

BIS - Access Engine (ACE) 4.5

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- ▶ Distributed access control system with graphical alarm management
- ▶ Seamless integration and interaction with video, fire, intrusion and PA/VA systems via the common BIS platform
- ▶ High resilience thanks to a 4-tier system architecture and redundancy of critical components
- ▶ Integration of third-party products via open protocols and SDK
- ▶ Efficient enrollment process that makes onboarding faster and more secure

Access control has become one of today's most important technologies for increasing the security of people, property, and assets. The BIS Access Engine and sophisticated controller products provide a wide range of access control features.

Combine the basic Access Engine package with optional features to build a customized access control system that meets your needs. Then use the Building Integration System software to integrate the Access Engine with your intrusion and video security equipment.

System overview

The Access Engine (ACE) software, in conjunction with Bosch access hardware, is a complete access control system within the Building Integration System (BIS). It encompasses all the essential features of any standalone access control system, plus a wide range of optional enhancements.

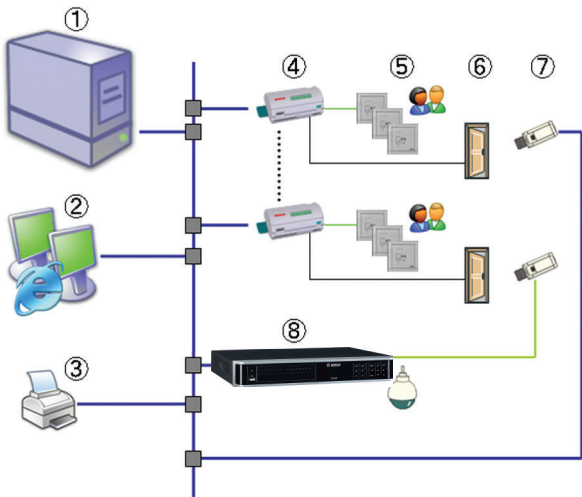
Like the other BIS engines, the ACE takes full advantage of all the extra BIS features, such as interactive location maps and action plans for powerful, fully integrated alarm management. Alarm

messages and access control events can be displayed with graphical location information and workflow instructions.

ACE uses the standard BIS user interfaces and their flexibility of customization. Additionally ACE offers specific access configuration interfaces for cardholders, access hardware and access rules. The main benefit of the Building Integration System family is the integration of a wide variety of security and safety systems on the same premises. By combining ACE with other BIS engines (e.g. Automation and Video) you can design smart security solutions tailored exactly to the requirements of your tender.

The Access Engine runs on a single-workstation, in a client-server system, or within a distributed environment with a central server and local or regional servers.

In the distributed multi-server environment all devices, cardholders and authorizations can be managed from the top-level server.



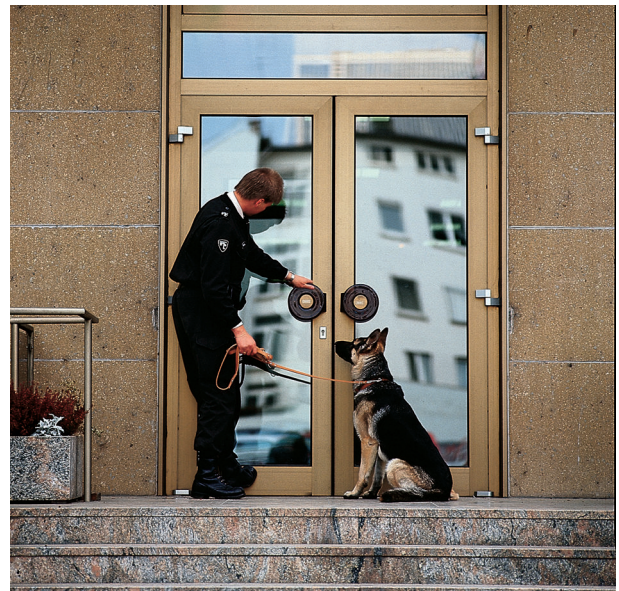
Pos.	Description (single-server system)
1	Central BIS server with Access Engine and Video Engine SW
2	Multiple workstations for alarm management or enrollment
3	Enrollment devices such as card printer, signature scanner, enrollment reader, camera for ID photos
4	Access controllers
5	Access readers
6	Door strikes
7	IP camera
8	Digital Video Recorder e.g. DIVAR for alarm recording

Functions

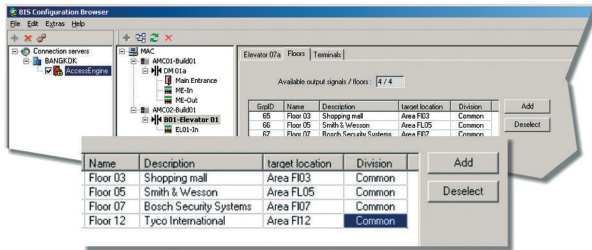
The Access Engine basic package, in combination with AMC access controllers, offers the following features:

- A wide range of intuitive, template door models allowing fast and easy hardware configuration (e.g. standard door, turnstile, elevator with time & attendance readers etc.).
- Door model configuration dialog generates a wiring plan for the hardware installer.
- On-the-fly activation of reader and cardholder configurations in the access controllers.
- Time models for time-based access control, including the definition of special days, recurring public holidays, etc.
- Time models for automatic activation/deactivation of cardholder accounts, such as access rules, PIN codes etc.
- Time models for automatic activation/deactivation of system settings, such as setting an office door to stay unlocked from 9 a.m. to 5 p.m.
- Additional PIN code for arming /disarming intruder alarms.
- Temporary blocking / unblocking of cardholders, either manually or time-controlled.
- Blacklisting of cards.

- User-definable input fields for supplementary cardholder information.
- Anti-passback.
- Access area balancing including access sequence checking provides a means of limiting the number of people in a given area, automatic arming/disarming if area is empty/not empty and muster list generation.
- N-Persons authorization will grant access at a door only when a defined number (N) of authorized cardholders present their badges to a correspondingly configured reader. The setting can be made reader by reader, and from 2 to N (no limit) persons.
- Mantrap feature for managing two cooperating doors with two pairs of readers; recommended for high security levels, e.g. entrances to server rooms or research departments.
- **New:** Improved guard tour: a state-of-the-art patrol tracking system using existing access control readers, access-sequence and access-time checking. Any violation of patrol sequence or timing causes an alarm, which is then tracked by BIS's sophisticated alarm management features. Guard tour reports can be generated from the BIS event log.



- Random screening feature: Cardholders accessing or leaving the site can be stopped at random intervals and directed to security personnel for closer inspection. Cards belonging to designated "VIPs" can be excluded from random screening.
- Visitor management: Visitors' cards can be tracked and handled separately as regards their validity periods and the possible need for an escort.
- Interface for arming/disarming an IDS (Intrusion Detection System) including authorization handling and card assignment.



- Elevator interface for controlling up to 64 floors via an elevator-internal card reader, and for the assignment of floor authorizations to cardholders.
- Interface for importing personnel data from an HR system or exporting such information from ACE to such a system.
- **New:** Improved card personalization for importing cardholder images and creating customized corporate badge designs printable on standard card printers.
- A routing feature to ensure that personnel follow prescribed routes within the premises.
- Remote door unlock feature e.g. by mouse click on an icon in a BIS interactive location map.
- Creation of logical areas, e.g. single rooms, groups of rooms, whole floors or parking lots, to which special access control points can be assigned.
- The ability to limit the number of people or cars accessing a logical area.
- Full archive and restore capability for system data.
- Powerful client/server architecture based on the BIS server.
- The ability to customize software administrator rights, if needed on a dialog-by-dialog basis.
- Flexible alarm management for a huge range of alarm conditions (e.g. denied access, tamper-detection, badge blacklisted, duress alarm, etc.) optionally combinable with BIS features such as interactive location maps and action plans.
- Utilization of the Bosch controller family's digital, monitored I/Os for additional control and monitoring functions, including intrusion- and tamper-detection.
- Easy integration with Bosch or 3rd party video systems such as matrix switches, DVRs, IP-cameras etc.
- Detailed logging of access events and alarms for legal compliance and forensic investigation.
 - Audit trail for changes to master records and authorizations, including creation, modification and deletion of records.
 - Integrated reporting with filtering capability.
 - Export to standard CSV-format for further processing.
- Support for up to four different Wiegand card formats simultaneously.
- Comprehensive online help.
- Mass data change for authorizations and other data.

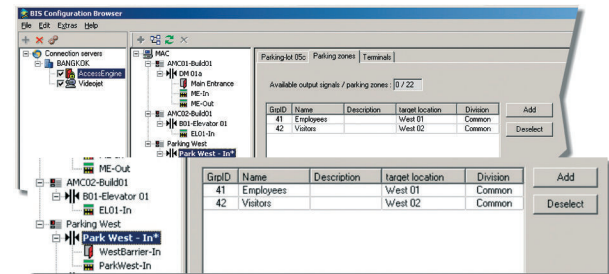
Video verification

Video verification extends the security level of your access control system through video technology. When a reader is in video verification mode the cardholder is

not admitted directly. Instead the reader performs a request for entrance which appears as a message on the operator's screen.

An Action Plan (see BIS optional accessories) shows the operator the cardholder's image as stored in the ACE database in conjunction with a live image from a camera near the entrance/reader that sent the request. The operator compares both images and decides whether or not to open the door.

Parking lot management



This feature allows the definition and use of the door model "parking lot" which contains the control of two barriers for entrance and exit and their traffic lights, which prevent access when the lot has reached maximum capacity.

Each parking lot can be divided into logical areas, with a maximum number of cars defined for each. Authorization to pass the barrier and park in a logical area can be assigned to cardholders in the standard dialogs. Load-balancing of the parking lots is also possible, with current capacity information displayed on the operator's screen. Load balancing of cars (parking lots) and persons (access areas) is handled separately, so that it is possible to track the location of both cardholder and car simultaneously.

Accessories for BIS Access Engine

Extended parking management

Provides management of guest parking, including the generation of parking vouchers and notification about visitors who overstay their scheduled appointments.

Application Programming Interface

A software development kit (SDK) to integrate Access Engine with third-party applications such as Identity Management, Time & Attendance and advanced Visitor Management systems.

Integration of key cabinets

Integration of **Deister** and **Kemas** key cabinets for securing physical keys and monitoring their usage.

Increasing access control capacity

ACE scales easily to the growing needs of your sites. Additional MAC (Master Access Controller) licenses enable you to increase geographical coverage or performance. A growing number of staff or visitors can be accommodated by additional cardholder licenses.

Licenses to increase the number of entrances are available in steps of 32, 128 or 512. An entrance in this sense is equivalent to an ACE door model, making it easy to calculate requirements.

Example: Your site has 2 main entrances with an entry and an exit reader each, 26 office doors with entrance reader and 1 mantrap for the server room. The total number of door models/entrances is 29, irrespective of the number of readers involved. A total of 32 entrances is already covered by the ACE basic package license.

Installation/configuration notes

Access Engine in figures

Max. number of active cards per controller	200,000
Max. number of readers per server	10,000
Max. number of MACs (Master Access Controllers) per server	40
Max. number of access authorizations per MAC	1000

The Engine can be ordered in one of two ways:

- as an integral part of an initial BIS configuration, in which case it is ordered along with a BIS basic license
- as an enhancement to an existing BIS configuration

Technical specifications

See the specifications for the respective version of the BIS Basic Package.

Ordering information

BIS-FACE-BPA45 Basic license

License for the BIS Access Engine (ACE) within BIS
Order number **BIS-FACE-BPA45**

BIS-XACE-100C45 License for 100 ID cards

License for 100 additional BIS ACE cards
Order number **BIS-XACE-100C45**

BIS-XACE-1KC45 License for 1,000 ID cards

License for 1000 additional BIS ACE cards
Order number **BIS-XACE-1KC45**

BIS-XACE-10KC45 License for 10,000 ID cards

License for 10,000 additional BIS ACE cards
Order number **BIS-XACE-10KC45**

BIS-XACE-50KC45 License for 50,000 ID cards

License for 50,000 additional BIS ACE cards
Order number **BIS-XACE-50KC45**

BIS-XACE-32DR45 License for 32 doors

License for 32 additional BIS ACE doors
Order number **BIS-XACE-32DR45**

BIS-XACE-128D45 License for 128 doors

License for 128 additional BIS ACE doors
Order number **BIS-XACE-128D45**

BIS-XACE-512D45 License for 512 doors

License for 512 additional BIS ACE doors
Order number **BIS-XACE-512D45**

BIS-FACE-OFFL45 License for offline basic package

License for the BIS ACE Offline Doors basic package
Order number **BIS-FACE-OFFL45**

BIS-XACE-25OF45 License for 25 offline doors

License for 25 additional BIS ACE Offline doors
Order number **BIS-XACE-25OF45**

BIS-XACE-1MAC45 License for 1 MAC

License for 1 additional Main Access Controller (MAC) in BIS ACE
Order number **BIS-XACE-1MAC45**

BIS-XACE-10MC45 License for 10 MAC

License for 10 additional Main Access Controllers (MAC) in BIS ACE
Order number **BIS-XACE-10MC45**

BIS-FACE-API45 License for API

License for the Application Programming Interface (API) in BIS ACE
Order number **BIS-FACE-API45**

BIS-FACE-PRK45 License for carpark management

License for Extended Carpark Management in BIS ACE
Order number **BIS-FACE-PRK45**

BIS-XACE-1KEY45 License for 1 key cabinet

License for the connection of 1 key cabinet to BIS ACE
Order number **BIS-XACE-1KEY45**

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