Building Integration System

Selection Guide for V3.0
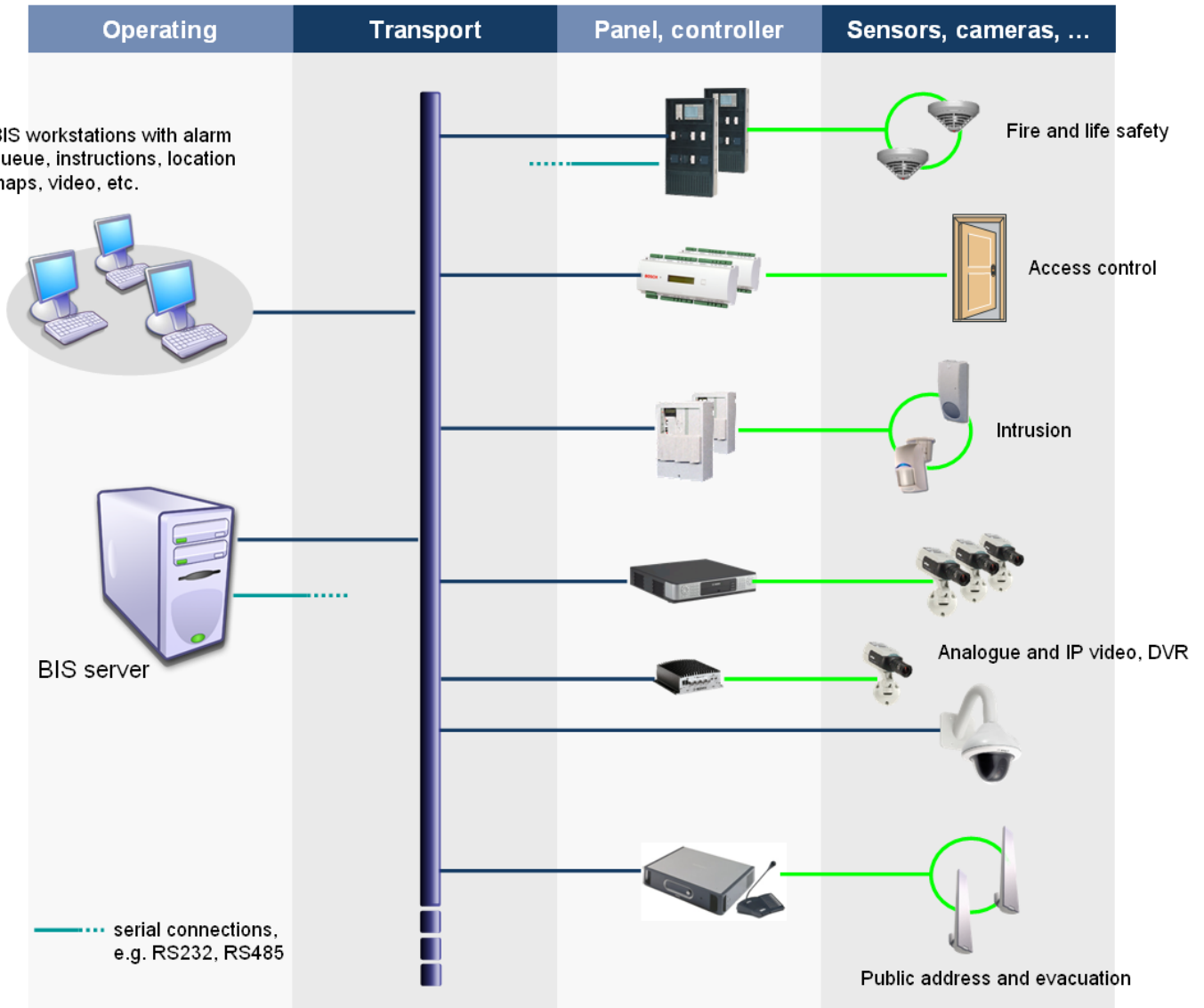
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System overview

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 providing the operator better control and faster response times. Further, BIS is designed with a modular structure consisting of a basic software license and a pool of additional options to meet the individual requirements of your customer.

Operating	Transport	Panel, controller	Sensors, cameras, …

BIS workstations with alarm queue, instructions, location maps, video, etc.

BIS server

serial connections, e.g. RS232, RS485

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 including complete cardholder, door and reader management
- ▶ Management and control of and integrated alarm and video verification with Bosch analog and IP video devices
- ▶ Management and control of Bosch Praesideo public address devices
- ▶ Management and control of many 3rd party security, safety or 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
	One OPC license per panel/device or host connection from a panel loop, sufficient number of 'own' detector points for Bosch devices (common option) or other detector points for 3rd party (AUE option)
Access Engine (ACE)	Compatible with Bosch AMC access controller, doors, readers, cardholders
	Door licenses in steps of 32, where a door can consist of up to four readers, number of cardholders and visitors
Video Engine (VIE)	Compatible with Bosch analog and IP video devices and 3rd party IP video devices
	Analog Allegiant matrix switch: One OPC license per host connection, one own detector point license per camera or alarm input **IP video devices:** One video channel license required per IP video camera, such as DinionIP, Gen4 dome, VIP camera input or DiBos/Divar camera input (VIE will be shipped with 40 free channel licenses)
Security Engine (SEE)	Compatible with Bosch G/GV2/GV3 intrusion panels, D6x00 alarm receiver
	G-panels: One OPC license per OPC driver which drives up to 32 panels plus panel licenses in steps of 2, 8 or 32 **D6x00:** One OPC license per receiver plus account licenses in steps of 500 up to a maximum of 3200 per receiver (SEE is shipped with 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 item from one of the offered 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 common options**
	Select from a variety of common alarm handling options to extend the scope of the system or to increase the control capabilities
Step 4	**Select engine related options**
	Choose engine-related options to increase the scope of a specific application or to extend its respective functionality

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

Start by selecting a suitable BIS basic package. BIS is available in several languages, so that you can choose from a pool of basic order items here. Each of the following items consists of a box containing the installation DVD, a unique dongle key, a quick installation guide, and the individual license file. Several standard features are already activated in these basic packages. For more details refer to the BIS datasheet.

You want your BIS in ...	... then you order (once per system)
German	BIS-GEN-B30DE
English	BIS-GEN-B30EN
Russian	BIS-GEN-B30RU*
Hungarian	BIS-GEN-B30HU*
Dutch	BIS-GEN-B30NL*
Simplified Chinese	BIS-GEN-B30CN*
Traditional Chinese	BIS-GEN-B30TW*
Spanish	BIS-GEN-B30ES*
Portuguese	BIS-GEN-B30PT*
French	BIS-GEN-B30FR*

* Separate release dates compared to English/German, please check availability with your order desk

Step 2: Select the main modules

Next add a selection of the main modules (engines) depending on the kinds of 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-AUE-BPA
... Bosch Intrusion panels UGM2020, UEZ2000, NZ300, MAP5000[1]		
... Bosch Allegiant matrix switch[2]		
... Bosch Praesideo public address		
... OPC compliant 3rd party systems[3]		
... Bosch AMC access controller with Wiegand or RS485 reader bus	Access Engine (ACE)	BIS-ACE-BPA
... Bosch Allegiant matrix switch	Video Engine (VIE)	BIS-VIE-BPA
... Bosch DiBos DVR V7.x and V8.x		
... Bosch Divar DVR V1.1 and 2.x		
... Bosch Divar XF series DVR[1]		
... Bosch Divar 700, BRS[4]		
... Bosch Dinion IP, Gen4 Auto domes		
... Bosch VIP-X, VideoJet (X) IP devices		
... Bosch VideoJet 1000, 8xxx IP devices		
... Bosch Video Recording Manager VRM		
... 3rd party NVR, DVR or IP camera[3]		
... Bosch G/GV2/GV3 series panels (D7xxx/9xxx)	Security Engine (SEE)[5]	BIS-SEE-BPA
... Bosch Conettix D6100/6600 alarm receiver		

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[1] Supported from BIS 2.2 TU2 onwards

[2] Allegiant matrix switches are also supported by BIS Video Engine

[3] Check with your representative what devices are already supported or how additional connections can be realized individually

[4] Supported from BIS 2.4 onwards for project versions (check with your representative)

[5] Corresponding subsystem hardware is available only in selected markets

Step 3: Select common options

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

If you want to ...	... then you need ...	... and you have to order...
... add the display of alarm documents and site maps including graphical navigation and layer control to the operator's UI	**Alarm document package** once per entire system	1 x BIS-GEN-ADPACK
... 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-GEN-AMPACK
... increase the number of operators which can be logged in simultaneously	**Operator license** per concurrent logged in operator	N x BIS-GEN-CLIENT
... connect another Bosch panel or 3rd party device to Automation Engine or Allegiant matrix switches to Video Engine	**Add. OPC server license** per panel/device or host connection from a panel loop	N x BIS-GEN-OPCLIC per connection
... separate the administration/control of devices, cardholders, etc. by operator groups or separate parties within a building	**Additional Division** per group of people which should operate individually	N x BIS-GEN-ONEDIV
... extend the number of detector points from Bosch panels to be monitored and controlled by Automation Engine	**Nx100, Nx1000 or Nx10000 own data points** regarding to the total number of sensors in the scope	N x BIS-GEN-P100 N x BIS-GEN-P1K N x BIS-GEN-P10K

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	**Nx100, Nx1000 or Nx10000 detector points** regarding to the total number of sensors in the scope	N x BIS-AUE-P100 N x BIS-AUE-P1K N x BIS-AUE-P10K
... 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 OPC server licenses and sufficient own detector points

Access Engine (ACE) options

If you want to ...	... then you need ...	... and you have to order...
... add cardholders beyond the 2000 included in the ACE basic license	N times **Additional 1000 cardholder** regarding to the total number you want to add	N x BIS-ACE-1000CRD
... add visitors beyond the 500 included in the ACE basic license	N times **Additional 100 visitors** regarding to the total number you want to add	N x BIS-ACE-100VIS
... add 32 doors[6] beyond the 32 included in the ACE basic license	N times **32-Door-Upgrade**	N x BIS-ACE-32DOORS
... extend the ACE with video verification, which allows operators to verify the identities (via camera and database image) of persons requesting access, and decide whether to grant or deny admission	**Video Verification** (once per system)	1 x BIS-ACE-VIDVERI
... use the opportunity to manage and control parking lots in the ACE	**Parking lot management** (once per system)	1 x BIS-ACE-PARKMGR

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[6] 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[7] beyond the 40 included in the VIE basic license	**Additional one Video Channel**	N x BIS-VIE-ADDCHA
... extend the Video Engine with extended features, such as backup VRM, etc.	**Video Engine Extended Features**	1 x BIS-VIE-EXTFEAT
... extend the system with one or more 3rd party camera channels	**VIE one 3rd Party Channel**	N x BIS-VIE-VRECHA
... extend the system with one or more Allegiant matrix switch	Step 3 'Common options'	... additional OPC server licenses and sufficient own detector points

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[7] A video channel can be an IP video camera or a camera port at an IP video device, such as Divar XF, DiBos 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.

Security Engine (SEE) options

If you want to ...	... then you need ...	... and you have to order...
... add G/GV2/GV3 series panels beyond the 2 (but less than 32) included in the basic SEE license	**OPC9000 2, 8, or 32 panel Upgrade** according to the total amount of panels you want to add	N x BIS-SEE-UPPNL2 N x BIS-SEE-UPPNL8 N x BIS-SEE-UPPNL32
... add G/GV2/GV3 series panels and you have already reached the maximum number of 32 panels per OPC driver/connection server	One additional connection server hardware and **Add.OPC-Server license** plus **OPC9000 2, 8, or 32 panel Upgrade** according to the total amount of panels you want to add	1 x BIS-GEN-OPCLIC (per 32 panels) plus N x BIS-SEE-UPPNL2 N x BIS-SEE-UPPNL8 N x BIS-SEE-UPPNL32 ⚠️
... add accounts[8] within a Conettix D6x00 alarm receiver connection beyond the 500 included in the basic SEE license	N times the **OPC6600 500 panel upgrade** (up to the maximum of 3200 accounts)	N x BIS-SEE-ACC500
... add another Conettix alarm receiver beyond the 3200 accounts (for the receiver internal number of accounts see previous point)	One additional connection server hardware, an **Add.OPC-Server license** plus number of **OPC6600 500 panel upgrade** necessary	1 x BIS-GEN-OPCLIC (per 3200 accounts) plus (N x BIS-SEE-ACC500) ⚠️
... add video badging capability to SEE (used with G-series panels containing access control functionality)	**Video badging for SEE** once per entire system	BIS-SEE-PID
... add video verification to your G-series panel containing access control functionality	**Video Verification for SEE** once per entire system	BIS-SEE-VIDVERI

⚠️   This engine-specific option requires additional generic options

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[8] 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 system
3	Intrusion detection system
4	Video surveillance systems
5	Fence and wall monitoring
6	Access control and parking lot management
7	HVAC, lighting, blinds, etc. monitoring
8	Public address / evacuation

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 system, 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 16 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-GEN-B25xx
	BIS-GEN-ADPACK
	BIS-GEN-AMPACK
	N times
	  BIS-GEN-OPCLIC
	  BIS-GEN-CLIENT
	  BIS-GEN-Pxxx
		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-AUE-BPA *N times* BIS-AUE-Pxxx	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-SEE-BPA *N times* BIS-SEE-UPPNLxx	Monitoring and control of Bosch intrusion panels	If G-series panels are used, sufficient number of panel licenses
4	BIS-VIE-BPA *N times* BIS-VIE-xxxx	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-ACE-BPA
	BIS-ACE-VIDVERI
	BIS-ACE-PARKMGR
	N times
	  BIS-ACE-1000CRD
	  BIS-ACE-100VIS
	  BIS-ACE-32DOORS
		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

Correctional Facilities (Prisons)

1	BIS Monitoring station and individual workstations
2	Fire detection system
3	Video surveillance systems
4	Fence and wall monitoring
5	Access control
6	Cell door control and monitoring
7	Light / antenna control
8	Visitor communication and public address

The challenge

Due to their intended purpose, correctional facilities typically have high-level requirements for security solutions. Escape, violence, arson, guard safety are only some reasons why prisons need additional attention. To provide fast reaction or to prevent dangerous situations requires a high-level integration of fire systems, access control, video surveillance, fence and wall monitoring or a guard tour system under one platform to protect people and assets in such a sensitive environment.

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

▶ Perimeter fence/wall surveillance
▶ Fire alarm system for cells and other vital areas
▶ Cell door control and monitoring
▶ Cell communication
▶ Visitor/inmate communication control and surveillance
▶ Access control to high-secure areas, e.g. 24/7 monitoring station, video verification and area balancing, video surveillance with storage/retrieval
▶ Access control with integrated video surveillance main gates, visitor area, etc.
▶ Video surveillance with motion detection of prison yard, fence/wall area, etc.
▶ Guard tour using standard access readers or similar sensors as checkpoints along a defined route to be passed in a defined period of time, combined with guard tracking system for immediate alerts, e.g. via Bosch paging system

Recommended solutions available

Note that each facility 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-GEN-B25xx
	BIS-GEN-ADPACK
	BIS-GEN-AMPACK
	N times
	  BIS-GEN-OPCLIC
	  BIS-GEN-CLIENT
	  BIS-GEN-Pxxx
		BIS central server and operator workstations, subsystem connections, display functions	Define the basic system size and required operating features, such as alarm documents

2 4 6 7 8	BIS-AUE-BPA *N times* BIS-AUE-Pxxx	Monitoring and control of Bosch fire panels and 3rd party subsystems	Sufficient number of detector points (own and 3rd party)
3 5	BIS-VIE-BPA *N times* BIS-VIE-xxxx	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

	BIS-ACE-BPA
	BIS-ACE-VIDVERI
	N times
	  BIS-ACE-1000CRD
	  BIS-ACE-100VIS
	  BIS-ACE-32DOORS
		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

Project-specific adaptations, expansions and additional Bosch services

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

A Tradition of Quality and Innovation

For over 100 years, the Bosch name has stood for quality and reliability. Bosch is the global supplier of choice for innovative technology, backed by the highest standards for service and support.

Bosch Security Systems proudly offers a wide range of security, safety, communications and sound solutions that are relied upon every day in applications around the world, from government facilities and public venues to businesses, schools and homes.