BIS - Basic package V4.3

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BOSCH
Invented for life

- ▶ Integration of Bosch and third party systems through deployment of OPC
- ▶ All relevant information in one user interface
- ▶ Fully embedded access control
- ▶ Full event log for forensic investigations
- ▶ Scalable system that grows with your needs

The Building Integration System (BIS)
BIS is a flexible, scalable security and safety management system that can be configured to handle an enormous spectrum of operational scenarios.
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.
This new version 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 and growing 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.
- Need for 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
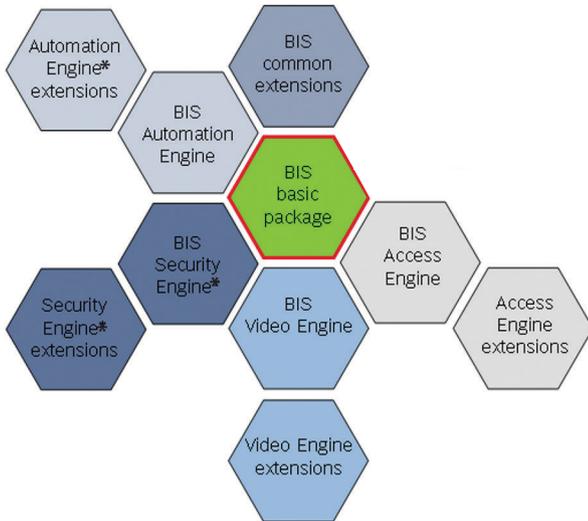
* not available in all countries
These engines are described in greater detail in separate datasheets.

Functions

System architecture

The BIS Engines provide fire and intrusion detection, access control, video surveillance, public address/ alarms plus the monitoring of HVAC and other vital systems.

BIS is based on a performance-optimized multi-tier architecture especially designed for use in Intranet and Internet environments.

Subsystems are connected via the well-established, world-wide OPC standard. This open standard makes it easy to insert BIS into existing OPC-compliant subsystems.

Optionally, individual BIS systems can cooperate by providing data to, or consuming data from, other BIS systems. The result is a Multi-server BIS system.
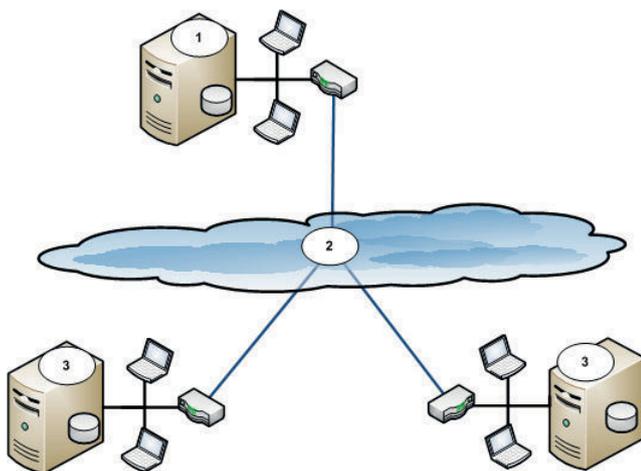
1. A BIS consumer server with workstations and router in a local area network (LAN)

2. Wide area network (WAN)
3. BIS provider servers with workstations and routers in local area networks (LAN)

Organizational structure and configuration

A number of automatic functions and easy-to-use tools make configuration installer-friendly, saving time and expense.

Hierarchical location trees can be created by the import of existing CAD data containing layers, named views and detector locations. Zooming and panning allow rapid navigation through the building.

The user interface is web -based using dynamic HTML pages. Default pages for different screen resolutions and formats are included in the installation software, and the default pages can easily be customized using a standard HTML editor.

BIS automatically detects the monitor resolution and provides the appropriate user interface.

Operation

The system's main task is to operate as the alarm-monitoring 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.
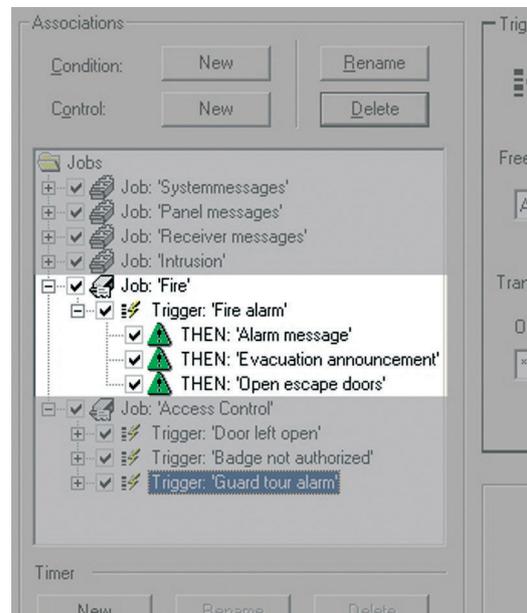
The heart of the system, the State Machine, monitors all incoming events and operator requests and, if desired, can take actions prescribed by user-defined rules, thus unburdening the operators.

System security

State-of-the-art encryption between BIS servers 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 client workstations to connect to BIS via just the browser.
- Direct support for location maps in standard AutoCAD DWF vector format reduces configuration effort.
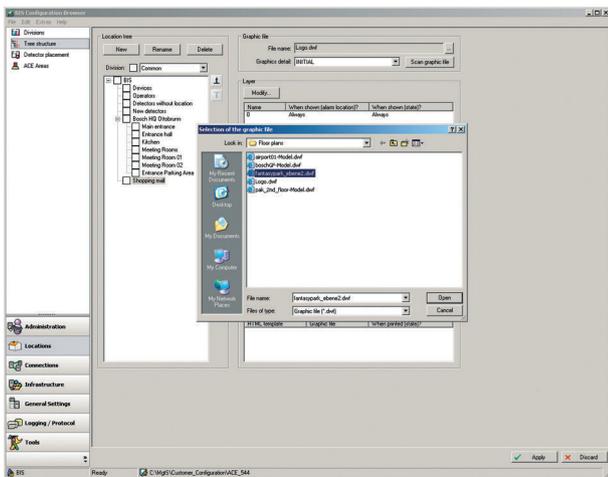
- Changes to architecture within a graphic (new walls, moving a door, etc.) can be implemented without changing the BIS configuration, simply import a new plot file.
- Automated workflows between operators, with message broadcasting and customizable escalation paths
- Huge library of standardized detector icons in standard vector format including color, event and control definitions
- Direct control and monitoring of detectors via the context menus of their icons in the location maps
- Direct control and monitoring of detectors via the logical tree-structure (e.g. building, floor, room) of a site, with hyperlinks to photos, manuals, instructions
- Location tree 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.
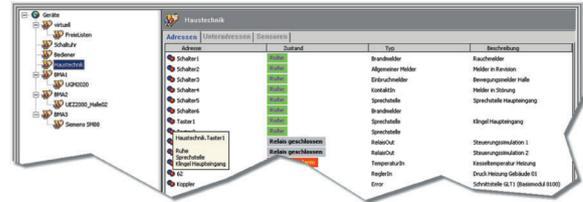
- Ability to compartmentalize the managed site into autonomous divisions, and to restrict operators to the control of specific divisions.
- Ability to provide specific information to the operator in the form of free-form "miscellaneous" hypertext documents, including text, bitmaps, video images, etc.
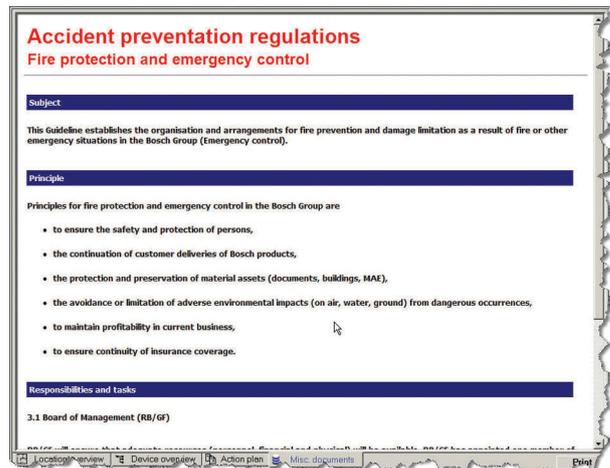
- Highly configurable operator authorizations for monitoring and control of subsystems and their peripherals
- Event log to ensure all events are completely documented (including messages received and actions taken)
- Reporting services to quickly create customized and interactive reports from the event log
- Linking and embedding of OPC servers from any computer in the network
- Online Help

Action plans and location maps

BIS amplifies standard alarm-handling by its ability to display action plans and location maps, including 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.
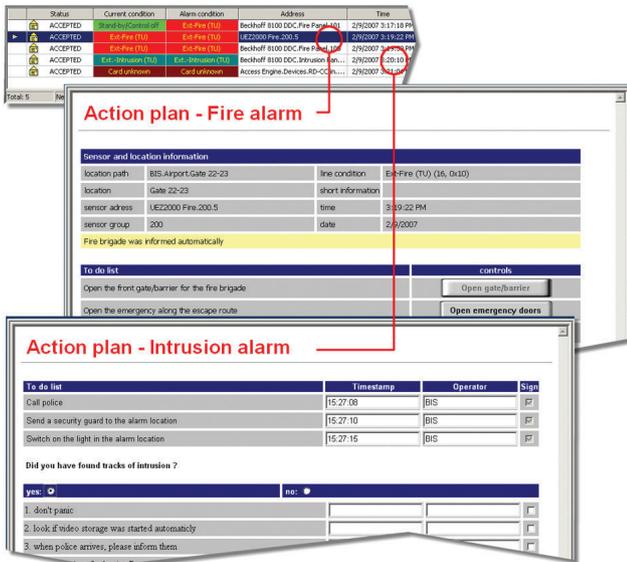
Alarm-dependent action plans or workflows provide detailed event-dependent information such as standard operating procedures, live images, control buttons, etc. to the operator. Simply create and assign one action plan to each possible alarm type in your system, e.g. fire alarm, access denied, technical 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.
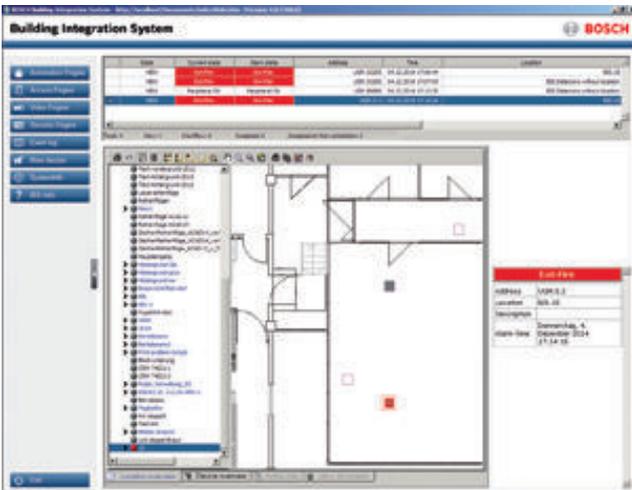
- Location maps are a visualization of premises e.g. floors, areas or rooms, based on the popular AutoCAD vector-graphics format. Detectors and other devices are represented by colored, animated icons that provide direct control via their context menus. Right-clicking an alarm causes the map to zoom in on the location where it was triggered.
- A location tree provides entry points to the location map and its graphical navigation functions (pan, zoom).

- Alarm-dependent layer control allows the display of additional graphical information for specific situations, e.g. escape routes in case of fire alarms.

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).

Alarm management package
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.
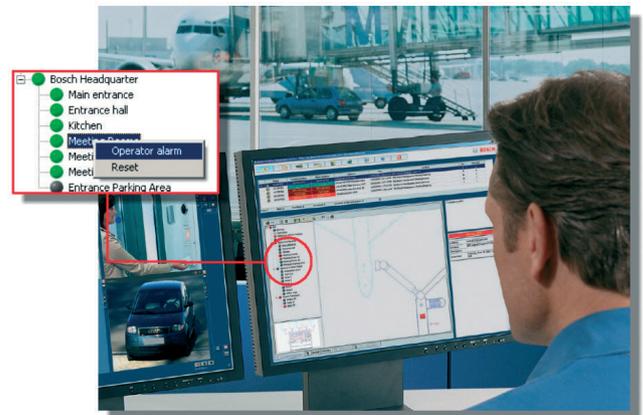
The **Operator Alarm** feature allows an operator to trigger an alarm manually from the location tree, for example, if informed by telephone of a dangerous situation. Such manual alarms are processed in the same way as those triggered by a detector: that is, the associated documents are displayed and all steps taken are recorded in the event log for thorough post-event investigation.
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 for an automatic, scheduled system backup.

Installation/configuration notes

Building Integration System in figures

Addresses, detectors, control elements, cameras etc. which can be processed	200,000 per BIS server
number of events per second	500 (continuous, with higher peaks possible)

Parts included

When ordered as **Installation Media in Box** the box contains:

Qty.	Components
1	BIS Installation medium with software and installation manuals as PDF
1	Quick installation guide (printed)

When downloaded (Version 4.0 and later) the online documentation is contained in the download.
The basic package includes the following licenses:

Qty.	Components
1	Operator client license
1	Division license

Technical specifications

Minimum technical requirements for a login or connection server

Servers	
Operating Systems (standalone or client/ server mode)	• Windows 7 SP1 (32 or 64 bit, Pro, Enterprise) • Windows Server 2008 R2 SP1 (64 bit, Standard, Datacenter) • Windows 8.1 (64 bit, Pro, Enterprise) • Windows Server 2012 R2 (64 bit, Standard, Datacenter) • Windows 10 Enterprise LTSB (64 bit) • **Note:** The default database delivered with this BIS Version is SQL Server 2014 SP1 Express edition with advanced services
Other Software	• IIS 7.0 or 7.5 for Windows 7 and Windows 2008 Server R2 • IIS 8.5 for Windows 8.1 and Windows 2012 Server R2 • IIS 10.0 for Windows 10 **Note:** IIS is not necessary on BIS connection servers • Internet Explorer 9, 10 or 11 in compatibility mode • .NET for various operating systems: • On Windows 7 and Server 2008: .NET 3.51 and .NET 4.0 • On Windows 8.1 and Server 2012: .NET 3.51 and .NET 4.5.1 (includes .NET 4.0)

Servers	
	• On Windows 10: .NET 3.51 and .NET 4.6.1 (includes .NET 4.0) • Latest drivers and OS updates are highly recommended.
Minimum hardware requirements	• Intel i3 processor or higher • 4 GB RAM (8 GB recommended) • 80 GB of free hard disk space • VGA graphics adapter with a resolution of 1280 x 1024 and at least 32k colors • 100 Mbit Ethernet card (PCI) • 1 free USB port or network share for installation

Minimum technical requirements for a client computer

Clients	
Operating Systems (standalone or client/ server mode)	• Windows 7 SP1 (32 or 64 bit, Pro, Enterprise) • Windows Server 2008 R2 SP1 (64 bit, Standard, Datacenter) • Windows 8.1 (32 or 64 bit, Pro, Enterprise) • Windows Server 2012 R2 (64 bit, Standard, Datacenter) • Windows 10 (32 or 64 bit, Pro or Enterprise LTSB) • **Note:** with a Pro edition, updates must be deferred until 8 months after the release of the BIS version. For further information see the Microsoft technet page at https://technet.microsoft.com/en-us/itpro/windows/manage/introduction-to-windows-10-servicing
Other Software	• ASP.NET • Internet Explorer 9, 10 or 11 in compatibility mode (**Note:** The SEE client requires IE 9.0) • .NET for various operating systems: • On Windows 7 and Server 2008: .NET 3.51 (for Video Engine with DiBos),and .NET 4.0 • On Windows 8.1 and Server 2012: .NET 3.51 (for Video Engine with DiBos),and .NET 4.5.1 (includes .NET 4.0) • On Windows 10: .NET 3.51 and .NET 4.6.1 (includes .NET 4.0)

Clients	
Minimum hardware requirements	• Intel i3 or higher • 4 GB RAM (8 GB recommended) • 20 GB free hard disk space • Graphics adapter with 1280 x1024 resolution, 32k colors, 256MB dedicated memory with OpenGL 1.2 or later • 100 Mbit Ethernet card
Additional minimum requirements for VIE (Video Engine) clients	• No Windows Server operating systems • No Windows 10 • Intel i5 processor or higher • For camera sequencing, virtual matrix or Multiview add 4GB RAM • Latest video drivers are highly recommended. Use the Windows dxdiag tool to make sure drivers are no more than 1 year old

Ordering information

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

A BIS basic license is required when setting up a new system

Ordering information

BIS 4.3 Basic License
License for the Building Integration System (BIS) product as downloaded from the website. No physical parts are delivered and the user documentation is contained in the download.
Order number **BIS-BGEN-B43**

BIS 4.3 Basic License without Alarm Doc
License for BIS without the Alarm Document package, that is without display of action plans, display of location maps, graphical navigation, and layer controlling.
Order number **BIS-BGEN-BAS43**

BIS 4.3 Alarm Management Package
License for the BIS Alarm Management package
Order number **BIS-FGEN-AMPK43**

BIS 4.3 additional 1 Operator Client
License for 1 additional BIS Operator Client
Order number **BIS-XGEN-1CLI43**

BIS 4.3 additional 5 Operator Clients
License for 5 additional BIS Operator Clients
Order number **BIS-XGEN-5CLI43**

BIS 4.3 additional 10 Operator Clients
License for 10 additional BIS Operator Clients
Order number **BIS-XGEN-10CL43**

BIS 4.3 additional 1 Division
License for 1 additional BIS Division
Order number **BIS-XGEN-1DIV43**

BIS 4.3 additional 10 Divisions
License for 10 additional BIS Divisions
Order number **BIS-XGEN-10DV43**

BIS 4.3 Multi-Server Connect per Server
License for 1 additional BIS server in a multi-server topology
Order number **BIS-FGEN-MSRV43**

BIS 4.3 BVMS Connectivity
License for the connection between 1 BIS and 1 BVMS installation
Order number **BIS-FGEN-BVMS43**

BIS Upgrade from 2.x to 4.2
License for an upgrade of BIS 2.x to BIS 4.2
Order number **BIS-BUPG-B2TO42**

BIS Upgrade from 3.x to 4.2
License for an upgrade of BIS 3.x to BIS 4.2
Order number **BIS-BUPG-B3TO42**