlocked smartphone in front of the reader and confirm authentication with 2 factors.

### Administration of Mobile Access

<table>
<thead>
<tr>
<th>Action</th>
<th>Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Getting the credentials</td>
<td>With an e-mail address: 1. The organizational administrator enrolls the user via Visitor or Credential Management and an e-mail invitation is sent to the user e-mail address.</td>
</tr>
</tbody>
</table>

### Installation/configuration notes

#### Smartphones

<table>
<thead>
<tr>
<th>Brand</th>
<th>Device</th>
<th>Default Operating System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apple</td>
<td>iPhone 6s</td>
<td>iOS version 15.6.1</td>
</tr>
<tr>
<td>Apple</td>
<td>iPhone XR</td>
<td>iOS version 15.7 - 16.0</td>
</tr>
<tr>
<td>Apple</td>
<td>iPhone SE (2nd generation)</td>
<td>iOS version 16.2</td>
</tr>
<tr>
<td>Apple</td>
<td>iPhone SE (3rd generation)</td>
<td>iOS version 15.7 / 16.1</td>
</tr>
<tr>
<td>Apple</td>
<td>iPhone 11</td>
<td>iOS version 16.0.2</td>
</tr>
<tr>
<td>Apple</td>
<td>iPhone 13 Pro / iPhone Pro Max</td>
<td>iOS version 15.6.1 / 16.0</td>
</tr>
<tr>
<td>Samsung</td>
<td>Galaxy A50</td>
<td>Android version 11.0</td>
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<tr>
<td>Samsung</td>
<td>S20 FE</td>
<td>Android version 12.0</td>
</tr>
<tr>
<td>Samsung</td>
<td>A22 5G</td>
<td>Android version 12.0</td>
</tr>
<tr>
<td>Others</td>
<td>Xiaomi Redmi Note 9 Pro</td>
<td>Android version 11.0</td>
</tr>
<tr>
<td>Motorola</td>
<td>Moto G7 plus</td>
<td>Android version 10.0</td>
</tr>
</tbody>
</table>

*Tab. 1: Mobile Access tested smartphones*
Note: Performances may vary with different phone types. The list only gives an overview of compatible phones that have been tested. Other phone types may work well in addition. Please review the section smartphone requirements for additional information.

Smartphone requirements
Mobile Access application requires:
• Stable internet connection to receive the mobile credential in your mobile application (Bosch Mobile Access). After registration, no internet connection is needed in order to establish communication between the phone and the reader.
• Bluetooth: 4.2 or higher to scan, detect and communicate with the reader.
• Operating System: last major releases of Apple iOS or Android.

Hardware requirements
Mobile Access supports the following products:
• LECTUS select reader with and without keypad with BLE module
• AMC2-4R4CF controller

Software requirements
Mobile Access supports the following software systems:
• AMS version 5.0.1 and later
• Visitor Management 5.0.1 and later
• BIS version 5.0.1 and later

Recommended servers
The recommended servers for the specific software, client and hardware are:
• Win Server 2019 for the AMS Server
• Win 10 Pro / Enterprise for the AMS Client
• Win 10 Pro / Enterprise for the MAC, working as network operating hardware locally in the control cabinet.
Note: The default database delivered with this system is SQL Server 2017 Express edition with advanced settings.

Technical specifications
Technical specifications and requirements for AMS and BIS-ACE can be found in the AMS and BIS-ACE datasheets available in Bosch online catalog.

Ordering information
AMS-FMOBLIT License Mobile Access Lite
License Mobile Access LITE
Order number AMS-FMOBLIT | F.01U.412.685

AMS-X50MOBLIT License 50 Mobile Credentials Lite
License 50 Mobile Credentials LITE
Order number AMS-X50MOBLIT | F.01U.412.687

AMS-X100MOBLIT License 100 Mobile Credentials Lite
License 100 Mobile Credentials LITE
Order number AMS-X100MOBLIT | F.01U.412.688

AMS-X1KMOBLIT License 1000 Mobile Credentials Lite
License 1000 Mobile Credentials LITE
Order number AMS-X1KMOBLIT | F.01U.412.689

AMS-X5KMOBLIT License 5000 Mobile Credentials Lite
License 5000 Mobile Credentials LITE
Order number AMS-X5KMOBLIT | F.01U.412.690

AMS-FMOBPLU License Mobile Access Plus
License Mobile Access PLUS
Order number AMS-FMOBPLU | F.01U.412.679

AMS-X50MOBPLU License 50 Mobile Credentials Plus
License 50 Mobile Credentials PLUS
Order number AMS-X50MOBPLU | F.01U.412.681

AMS-X100MOBPLU License 100 Mobile Credentials Plus
License 100 Mobile Credentials PLUS
Order number AMS-X100MOBPLU | F.01U.412.682

AMS-X1KMOBPLU License 1000 Mobile Credentials Plus
License 1000 Mobile Credentials PLUS
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License 5000 Mobile Credentials PLUS
Order number AMS-X5KMOBPLU | F.01U.412.684

AMS-FMOBPRO License Mobile Access Pro
License Mobile Access PRO
Order number AMS-FMOBPRO | F.01U.412.674

AMS-X50MOBPRO License 50 Mobile Credentials Pro
License 50 Mobile Credentials PRO
Order number AMS-X50MOBPRO | F.01U.412.702

AMS-X100MOBPRO License 100 Mobile Credentials Pro
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Order number AMS-X100MOBPRO | F.01U.412.676

AMS-X1KMOBPRO License 1000 Mobile Credentials Pro
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AMS-X5KMOBPRO License 5000 Mobile Credentials Pro
License 5000 Mobile Credentials PRO
Order number AMS-X5KMOBPRO | F.01U.412.678

AMS-BMOBLIT License bundle Mobile Access Lite
License bundle Mobile Access LITE
Order number AMS-BMOBLIT | F.01U.413.832

AMS-BMOBPLU License bundle Mobile Access Plus
License bundle Mobile Access PLUS
Order number AMS-BMOBPLU | F.01U.413.831

AMS-BMOBPRO License bundle Mobile Access Pro
License bundle Mobile Access PRO
Order number AMS-BMOBPRO | F.01U.413.830

AMS-SMA-BMOBLIT SMA bundle Mobile Access Lite
1-year Service and Maintenance Agreement (SMA) for AMS-BMOBLIT
Order number AMS-SMA-BMOBLIT | F.01U.413.835
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