BOSCH
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Building Integration System

Selection Guide for Version 4.x

Your platform for customized
security and safety management

Contents

System overview

The Building Integration System (BIS) is a state-of-the-art security management system running on standard computers with Microsoft Windows operating system. The software is able to manage and control a wide range of security and safety applications under one common platform, giving the operator better control and faster response. The modular licensing concept of BIS, consisting of a basic software license and a pool of additional options, helps you tailor systems to the exact requirements of any customer.

Operating	Transport	Panel, controller	Sensors, cameras ...

BIS workstations with alarm queue, instructions, location map

BIS server

Fire and life safety

Access control

Intrusion

Analogue and IP video, DVR

Public address and evacuation
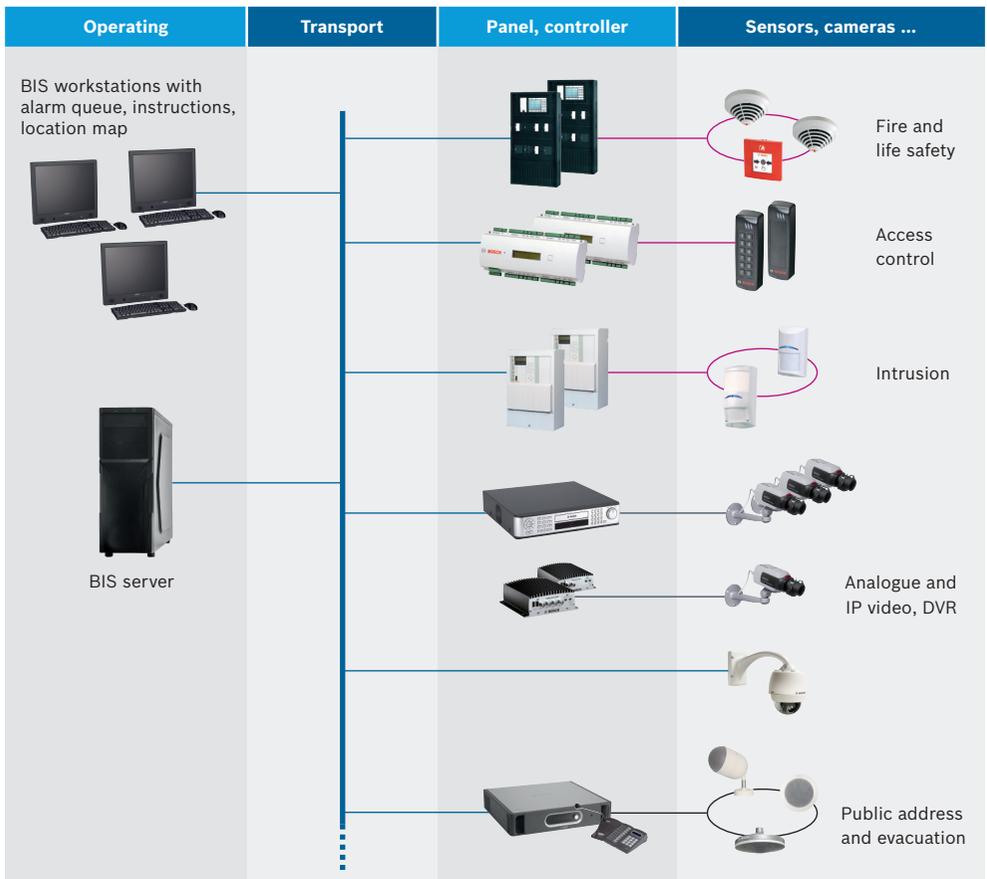
Typical applications

Among many others the following applications can be realized with BIS:

- ▶ Management and control of Bosch fire panels
- ▶ Management and control of Bosch intrusion panels
- ▶ Management and control of Bosch AMC access controllers along with cardholders, doors and readers
- ▶ Management and control of analog and IP video devices, complete with video verification of alarm scenes
- ▶ Management and control of Bosch Praesideo and Paviro public address devices
- ▶ Management and control of 3rd party security, safety and building-automation systems
- ▶ Any combination of the above with tight integration of the applications involved: e.g. video verification with access control, evacuation announcements in case of fire, etc.

For more information see also applications and project-specific adaptations and expansions at the end of this document.

Connection types and licensing basics

BIS provides enormous flexibility in configuration and licensing. The following table provides a basic introduction to the BIS engines, all of which are optional.

Automation Engine (AUE)	**Compatible with selected Bosch fire and intrusion panels, Bosch public address systems, and OPC compliant 3rd party devices**
	Includes 500 detector points for Bosch and 3rd party devices
Access Engine (ACE)	**Compatible with Bosch AMC access controller, doors, readers, cards**
	ACE includes 32 door licenses and 1000 card licenses. A door can consist of up to four readers. Up to 5 cards can be assigned to an employee or visitor.
Video Engine (VIE)	**Compatible with Bosch analog and IP video devices and 3rd party IP video devices**
	VIE includes 100 detector points and 20 video channels for Bosch and 3rd party IP video devices. **Analog Allegiant matrix switch:** One detector point per camera or alarm input **IP video devices:** One video channel license required per IP video camera, such as DinionIP, AutoDome, VIP camera input or DiBos/Divar camera input
Security Engine (SEE)	**Compatible with Bosch G/GV2/GV3 intrusion panels, D6x00 alarm receiver**
	G-series panels: Panel licenses in steps of 2 panels (SEE includes 2 panel licenses) **D6x00:** Account licenses in steps of 500 up to a maximum of 3200 per receiver (SEE includes 500 free account licenses)

Selection Guide – **Four steps to your new management system**

Step 1	Choose the basic license item for a new system
	Choose the basic license for one of the language variants to start the system software configuration
Step 2	Select the main modules
	Select the main modules (engines) to meet your technical requirements
Step 3	Select BIS platform options
	Select from a variety of alarm-handling options to extend the system's monitoring and control capabilities
Step 4	Select engine related options
	Choose engine-related options to extend their functionalities

Step 1: Choose the basic license item for a new system

Start by selecting a suitable BIS basic package in the language of your choice. Each basic package consists of a box containing the installation medium and a quick installation guide. Many features are already activated in the basic package. For details refer to the BIS datasheet.

You want your BIS in ...	... then you order (once per system)
German, English, Russian, Hungarian, Polish, Dutch, French, Spanish, Portuguese, Simplified Chinese, Traditional Chinese, Turkish, Arabic	BIS-BGEN-B4x or BIS-BGEN-BAS4x, if Alarm Document Package is not needed Every basic package includes 1 BIS Operator Client and 1 BIS Division license.

Step 2: Select the main modules

Next, add main modules (engines) depending on the subsystems you wish to control.

If you want to manage and control ...	... then you need ...	... and you have to order ... (once per entire system)
... Bosch Fire panels UGM2020, UEZ2000, FPA5000, FPA1200, BZ500	Automation Engine (AUE)	BIS-FAUE-BPA4x
... Bosch Intrusion panels UGM2020, UEZ2000, NZ300, MAP5000, GV4, G Series, B Series		
... Bosch Allegiant matrix switch[1]		
... Bosch Praesideo and Paviro public address		
... OPC compliant 3rd party systems[2]		
... Bosch AMC access controller with Wiegand or RS485 reader bus	Access Engine (ACE)	BIS-FACE-BPA4x
... Bosch Allegiant matrix switch	Video Engine (VIE)	BIS-FVIE-BPA4x
... Bosch Dibos V8.x		
... Bosch Divar DVR 400, 600, 700, XF		
... Bosch DVR 3000, 5000		
... Bosch BRS		
... Bosch Dinion, FlexiDome, AutoDome		
... Bosch VIP-X, VideoJet encoders		
... Bosch VIP-X decoders		
... Bosch VRM / DLA		
... 3rd party NVR, DVR or IP camera[3]		
... Bosch G/GV2/GV3 series panels (D7xxx/9xxx)	Security Engine (SEE)	BIS-FSEE-BPA4x
... Bosch Conettix D6100/6600 alarm receiver		

[1] Allegiant matrix switches are also supported by BIS Video Engine
[2] Check with your sales representative what devices are already supported as standard, or can be integrated via the inbuilt OPC connector tool.
[3] See Video Compatibility Matrix on Bosch Extranet

Step 3: Select BIS platform options

BIS provides a pool of generic options with which you can extend the system's core coverage and responsiveness.

If you want to ...	... then you need ...	... and you have to order...
... add timer function for scheduled controls, opportunity to generate manual alarms in case of e.g. telephone calls, alarm message distribution and to start launch of external applications like backups	**Alarm management package** once per entire system	**1 x BIS-FGEN-AMPK4x**
... increase the number of concurrent operators	**Operator license** per concurrent logged in operator	**N x BIS-XGEN-1CLI4x**
... compartmentalize the administration/control of devices, cardholders, etc. by dividing sites into distinct logical entities (divisions) governed by their own operator groups	**Additional Division** per group of people which should operate individually	**N x BIS-XGEN-1DIV4x**
... connect BIS servers together for distributed alarm handling and centralized card holder management	**1xBIS Multi Server Connect** for each connected BIS server (Card holders are licensed only once per system)	**1 x BIS-FGEN-MSRV4x**
... connect BIS server to a 3rd party management system via OPC	**1xBIS Multi Server Connect** for the 3rd party integration	**1 x BIS-FGEN-MSRV4x**

Step 4: Select engine-related options

Additional options are available per engine, which extend the size or functionality of the specific module and the respective application.

Automation Engine (AUE) options

If you want to ...	... then you need ...	... and you have to order...
... add detector points for 3rd party devices to be monitored and controlled by AUE beyond the 500 detector points included in the AUE basic license	**Nx100 or Nx1000 detector points** corresponding to the total number of sensors in the scope	**N x BIS-XAUE-100P4x** **N x BIS-XAUE-1KP4x**
... add another fire or intrusion panel, a Praesideo PA system, an Allegiant matrix switch or a 3rd party system to the AUE	Step 3 'Common options'	... additional detector points
... integrate with an existing BVMS video management system or a Divar IP appliance	**1 x BIS-BVMS Connectivity license** and sufficient video channels beyond the 220 included channels. 100 detector points and 220 video channel licenses are included.	**1 x BIS-FGEN-BVMS4x** **N x BIS-XVIE-1CHA4x**

Access Engine (ACE) options

If you want to ...	... then you need ...	... and you have to order...
... add cards for employees or visitors beyond the 1000 included in the ACE basic license	N times **Additional 100 or 1000 cards** corresponding to the total number you want to add	**N x BIS-XACE-100C4x** **N x BIS-XACE-1KC4x**
... add 32 doors[4] beyond the 32 included in the ACE basic license	N times **32-Door-Upgrade**	**N x BIS-XACE-32DR4x**
... extend the ACE with offline locking devices from Allegion/Normbau (certain markets only)	ACE **Offline Basic Package** and additional offline doors packages (25 doors each)	**1 x BIS-FACE-OFFL4x** **N x BIS-XACE-25OF4x**
... extend the ACE with key and asset management systems from Deister or Kemas	N times **ACE Additional 1 Key Cabinet** (once per Deister / Kemas terminal/reader)	**N x BIS-XACE-1KEY4x**
... add another MAC to extend the number of AMCs beyond the limit of 120 AMCs per MAC or to install AMCs in a different time zone	N times **ACE Additional 1 MAC** corresponding to the total number you want to add	**N x BIS-XACE-1MAC4x**
... extend the ACE with 3rd party biometric readers	N times **ACE biometric 3rd party reader**	**N x BIS-XACE-1BIO4x**
... integrate a 3rd party system with ACE via API	Application Programming Interface **ACE API**	**1 x BIS-FACE-API4x**

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[4] A door in the means of ACE can consist of one (standard door) up to four readers (mantrap). The door configuration and the amount of hardware used is up to the customer. Licensing of doors are not done per device used.

Video Engine (VIE) options

| If you want to ...	... then you need ...	... and you have to order...
... add video channels[5] beyond the 20 included in the VIE basic license	**Additional video channels**	**N x BIS-XVIE-1CHA4x**
... extend the system with one or more 3rd party camera channels	**VIE one 3rd Party Channel**	**N x BIS-XVIE-1VRE4x**
... extend the system with one or more Allegiant matrix switch	Step 3 'Common options'	... additional detector points

Security Engine (SEE) options

If you want to ...	... then you need ...	... and you have to order...
... add G/GV2/GV3/GV4/B series panels beyond the 2 included in the basic SEE license	**OPC9000 2 panel Upgrade** according to the total amount of panels you want to add plus one connection server hardware per 32 panels	**N x BIS-XSEE-2PNL4x**
... add accounts[6] within a Conettix D6x00 alarm receiver connection beyond the 500 included in the basic SEE licenses	N times the **OPC6600 500 panel upgrade** plus one connection server hardware per 3200 accounts (i.e. per Connetix alarm receiver)	**N x BIS-XSEE-500P4x**

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[5] A video channel can be an IP video camera or a camera port at an IP video device, such as Divar, Divar IP or VIP-X. A video channel provides typically live streaming and depending on the device type archiving, alarming and controlling additionally. Camera ports at analogue Allegiant matrix switches are not in the scope of this licensing model.

[6] An account typically represents an (intrusion) panel connected via dialler or Ethernet to the alarm receiver and which provides several alarm events, such as intrusion, social alarm, etc.

Applications

Industrial site with office building
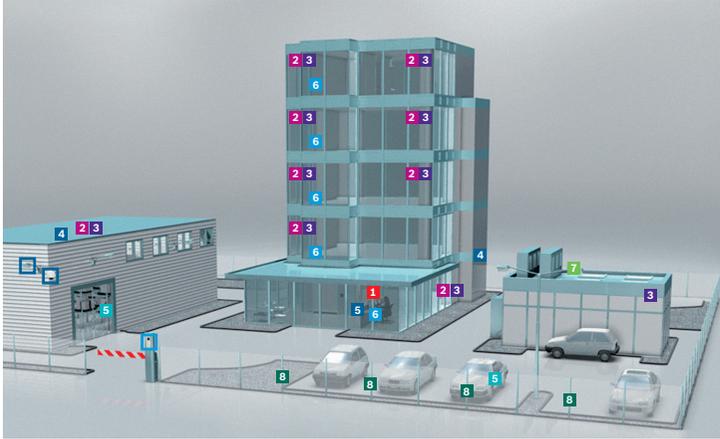
1 BIS Monitoring station

2 Fire detection systems

3 Intrusion systems

4 Video surveillance systems

5 Access control systems

6 Public address/evacuation

7 HVAC, lighting, blinds, IT monitoring

8 Fence and wall monitoring

The challenge

Many Industrial sites and office buildings today require security and building management systems for their day-to-day operation such as fire and intrusion systems, video surveillance and access control, IP infrastructure, etc. Malfunctions and downtimes of those systems cause additional costs and extra staff to properly and safely operate the facility. Such installations are equipped with 24/7 monitoring stations or reception desks that often contain different front-end workstations for each of these systems. Furthermore, many times, no real interaction between them is possible. In such complex installations, an alarm can cause stressful emergency situations. A fire alarm or intrusion attempt can cause operators to make mistakes or simply need more time to find the right button. Stress levels are higher and often the operator feels strained or unsure on how to proceed.

Solutions and system functionality

All those systems can be connected with a high-confidence level to a central BIS server equipped with a worldwide open interface standard. The customized or standard system configuration between the different subsystems can be set up. Specific instructions can be pre-programmed and corresponding site maps can be displayed on the operator screen in association with each alarm type to optimize decisions during such high-alert situations. Automatic and scheduled controls are also possible to allow operators to concentrate on the important things. In addition, individual operator authorizations provide a separation in access and control of the different systems to assure authorization only to specific individuals to see and manage different data available in the system.

Typical applications

▶ Fire detection with evacuation via public address and/or escape door management

▶ Intrusion detection system with integrated video live images and alarm archives

▶ Access to high-secure areas, e.g. computer center with entrance and exit reader, video verification and area balancing, video surveillance with storage/retrieval

▶ Parking lot access with normal reader, barrier and traffic light control and video surveillance or video verification

▶ Arming/disarming intrusion system via keypad reader

▶ Video surveillance of back entrance, parking lot or other locations

▶ Elevator control with individual floor authorizations for up to 64 floors

▶ Perimeter fence control and monitoring

▶ Technical alarms for HVAC, lighting, blinds, etc.

Recommended solutions available

Note that every industrial site or office building has its own structure and a site analysis is recommended to identify the vulnerabilities, the necessary security level at each point of interest and the amount of devices needed for a complete solution to meet the exact requirements.

Parts list – basic selection			
1	BIS-BGEN-B4x BIS-FGEN-AMPK4x *X times* BIS-FGEN-1CLI4x BIS-XGEN-100P4x	BIS central server and operator workstations, subsystem connections, display functions	Define the basic system size and required operating features, such as alarm documents
2 **5** **7** **8** **3**	BIS-FAUE-BPA4x *X times* BIS-AUE-100P4x	Monitoring and control of Bosch fire and intrusion panels and 3rd party subsystems	Sufficient number of detector points (own and 3rd party), used for intrusion panels if 3rd party or Bosch other than G-series
3	BIS-FSEE-BPA4x *X times* BIS-XSEE-2PNL4x	Monitoring and control of Bosch intrusion panels	If G-series panels are used, sufficient number of panel licenses
4	BIS-FVIE-BPA4x *X times* BIS-XVIE-1CHA4x	Monitoring, control and display of Bosch video systems	Analog and IP video, live display and archiving based on Bosch DVR's and storage systems, sufficient video subsystem licenses
6	BIS-FACE-BPA4x *X times* BIS-XACE-100C4x BIS-XACE-32DR4x BIS-XACE-1MAC4x	Monitoring and control of Bosch access control systems	Based on AMC controller family and corresponding readers (Wiegand and RS485 bus), sufficient number of cardholders, visitors and doors

Applications

Train stations
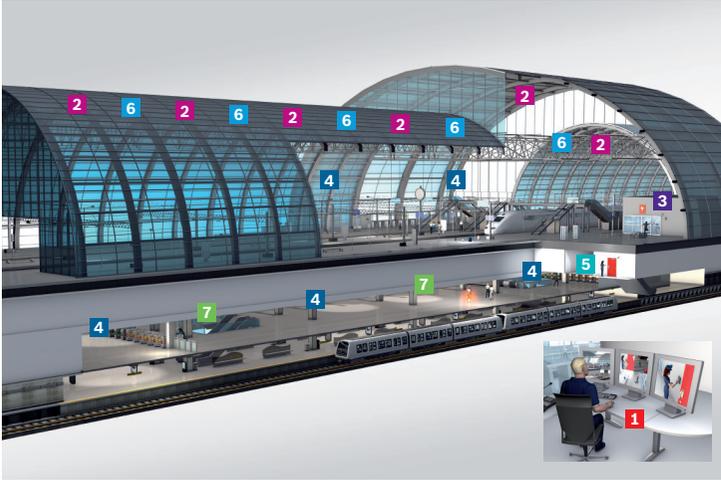
1. BIS Monitoring station
2. Fire detection systems
3. Intrusion systems
4. Video surveillance systems
5. Access control systems
6. Public address/evacuation
7. Intelligent Video Analytics (IVA)

The challenge

Train stations play an important role in the lives of people everywhere. However, in recent years train stations have become increasingly vulnerable to security and safety risks. The rail industry faces a crucial need to guard passengers, employees, goods, infrastructure, and assets against possible threats. The security and safety risks can include vandalism and graffiti, theft, drug dealing, fire, and acts of terrorism. Managing them is a challenging task, since many different areas need to be monitored: tracks, underground passageways, bicycle and car parking areas, buildings, luggage storage facilities, utility rooms, spare part storages (copper is valuable and therefore prone to theft), ticket counters and parked railway cars and engines. To provide fast reaction or to prevent dangerous situations requires a high-level integration of fire systems, access control, video surveillance, public address and voice evacuation under one platform to protect people and assets.

Solutions and system functionality

All those systems can be connected with a high-confidence level to a central BIS server equipped with a worldwide open interface standard. The customized or standard system configuration between the different subsystems can be set up. Specific instructions can be pre-programmed and corresponding site maps can be displayed on the operator screen in association with each alarm type to optimize decisions during such high-alert situations. Automatic and scheduled controls are also possible to allow operators to concentrate on the important things. In addition, individual operator authorizations provide a separation in access and control of the different systems to assure authorization only to specific individuals to see and manage different data available in the system.
Thanks to its multi-server system, BIS is also the ideal solution for distributed railway or metro installations as the stations can be surveilled centrally as well as locally (e.g. in case of an alarm).

Typical applications

▶ Access control for restricted areas such as utility rooms or ticket counters
▶ Video surveillance to detect potentially dangerous individuals before they can cause any trouble
▶ IVA to detect suspicious behavior and identify abandoned luggage and to prevent accidents via the "Virtual Perimeter Fence" functionality
▶ Fire alarm systems (e.g. AVIOTEC) to quickly detect, locate, verify, and contain fires
▶ Intrusion alarm systems to monitor sensitive areas (e.g. remote materials and spare part storages) for intruders
▶ Evacuation systems to conduct fast, controlled evacuations

Recommended solutions available

Note that each train station has its own structure and a site analysis is recommended to identify the vulnerabilities, the necessary security level at each point of interest and the number of devices needed for a complete solution to meet the exact requirements.

Parts list – basic selection			
1	BIS-BGEN-B4x *X times* BIS-XGEN-1CLI4x	BIS central server and operator workstation	Define the basic system size and required operating features, such as alarm documents
2 3 4 6 7	BIS-FAUE-BPA4x *X times* BIS-XAUE-1KP4x BIS-XAUE-100P4x	Monitoring and control of Bosch fire detection and intrusion systems, monitoring of Bosch PA/VA, Bosch video analytics (IVA) and 3rd party systems	Sufficient number of detector points
4	BIS-FGEN-BVMS4x *X times* BIS-XVIE-1CHA4x	Video alarm verification and recording with BVMS	Sufficient number of video channels for alarm verification and recording
5	BIS-FACE-BPA4x *X times* BIS-XACE-128D4x BIS-XACE-100C4x	Monitoring and control of Bosch access control systems	Based on AMC controller family and corresponding readers, sufficient number of cardholders and doors

Project-specific adaptations, expansions and additional Bosch services

▶ Specifications for tenders
▶ Quotations
▶ Project planning
▶ Project-specific application development
  – Interfaces/drivers to 3rd party devices
  – Specific reporting
  – Specific administration tools
  – etc.
▶ Factory acceptance tests

Bosch Security and Safety Systems

Protecting lives, buildings and assets is our aim. Our product portfolio includes video security, intrusion detection, fire detection and voice evacuation systems as well as access control and management systems. Professional audio and conference systems for communications of voice, sound and music complete the range.