BIS - Overview and basic package V3.0

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BOSCH
Invented for life

▶ Complete enterprise management for efficient, integrated building and security management in a single solution

▶ Consistent use of world-wide open IT standards for configuring, interfacing and displaying makes BIS extremely user and installer friendly

▶ Provides even better integration of Bosch and 3rd party systems through OPC compliance

▶ Easily links alarm information to user-defined action-plans and existing location maps

▶ Modular structure makes it easy to create a security solution which best meets your requirements

The building management system

The Building Integration System (BIS) is a flexible building management system which can be configured to suit the user's specific needs.

It contains a huge range of applications and features which enable both the integration and coupling as well as the monitoring and control of all technical building systems.

The new generation builds on Bosch's many years of experience in management systems and was considerably influenced by the following market trends:

- Increasing complexity of technical building equipment
The increasing complexity of technical equipment inside buildings requires a powerful management system which combines the most varied functions (e.g. fire and intrusion alarm systems, access control, video systems and building automation... etc.) in the best possible way. The OPC standard enables BIS to process and share information efficiently with a huge variety of hardware devices and other sources.

- Using new technologies and standards
While the strict regulations in the field of security technology ensure a high degree of reliability in security matters, they hinder the integrated use of new technologies from the IT world. BIS has succeeded in harnessing the benefits of non-security-based technologies (e.g. OPC, CAD, web) and harmonizing them with the world of security technologies.

- Customers want complete solutions
Facility managers and integrators are demanding a single building-management solution that is nevertheless able to integrate all their security subsystems.

System overview

The Building Integration System is a versatile product made up of a basic package plus various optional components (also known as Engines) based on a common software platform. The engines can be combined to tailor building management systems to detailed requirements.

These main components are:

- Automation Engine
- Access Engine
- Video Engine
- Security Engine
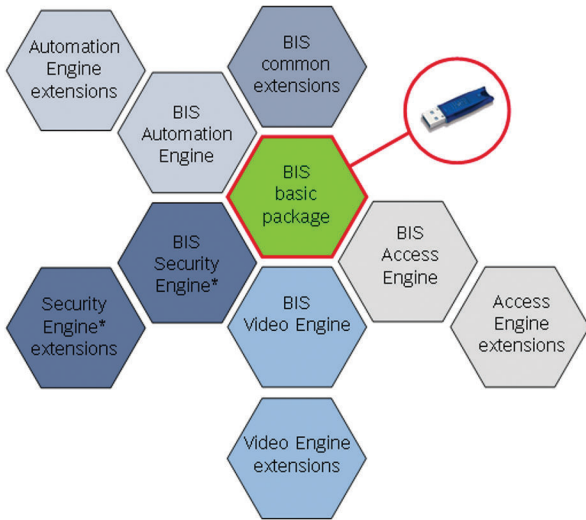
* not available in all countries
These engines are described in greater detail in separate datasheets.

Functions

System architecture
The BIS Engines provide fire and intrusion detection, access control, video surveillance and the monitoring of HVAC and other vital systems.
BIS is based on a performance-optimized three-tier architecture especially designed for use in Intranet and Internet environments.
Subsystems are connected via the well-established world-wide OPC standard.
BIS can operate on a standalone PC or in a networked client/server architecture.
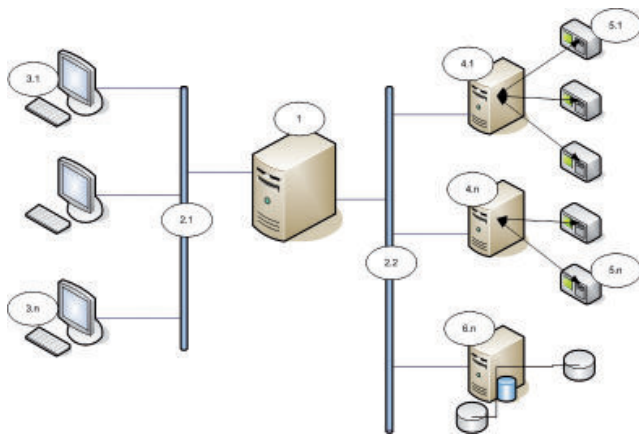
1. BIS server	4.1.- 4.n Connection servers
2. Client network	5.1 – 5.n OPC compatible devices
3.1 – 3.n Clients	6. Database server

Organizational structure and configuration
A number of automatic functions and easy-to-use tools make the configuration of BIS installer-friendly, saving time and expense.
Hierarchical location trees can be created by the import of existing CAD data (standard DWF vector format) containing layers, named views and detector locations. Zooming and panning allow rapid navigation through the building.
The BIS user interface is web-server-based using dynamic HTML pages. Default pages for different screen resolutions and formats are included in the installation software.
BIS automatically detects the monitor resolution and provides the appropriate user interface. The default pages can easily be customized using a standard HTML editor.
Existing configurations of OPC compliant subsystems can be easily imported into BIS through this open interface standard. An OPC server can be installed on a PC anywhere in the network and BIS will connect to it.

Operation
The main task of BIS is to operate as the alarm, monitor and control center for the various security systems within a site. Its graphical interface is designed to help the operator grasp the extent and urgency of an occurrence quickly, and to take prompt and effective action.
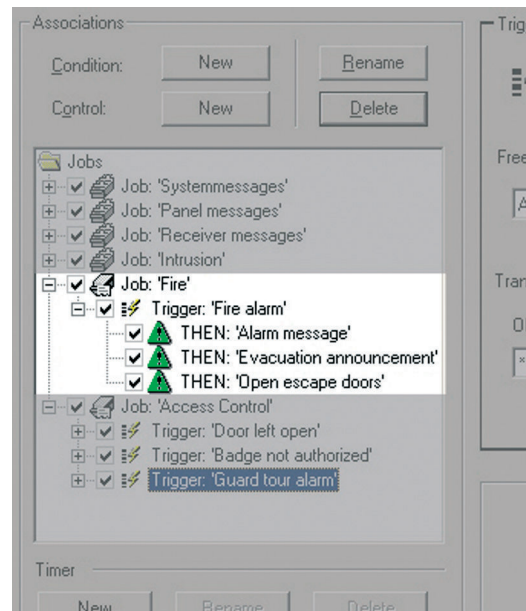
The heart of the system, the State Machine, monitors all incoming events and operator requests and takes those actions prescribed by user-defined rules or Associations, thus unburdening the operators.
BIS client workstations require only Windows and the Internet Explorer. No local installation is necessary.

System security

AES encryption between BIS central server and workstations provides additional security in addition to configurable user-access rights. If PCs within a corporate network are to be used as client workstations then enhanced security can be achieved by restricting operators to specific workstations or IP-addresses.

Basic package

The Building Integration System basic package provides many features used in common by the various Engines.

- Customizable device condition counters to provide an overview of the condition of subsystems across the entire BIS system
- Message processing and alarm display
- Alarm queue with up to 5000 simultaneous alarm events and detailed alarm information

- Fixed assignment of operators to workstations for higher security
- State machine for automated event and alarm handling.
- Web-server-based platform allows connection of client workstation via just the Internet Explorer
- Direct support for location maps in standard AutoCAD DWF vector format reduces configuration effort.
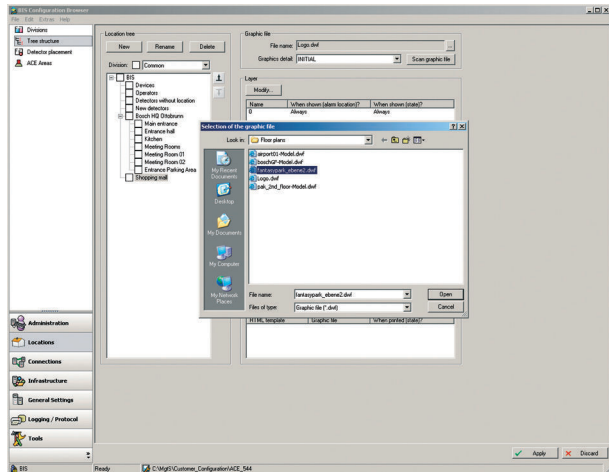

- Changes to architecture within a graphic (new walls, moving a door, etc.) can be implemented without changing the BIS configuration, simply import a new plot file.
- Automated workflows with message distribution and customizable escalation paths
- Huge library of standardized detector icons in standard vector format including color, event and control definitions
- Direct control of detectors via the context menus of their icons in the location maps

- The logical structure (e.g. building – floor – room) of a site is visualized as a tree that can be used for graphical navigation, and where alarm conditions are indicated by colored spheres.
- Location tree can be generated automatically from the "named views" within the AutoCAD graphic
- Action management for automatic and manual control into connected subsystems and their peripherals
- Device overview for all connected subsystems, and their peripherals (detectors) and internal virtual devices (operator, server, ...) in the form of a tree structure with detailed information about address, status, type, location and notes. Control the peripherals via the context menus of their tree nodes.

- Ability to divide the system into autonomous Divisions, and to restrict operators to the control of specific Divisions.
- Ability to provide specific information to the operator in the form of "miscellaneous" hypertext documents, including text, bitmaps, video images, etc.
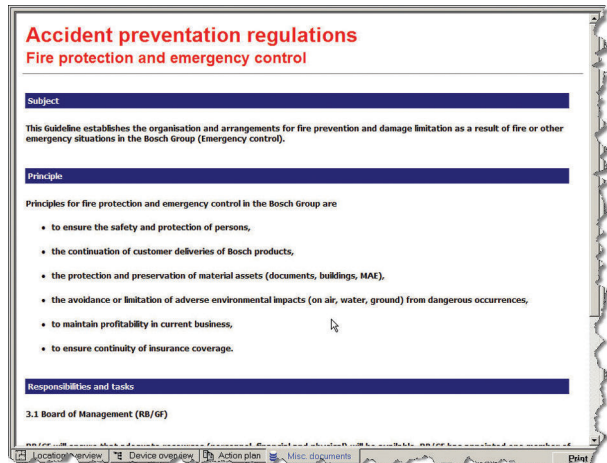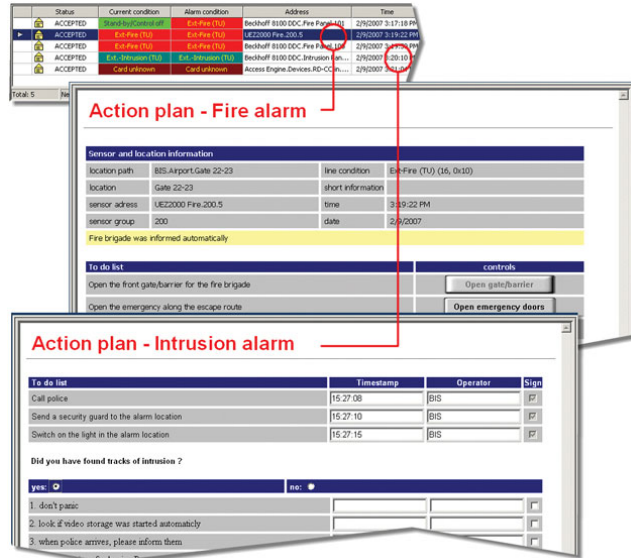

- Location overview with hyperlinks to photos, manuals, instructions
- Highly configurable operator access rights for monitoring and control of subsystems and their peripherals
- Event log to ensure all events are completely documented (including messages and controls)
- Reporting services to quickly create reports from the event log
- Linking and embedding of OPC servers from any computer in the network
- Online Help

BIS optional accessories

The optional features listed below can be added to the BIS system to meet specific customer requirements. They are usable with all the BIS Engines (Automation, Access, Video and Security Engine).
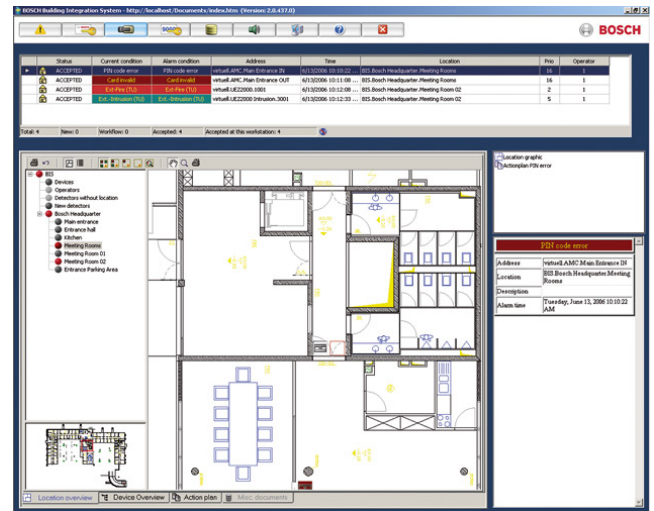
This package extends the standard alarm handling of your BIS system with the capability of displaying action plans and location maps as well as the graphical navigation and the alarm-dependent visualization of layers inside those maps. This ensures optimal guidance to operators especially in stress situations, such as fire or intrusion alarms.

- Location maps are a visualization of premises e.g. floors, areas or rooms, based on the popular AutoCAD vector-graphics format. Detectors and other devices are represented by colored, animated icons that provide direct control via their context menus. In the case of an alarm BIS zooms automatically to the location in the map where it was triggered.
- A location tree, which can be created automatically, and the zoom/pan function allow synchronized graphical navigation within the buildings.
- Alarm-dependent layer control allows the display of additional graphical information for specific situations, e.g. escape routes in case of fire alarms.
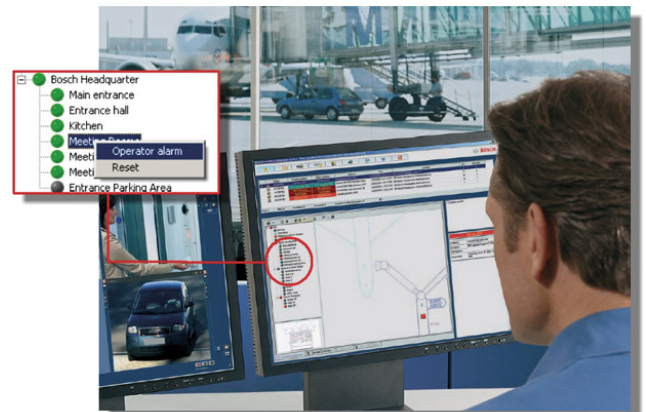
Alarm-dependent action plans or workflows provide detailed event-dependent information such as standard operating procedures, live images, control buttons, etc. to the operator. Simply create and assign one action plan to each possible alarm type in your system, e.g. fire alarm, access denied, technical alarms, etc.

With the deletion of an alarm message an unmodifiable snapshot of the displayed action plan is attached to the event log. This ensures accountability by providing a trace of all steps performed by the operator during the alarm response.

This package extends the standard alarm-handling of your BIS system by some additional features: Message distribution allows the definition of escalation scenarios which are activated automatically when an operator or operator group fails to acknowledge an alarm message within a defined period. BIS will then forward the message automatically to the next authorized operator group. The timer feature allows the setup of time schedules which can be used to perform automatic control commands, such as closing a barrier at 8:00 pm, as well as for time-dependent redirection of alarm messages, e.g. within time period 1 show message to operator group 1 else to operator group 2.

The operator alarm feature allows an operator to trigger an alarm manually from the location tree, for example, if informed by telephone of a dangerous situation. Such manual alarms are processed in the same way as those triggered by a detector: that is, the associated documents are displayed and all steps taken are recorded in the event log.
The application launcher allows the invocation of non-BIS applications by the system based upon predefined conditions, e.g. alarms or timers. A typical application of this would be an automatic regular system backup.

Installation/configuration notes

Building Integration System in figures

Addresses, detectors, control elements, cameras etc. which can be processed in the entire system	500,000
max. number of states	unlimited
number of events per second	500 (continuous, with higher peaks)
max. number of network printers in the integrated network	not limited by BIS

Parts included

Qty.	Components
1	BIS Installation DVD incl. BIS platform, complete engine software and installation manuals as PDF
1	Quick installation guide
1	License file
1	Dongle key
1	operator licence
1	OPC server license
	Event log
	Message processing (basic alarm management)

Technical specifications

Minimum technical requirements to be met by the BIS login or connection server

Processor 3GHz CPU Single Core or higher

4 GB RAM

80 GB of free HD space

DVD-ROM drive

100 Mbit network card (PCI)

1 free USB port for dongle

Graphical adapter with 1280 x 1024, 32 k colors

Windows Server 2008 R2,
or Windows 7 (32 or 64 Bit, but not Starter/Home Edition),
or Windows Server 2003 (SP2, R2, 32 Bit),
or Windows XP Professional SP3 (32 Bit) including IIS

- Microsoft Internet Explorer 8 or 9

- Keyboard, mouse

Subject to technical changes.

Minimum technical requirements to be met by the BIS client workstation PC

Processor 3GHz CPU Single Core

4 GB RAM

20 GB of free HD space

100 Mbit Ethernet network card

Graphical adapter with 1280 x 1024, 32 k colors

Windows XP SP3 or Windows 7 (32/64 Bit)

Microsoft Internet Explorer 8 or 9

Keyboard, mouse

Subject to technical changes.

Ordering information
BIS is available in the following languages:
- DE = German
- EN = English
- ES = Spanish
- FR = French
- HU = Hungarian
- NL = Dutch
- PT = Portuguese
- RU = Russian
- ZH-TW = Traditional Chinese
- ZH-CN = Simplified Chinese

A BIS basic package in one of these languages is always required when setting up a new system.
A Re-fitting package is required, one per order, when extending an existing BIS. For re-fitting older versions of BIS (1.4.x to 2.x), or upgrading such a version to the current one, please refer to the re-fitting packages for those versions.

Ordering information

BIS-Re-fitting features V3.0
Order number **BIS-GEN-REFV30**

BIS 3.0 Basic Package DE
Order number **BIS-GEN-B30DE**

BIS 3.0 Basic Package EN
Order number **BIS-GEN-B30EN**

BIS 3.0 Basic Package NL
Order number **BIS-GEN-B30NL**

BIS 3.0 Basic Package FR
Order number **BIS-GEN-B30FR**

BIS 3.0 Basic Package RU
Order number **BIS-GEN-B30RU**

BIS 3.0 Basic Package HU
Order number **BIS-GEN-B30HU**

BIS 3.0 Basic Package ES
Order number **BIS-GEN-B30ES**

BIS 3.0 Basic Package PT
Order number **BIS-GEN-B30PT**

BIS 3.0 Basic Package CN
Order number **BIS-GEN-B30CN**

BIS 3.0 Basic Package TW
Order number **BIS-GEN-B30TW**

BIS Upgrade to Version 3.0 DE
Order number **BIS-GEN-UP30DE**

BIS Upgrade to Version 3.0 EN
Order number **BIS-GEN-UP30EN**

BIS Upgrade to Version 3.0 NL
Order number **BIS-GEN-UP30NL**

BIS Upgrade to Version 3.0 FR
Order number **BIS-GEN-UP30FR**

BIS Upgrade to Version 3.0 RU
Order number **BIS-GEN-UP30RU**

BIS Upgrade to Version 3.0 HU
Order number **BIS-GEN-UP30HU**

BIS Upgrade to Version 3.0 ES
Order number **BIS-GEN-UP30ES**

BIS Upgrade to Version 3.0 PT
Order number **BIS-GEN-UP30PT**

BIS Upgrade to Version 3.0 CN
Order number **BIS-GEN-UP30CN**

BIS Upgrade to Version 3.0 TW
Order number **BIS-GEN-UP30TW**

Software Options

Alarm document package
License bundle containing Display of action plans,
Display of location maps, Graphical navigation, and
Layer controlling.
Order number **BIS-GEN-ADPACK**

Alarm management package
License bundle containing Message distribution,
Timer, Operator alarm, and Application launcher.
Order number **BIS-GEN-AMPACK**

Additional Division licence
Licenses the addition of an autonomous, named party
(aka Division) to your BIS installation.
Order number **BIS-GEN-ONEDIV**

Additional operator licence
Licenses the addition of an operator to your BIS
installation.
Order number **BIS-GEN-CLIENT**

Additional OPC server licence
Licenses the addition of an OPC server to your BIS
installation.
Order number **BIS-GEN-OPCLIC**

N x 100 Bosch detector points
Licenses the addition of 100 Bosch detector points to
your BIS installation.
Order number **BIS-GEN-P100**

N x 1,000 Bosch detector points
Licenses the addition of 1000 Bosch detector points
to your BIS installation.
Order number **BIS-GEN-P1K**

N x 10,000 Bosch detector points
Licenses the addition of 10 000 Bosch detector points
to your BIS installation.
Order number **BIS-GEN-P10K**