

Access Management System V4.0



Access Management System (AMS) is an access control system for stand-alone application or for integration with other systems, such as the Bosch video management system BVMS or Bosch B and G series intrusion panels.

- As a stand-alone system, it features a simple-to-use map and alarm viewer for a rapid assessment of all the devices and entrances on the site.
- As an integrated system, it allows the operator of a video management system to perform door-related tasks like video-based ID verification, to grant and deny access, or to disable doors.
- Intrusion areas can be armed directly from the Map View, and intrusion panel users can be centrally managed.

AMS combines the robustness, performance and features of high-end access control products with a modern UI that makes it faster to install and configure.

The existing portfolio of Bosch access control devices can be easily scanned and integrated.

Data privacy and IT security is state-of-the-art, in order to comply with the latest data-protection regulations.

System overview

Access Management Server

The server is the main component for processing all data. It coordinates the activities of all the hardware and software components described below.

- ► Combines high-end access control features, performance and availability with intuitive operation.
- ► Highly scalable: From 1,000 to 400,000 users, and from 32 to 10.000 doors.
- ► Easy to use: Intuitive GUI for maps and alarm viewer, and web-based visitor management.
- ► Easy to configure: Pre-packaged licenses, simple installation and set-up.
- ► Comprehensive security management: Integrates with intrusion and video systems.

Master Access Controller (MAC)

The MAC is an additional security layer to increase system availability. It holds its own database to exchange information between AMCs, even if the main server or the network is down. All AMCs connect via highly encrypted communication to the MAC servers.

Access Modular Controller (AMC)

The AMC is a robust and reliable field controller to connect to up to 8 doors with readers and door strikes. With its large on-board memory the AMC can make autonomous decisions and store hundreds of thousands of access events, regardless of network interruptions.

Access Management Database

The SQL server holds all master data (cardholder, cards, authorizations, schedules, etc.) and also all access events. The latest version provides encryption to protect personal information from misuse or theft.

Access Management Dialog Manager

The Dialog Manager is the main user interface for configuring the system, and for collecting and maintaining access-related information. In particular, its personnel dialogs are used for enrolling new cardholders, and maintaining their access authorizations and credentials.

Access Management Map View

The Map View is a simple-to-use application both to visualize the overall security situation of the premises, and zoom into close detail. It displays access violations, tampering and malfunction alarms, and allows the sending of commands directly from the maps themselves.

Badge designer

Card personalization is included in the product, providing you with the means to design your badges, to perform image acquisition with USB cameras and to use most commercially available card printers.

Visitor Management

Receptionist view: a browser-based user interface where receptionists can efficiently register and monitor visitors and visits.

Host view: a browser-based user interface where employees can pre-register their visits.

Visitor view: a browser-based user interface in **kiosk mode**, where visitors can maintain their own stored profiles, scan their ID papers and digitally sign required documents, so substantially reducing waiting times and crowding at reception.

Access Management BVMS Interface

The seamless integration with BVMS (version 10.1 or higher) allows the video verification of cardholder identities from the BVMS operator client: a person requesting access with a valid card can be manually verified through camera live stream and the cardholder's photo from the database. Camera events can trigger door actions. Door events can trigger camera actions.

Access Management Intrusion Interface

Management of up to 50 B and G Series intrusion panels, and up to 500 panels for user management. Shows area states (e.g. armed, ready to arm), detector states and intrusion events on Map View. Allows the sending of commands (e.g. arm, disarm) to panels.

Access Management SDK

This SDK facilitates the integration of 3rd party systems with AMS, for instance an Identity Management or Visitor Management system. A particular advantage is its ability to re-use 3rd party integrations initially written for BIS Access Engine.

Integration of key cabinets

Integration of **Deister** and **Kemas** key cabinets for securing physical keys and monitoring their usage. Available in certain countries only.

Integration of wireless online locks

Integration of **SimonsVoss SmartIntego** wireless online locks (lock cylinders, door handles and padlocks) for doors, which require medium-level security, such as offices and classrooms. Available in certain countries only.

Integration of remote offline locks

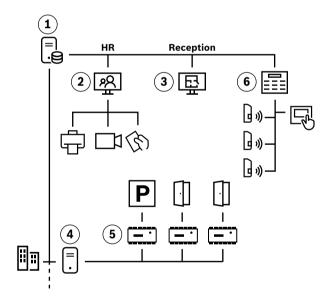
Integration of **Uhlmann&Zacher (OSS-SO)** or **Normbau (Pegasys)** offline locks for remote doors, which connection via cabling is not possible due to distance, construction conditions or cost. Available in certain countries only.

Access Importer/Exporter

This tool facilitates data import and export from external systems for 1-time data migration, such as from Access PE systems, or regular data transfer from Active Directory via the LDAP protocol.

Topology diagrams

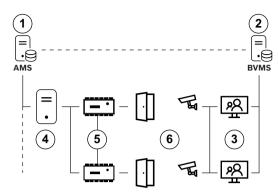
The following diagrams illustrate AMS configurations with integrated intruder-detection panels and with BVMS.



Intruder-detection topology

- (1) AMS server
- (2) Client workstation for enrollment
- (3) Client workstation for access control, visitor management, alarm management and the centralized arming/disarming of intrusion areas
- (4) Optional MAC servers (one MAC license is always included, on the AMS server)
- (5) AMCs for parking lot and door control

(6) Intrusion panel with detectors and touch-screen keypad



BVMS Integration

- (1) AMS server
- (2) BVMS management server or DIVAR IP all-in-one
- (3) BVMS Client workstation for access and video management
- (4) Optional MAC servers (one MAC license is always included, on the AMS server)
- (5) AMCs
- (6) Entrances with cameras

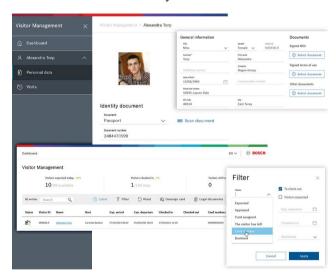
Functions

- · Registration of new cardholders:
 - Use fully customizable enrollment dialogs to streamline the process of cardholder enrollment.
 - Capture both conventional and biometric characteristics, including photos and signatures.
 - Design and produce physical credentials.
 - Take advantage of dialogs for the mass import of stored personnel data.
- Assigning of access authorizations:
 - Collect access authorizations into reusable profiles, and assign these to predefined or customized personnel types.
- Door functions:
 - Use a comprehensive set of template door models, including elevators and parking lots, to accelerate the configuration phase of your project.
 - Office mode: unlock doors for free access during office or shop hours.
 - Combat theft and security threats by random screening of cardholders.
 - Verify cardholder identity with biometric checks at entrances, and with additional video-based ID verification powered by BVMS.

- Disarm an intrusion area and grant access with a single card swipe.
- Use the SimonsVoss SmartIntego technology to enhance your system with card-programmable remote online doors, as commonly used in hotels, healthcare, offices and educational establishments.
- · Reporting:
 - Take advantage of a large number of predefined template reports.
- · Visitor Management
 - Pre-register appointments in the system, to shorten processing time.
 - Allow visitors to create their own profiles in kiosk mode, to avoid queues at reception.
 - Use a dashboard to monitor the day's expected visits, how many visitors are on the premises, which credentials are in use, and which credentials still need to be collected.
 - Set expiration dates on visitor profiles and their attachments to comply with national data privacy regulations, such as European GDPR.

Welcome

Please enter your visitor ID.



- · Guard Tours and patrols:
 - Define up to 200 guard tours, and monitor up to 8 patrols simultaneously.
- Monitor car parks and muster points:
 - Display customizable summaries of employees and vehicles on site.
 - Monitor the number of available parking spaces.
- · Divisions:
 - Provide unified access control for a facility that is shared by any number of independent parties.

- Individual operators can be restricted to manage only the persons, devices and entrances of those divisions assigned to them.
- · Alarm Monitor, Command & Control:
 - The Map View supports up to 100 maps, which can be nested to provide both overviews and close detail.
 - Use the Map View to keep control of large numbers of entrances simultaneously.
 - Use the Map View to monitor incoming alarms and alerts in real time.
 AMS does not buffer intrusion alarms that occur



- · BVMS and DIVAR IP Integration:
 - Video verification at entrances.
 - Camera actions (e.g. start recording, pan/tilt/ zoom) triggered by access events (e.g. unauthorized door opening).
 - Door events (e.g. unlock/lock door) triggered by camera events (e.g. Intelligent Video Analytics).
 - Requires version 10.1 or higher.
- · Milestone XProtect Integration:
 - Use AMS to support XProtect with access events and alarms for further processing on XProtect client.
- Intrusion Integration:
 - Supports up to 500 Bosch B Series (Bx512) and G Series (Bx512G) control panels for central user management and 50 for command & control
 - A full contingent of panels provides up to 12,800 intrusion detectors.
- · Mobile Device Integration:
 - Supports HID Mobile Access (on MIFARE CSN via NFC and Wiegand) and STid Mobile ID (on MIFARE CSN via Wiegand and OSDP, NFC and BLE).

Installation/configuration notes

The following tables illustrate hardware and software requirements for running AMS.

Serve

Supported operating systems.

Installations on other operating systems may succeed, but are entirely without warranty.

- Windows Server 2016, Windows Server 2019 (64 bit, Standard, Datacenter)
- Windows 10 Version 1809 LTSC, Windows 10 Professional and Enterprise, Version 21H1
- Ensure that the latest software updates are installed.
- Note: The default database delivered with this system is SQL Server 2019 Express edition with advanced services

Minimum hardware requirements

- Intel i7 processor generation 8
- 16 GB RAM (32 GB recommended)
- 250 GB of free hard disk space
- Hard disk transfer rate 300 MB/s with < 10 ms average response time (SSD recommended)
- Graphics adapter with
 - 256 MB RAM
 - A resolution of 1280x1024 (Use the graphic resolution recommended for the client if you wish to run the Map View client on the AMS server).
 - At least 32 k colors
- 1 Gbit/s Ethernet card
- A free USB port or network share for installation files

Client, including the Map View client

Supported operating systems.

Installations on other operating systems may succeed, but are entirely without warranty.

Minimum hardware requirements

- Windows 10 Version 1809 LTSC, Windows 10 Professional and Enterprise, Version 21H1
- Ensure that the latest software updates are installed.
- Intel i5 or higher
- 8 GB RAM (16 GB recommended)
- 25 GB of free hard disk space
- Graphics adapter
 - 256 MB RAM
 - To use the AMS Dialog manager, a resolution of 1280x1024 is sufficient.
 - For AMS Map view, a resolution of 1920x1080 (Full HD) is required.
 - At least 32 k colors

Client, including the Map View client

- DirectX® 11
- 1 Gbit/s Ethernet card
- A free USB port or network share for installation files

Visitor Management and OSO Configurator clients

Supported browsers. Google Chrome, Mozilla Firefox, Microsoft Edge

(Chromium based)

Minimum Full HD 1920x1080

recommended screen

resolution

Web Browser	Version
Google Chrome	90 or higher
Microsoft Edge	90 or higher
Mozilla Firefox	88 or higher

MAC server

Supported operating systems.

Installations on other operating systems may succeed, but are entirely without warranty.

Minimum hardware requirements

- Windows Server 2016, Windows Server 2019 (64 bit, Standard, Datacenter)
- Windows 10 Version 1809 LTSC, Windows 10 Professional and Enterprise, Version 21H1
- Ensure that the latest software updates are installed.
- · Intel i5 or higher
- 8 GB RAM (16 GB recommended)
- 60 GB of free hard disk space
- · Graphics adapter with
 - 256 MB RAM
 - A resolution of 1280x1024
 - At least 32 k colors
- · 1 Gbit/s Ethernet card

The complexity of security systems has increased significantly over the last few years. At the same time, you are relying on your system to mitigate security risks. With Bosch Software Assurance, you can always approach us for help, to ensure your system keeps pace with changes.

You can find the terms and conditions of Bosch Software Assurance on the Bosch Building

Technologies website: https://

www.boschsecurity.com/xc/en/solutions/management-software/bosch-software-assurance/

Technical specifications

The following tables specify the dimensions of an AMS access control system from two aspects:

- As per the respective license bundle: LITE, PLUS or PRO.
- As a maximum, if the necessary licenses are purchased.

License bundle LITE

LITE	Licensed number	Maximum number
Number of doors (with 1 or 2 readers):	16	144
Number of cards:	1,000	200,000
Number of divisions:	1	200
Number of clients configurable:	1	2
Number of MACs	1	1
Number of AMCs	Maximum 125 per MAC Up to 60 (on the network) recommended for high performance	
Number of authorizations	Maximum 1024 per MAC	
Number of guard tours		50
SDK available		✓
BVMS integration available		✓
Intrusion integration	Maximum number of Bosch B Series (Bx512) and G Series (Bx512G) contropanels: • for command and control: 50	
	for central us	er management: 50

License bundle PLUS

PLUS	Licensed number	Maximum number
Number of doors (with 1 or 2 readers):	32	512
Number of cards:	2,000	300,000
Number of divisions:	1	300
Number of clients configurable:	1	5
Number of MACs	3	10
Number of AMCs	Maximum 125 per MAC	
	Up to 60 (on the network) recommended for high performance	

PLUS	Licensed number	Maximum number
Number of authorizations	Maximum 1024 per MAC	
Number of guard tours		100
SDK available		✓
BVMS integration available		✓
Intrusion integration	Maximum number of Bosch B Series (Bx512) and G Series (Bx512G) contro panels:	
	• for command	and control: 50
	• for central us	er management: 200

License bundle PRO

PRO	Licensed number	Maximum number
Number of doors (with 1 or 2 readers):	32	10,000
Number of cards:	5,000	400,000
Number of divisions:	1	400
Number of clients configurable:	1	40
Number of MACs	5	40
Number of AMCs	Maximum 125 per MAC Up to 60 (on the network) recommended for high performance	
Number of authorizations	Maximum 1024 per MAC	
Number of guard tours	200	
SDK available		✓
BVMS integration available		✓
Intrusion integration	Maximum number of Bosch B Series (Bx512) and G Series (Bx512G) contropanels:	
	 for command 	and control: 50
	 for central us 	er management: 500

Specifications for AMS server and client reference systems

The following are specifications for a reference system with good overall performance.

	Server system (with no client running)	Client system
CPU	Intel Xeon E-2144G @ 3,6 GHz (4 cores, 8 logical)	Intel Core i7-8700 @ 3,2 GHz (6 cores, 12 logical)
RAM	32 GB (2667 MHz)	8 GB (2667 MHz)
GPU	Integrated graphics from CPU	Intel UHD Graphics 630 (4GB GPU memory)
System disk	NVMe Write speed: 1440MB/s Read speed: 2250MB/s Average response time 10ms	SSD disk
Disk where AMS is installed	SSD Write speed: 1000MB/s Read speed: 1100MB/s Average response time 10ms	
Operating system	Microsoft Server 2019 Standard Edition	Microsoft 10 Pro Edition

Performance of the reference system

	SQL Server 2019 Express version	SQL Server 2019 Standard version
Max. events per second	70	150
Max. events that can be stored in the event database.	2x10^6	Limited by storage capacity, not by database version.

- The system can process a maximum of 100 access events per second (for example: door open/close, audit trail entries).
- With intrusion integration, one point change can trigger three or more access events, for example Point shorted, Area not ready to arm, Point state changed. Consider this factor when calculating performance.

Languages of the user interface

- AR: Arabic
- DE: German
- EN: English
- ES: Spanish
- FR: French
- HU: Hungarian
- NL: Dutch
- PL: Polish

- · PT: Portuguese
- · RU: Russian
- · TR: Turkish
- ZH-CN: Chinese (simplified)
- · ZH-TW: Chinese (traditional)

Hardware devices supported

- The Bosch AMC2 family of access controllers See corresponding datasheets in the product catalogs at https://www.boschsecurity.com
- Bosch AMC2 extension boards
 See corresponding datasheets in the product catalogs at https://www.boschsecurity.com
- SimonsVoss SmartIntego remote online door components
- Uhlmann & Zacher Clex public offline locks (OSS-SO compatible) Available in certain countries
- Normbau Pegasys offline locks (V2.1). Available in certain countries
- Idemia Sigma, Morpho, VisionPass biometric fingerprint and face recognition readers

Other supported systems

- ISS SecurOS face and license plate recognition system
- · Oosto OnAccess face recognition system
- · Otis Compass elevator dispatch system
- Deister flexx and maxx key management systems

For Visitor Management

- · Card enrollment reader: LECTUS enroll 5000 MD
- · Signature reader: signotec LITE, signotec Omega
- Scanner for ID documents: ARH Combo, ARH Osmond

Ordering information

AMS-BASE-LITE40 Lite license

Basic license LITE

Order number AMS-BASE-LITE40 | F.01U.395.556

AMS-BASE-PLUS40 Plus license

Basic license PLUS

Order number AMS-BASE-PLUS40 | F.01U.395.557

AMS-BASE-PRO40 Pro license

Basic license PRO

Order number AMS-BASE-PRO40 | F.01U.395.558

AMS-XDIV-1V40 License for 1 division

License for 1 additional division

Order number AMS-XDIV-1V40 | F.01U.395.563

AMS-XCLI-1V40 License for 1 operator client

License for 1 operator client

Order number AMS-XCLI-1V40 | F.01U.395.559

AMS-XCLI-5V40 License for 5 operator clients

License for 5 operator clients

Order number AMS-XCLI-5V40 | F.01U.395.560

AMS-XMAC-1V40 License for 1 MAC server

License for 1 MAC server

Order number AMS-XMAC-1V40 | F.01U.395.561

AMS-XMAC-5V40 License for 5 MAC servers

License for 5 MAC servers

Order number AMS-XMAC-5V40 | F.01U.395.562

AMS-XCRD-100V40 License for 100 ID cards

License for 100 ID cards

Order number AMS-XCRD-100V40 | F.01U.395.569

AMS-XCRD-1KV40 License for 1,000 ID cards

License for 1000 ID cards

Order number AMS-XCRD-1KV40 | F.01U.395.570

AMS-XCRD-10KV40 License for 10,000 ID cards

License for 10,000 ID cards

Order number AMS-XCRD-10KV40 | F.01U.395.571

AMS-XCRD-50KV40 License for 50,000 ID cards

License for 50,000 ID cards

Order number AMS-XCRD-50KV40 | F.01U.395.572

AMS-XDRS-32V40 License for 32 doors

License for 32 doors

Order number AMS-XDRS-32V40 | F.01U.395.564

AMS-XDRS-128V40 License for 128 doors

License for 128 doors

Order number AMS-XDRS-128V40 | F.01U.395.565

AMS-XDRS-512V40 License for 512 doors

License for 512 doors

Order number AMS-XDRS-512V40 | F.01U.395.566

AMS-XOND-25V40 License for 25 remote online doors

License for 25 remote online doors. Available in certain countries.

Order number AMS-XOND-25V40 | F.01U.395.567

AMS-XOFF-25V40 License for 25 offline doors

License for 25 offline doors. Available in certain countries.

Order number AMS-XOFF-25V40 | F.01U.395.568

AMS-XOSO-25V40 License for 25 OSO offline drs

License for 25 OSO offline doors. Available in certain countries.

Order number AMS-XOSO-25V40 | F.01U.402.818

AMS-XPAN-1V40 License for 1 intrusion panel

License for 1 intrusion panel. Available in certain countries.

Order number AMS-XPAN-1V40 | F.01U.395.575

AMS-XPAN-10V40 License for 10 intrusion panels

License for 10 intrusion panels. Available in certain countries.

Order number AMS-XPAN-10V40 | F.01U.395.576

AMS-FVIS-WEBV40 License for visitor management

License for visitor management

Order number AMS-FVIS-WEBV40 | F.01U.395.573

AMS-FUPG-TOPL40 License from Lite to Plus

Upgrade from Lite to Plus

Order number AMS-FUPG-TOPL40 | F.01U.395.577

AMS-FUPG-TOPR40 License from Plus to Pro

Upgrade from Plus to Pro

Order number AMS-FUPG-TOPR40 | F.01U.395.578

AMS-SMA-LITE License for AMS-BASE-LITE*, 1 yr

1-year Service and Maintenance Agreement (SMA) for AMS-BASE-LITE

Order number AMS-SMA-LITE | F.01U.363.506

AMS-SMA-PLUS License for AMS-BASE-PLUS*, 1 yr

1-year Service and Maintenance Agreement (SMA) for AMS-BASE-PLUS

Order number AMS-SMA-PLUS | F.01U.363.507

AMS-SMA-PRO License for AMS-BASE-PRO*, 1 yr

1-year Service and Maintenance Agreement (SMA) for AMS-BASE-PRO

Order number AMS-SMA-PRO | F.01U.363.508

AMS-SMA-1DIV License for AMS-XDIV-1V*, 1 yr

1-year Service and Maintenance Agreement (SMA) for AMS-XDIV-1V $\,$

Order number AMS-SMA-1DIV | F.01U.379.427

AMS-SMA-1CLI License for AMS-XCLI-1V*, 1 yr

1-year Service and Maintenance Agreement (SMA) for AMS-XCLI-1V $\,$

Order number AMS-SMA-1CLI | F.01U.363.509

AMS-SMA-5CLI License for AMS-XCLI-5V*, 1 yr

1-year Service and Maintenance Agreement (SMA) for AMS-XCLI-5V

Order number AMS-SMA-5CLI | F.01U.363.510

AMS-SMA-1MAC License for AMS-XMAC-1V*, 1 yr

1-year Service and Maintenance Agreement (SMA) for AMS-XMAC-1V

Order number AMS-SMA-1MAC | F.01U.363.511

AMS-SMA-5MAC License for AMS-XMAC-5V*, 1 yr

1-year Service and Maintenance Agreement (SMA) for AMS-XMAC-5V

Order number AMS-SMA-5MAC | F.01U.363.512

AMS-SMA-100CRD License for AMS-XCRD-100V*, 1 yr

1-year Service and Maintenance Agreement (SMA) for AMS-XCRD-100V

Order number AMS-SMA-100CRD | F.01U.363.516

AMS-SMA-1KCRD License for AMS-XCRD-1KV*, 1 yr

1-year Service and Maintenance Agreement (SMA) for AMS-XCRD-1KV

Order number AMS-SMA-1KCRD | F.01U.363.517

AMS-SMA-10KCRD License for AMS-XCRD-10KV*, 1 yr

1-year Service and Maintenance Agreement (SMA) for AMS-XCRD-10KV

Order number AMS-SMA-10KCRD | F.01U.363.518

AMS-SMA-50KCRD License for AMS-XCRD-50KV*, 1 yr

1-year Service and Maintenance Agreement (SMA) for AMS-XCRD-50KV

Order number AMS-SMA-50KCRD | F.01U.363.519

AMS-SMA-32DRS License for AMS-XDRS-32V*, 1 yr

1-year Service and Maintenance Agreement (SMA) for AMS-XDRS-32V

Order number AMS-SMA-32DRS | F.01U.363.513

AMS-SMA-128DRS License for AMS-XDRS-128V*, 1 yr

1-year Service and Maintenance Agreement (SMA) for AMS-XDRS-128V $\,$

Order number AMS-SMA-128DRS | F.01U.363.514

AMS-SMA-512DRS License for AMS-XDRS-512V*, 1 yr

1-year Service and Maintenance Agreement (SMA) for AMS-XDRS-512V

Order number AMS-SMA-512DRS | F.01U.363.515

AMS-SMA-250FF License for AMS-XOFF-25V*, 1 yr

1-year Service and Maintenance Agreement (SMA) for AMS-XOFF-25V. Available in certain countries.

Order number AMS-SMA-250FF | F.01U.386.744

AMS-SMA-25OSO License for AMS-XOSO-25V*, 1yr

1-year Service and Maintenance Agreement (SMA) for AMS-XOSO-25V*. Available in certain countries.

Order number AMS-SMA-25OSO | F.01U.402.820

AMS-SMA-1PAN License for AMS-XPAN-1V*, 1 yr

1-year Service and Maintenance Agreement (SMA) for AMS-XPAN-1V*. Available in certain countries.

Order number AMS-SMA-1PAN | F.01U.387.837

AMS-SMA-10PAN License for AMS-XPAN-10V*, 1 yr

1-year Service and Maintenance Agreement (SMA) for AMS-XPAN-10V*. Available in certain countries.

Order number AMS-SMA-10PAN | F.01U.386.745

AMS-SMA-VIS License for AMS-FVIS-WEBV*, 1yr

1-year Service and Maintenance Agreement (SMA) for AMS-FVIS-WEBV

Order number AMS-SMA-VIS | F.01U.395.537

AMS-SMA-TOPLUS License for AMS-FUPG-TOPLUS, 1 yr

1-year Service and Maintenance Agreement (SMA) for AMS-FUPG-TOPLUS

Order number AMS-SMA-TOPLUS | F.01U.379.428

AMS-SMA-TOPRO License for AMS-FUPG-TOPRO, 1 yr

1-year Service and Maintenance Agreement (SMA) for AMS-FUPG-TOPRO

Order number AMS-SMA-TOPRO | F.01U.379.429

Represented by:

Europe, Middle East, Africa: Bosch Security Systems B.V. P.O. Box 80002 5600 JB Eindhoven, The Netherlands Phone: + 31 40 2577 284 www.boschsecurity.com/xc/en/contact/ www.boschsecurity.com

Germany:

Bosch Sicherheitssysteme GmbH Robert-Bosch-Ring 5 85630 Grasbrunn Tel.: +49 (0)89 6290 0 Fax:+49 (0)89 6290 1020 de.securitysystems@bosch.com www.boschsecurity.com

North America:

Bosch Security Systems, LLC 130 Perinton Parkway Fairport, New York, 14450, USA Phone: +1 800 289 0096 Fax: +1 585 223 9180 onlinehelp@us.bosch.com www.boschsecurity.com

Asia-Pacific:

Robert Bosch (SEA) Pte Ltd, Security Systems 11 Bishan Street 21 Singapore 573943 Phone: +65 6571 2808 Fax: +65 6571 2699 www.boschsecurity.com/xc/en/contact/ www.boschsecurity.com