

BIS - Basic Package V4.8



- ▶ Integration of Bosch and third party systems via open interfaces and SDK
- ▶ All relevant information in one user interface, and intuitive operation via interactive maps and HTML5 action plans
- ▶ Fully embedded access control
- ▶ Full event log and audit trail 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. Open standards enable 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.

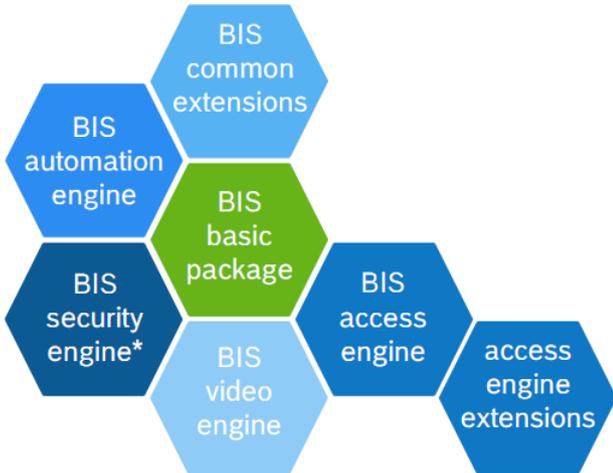
- Need for complete solutions
Facility managers and integrators are demanding a single building-management solution that is nevertheless able to integrate all their security subsystems.

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

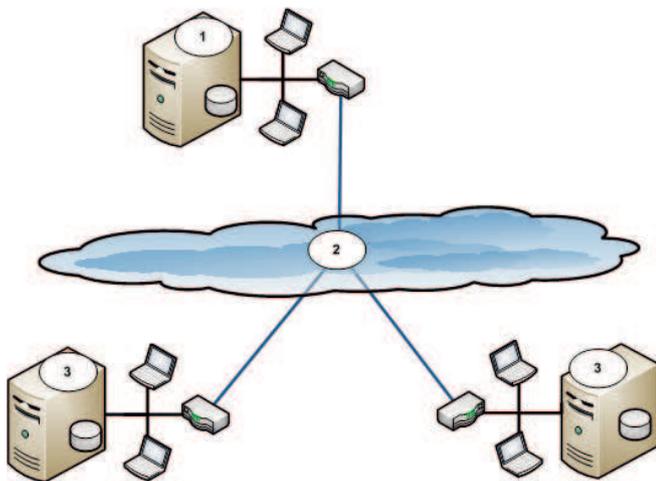
System architecture

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

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

Subsystems are connected via the well-established, worldwide standards Classic OPC and OPC UA. These open standards make it easy to integrate 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 an open, 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.

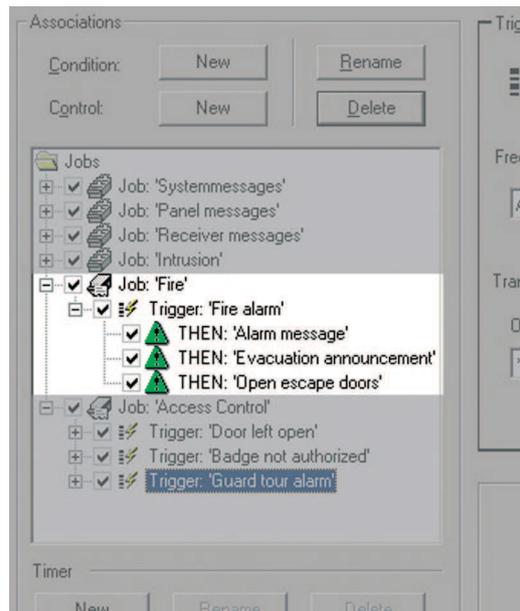
Hierarchical location trees can be created by the import of existing CAD data containing layers, named views and detector locations. Zooming and panning allow rapid navigation through the building.

The user interface is web-based using dynamic HTML5 pages. Default pages for different screen resolutions and formats are included in the installation package, 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.

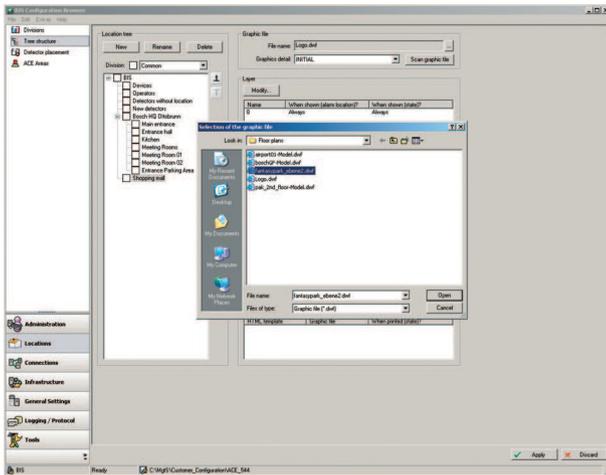
Basic package

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

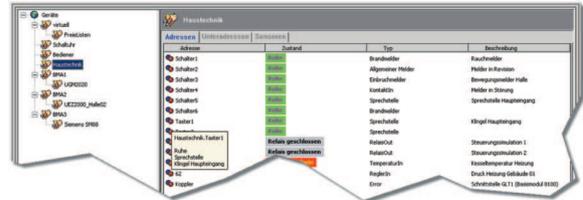
State	Current state	Message	Address	Time	Location
ACCEPTED	OK	Fire Alarm	LEZ2000_100_2	11/16/2007 4:03:25 PM	BIS Security center - Bosch-HQ Ottobrunn-Köster
ACCEPTED	OK	Backup/FDCC Alarm trouble 7058		11/16/2007 4:29:49 PM	BIS Security center - Detectors without location
ACCEPTED	Card not authorized	Card not authorized	Access Device: RD-CC-1	11/16/2007 4:30:58 PM	BIS Security center - Office tower 21 - Upper level

- Authentication of operators via Microsoft Active Directory, Windows or secure BIS passwords.
- 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.

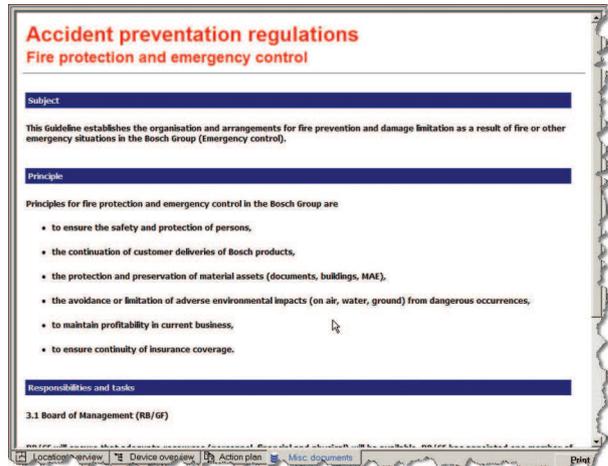


- Changes to architecture within a graphic (new walls, moving a door, etc.) can be implemented without changing the BIS configuration, simply import a new plot file.
- Automated workflows between operators, with message broadcasting and customizable escalation paths
- Huge library of standardized detector 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

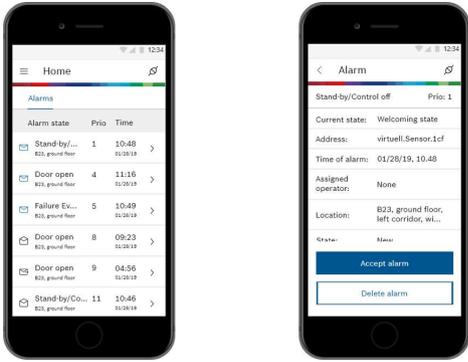
- Location tree generated automatically from the "named views" within the AutoCAD graphic
- Action management for automatic and manual control into connected subsystems and their peripherals
- Device overview for all connected subsystems, and their peripherals (detectors) and internal virtual devices (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 streams, etc.



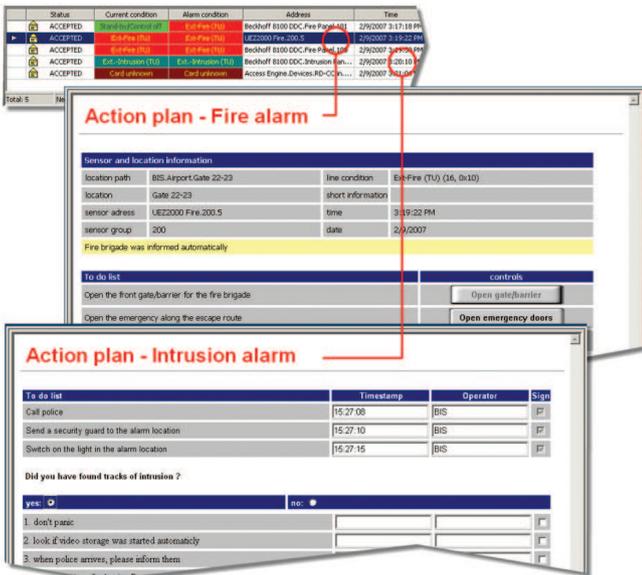
- Highly configurable operator authorizations for monitoring and control of subsystems and their peripherals
- Mobile web client for Android and iOS powered devices running in different browsers. Alarms are shown and can be accepted and deleted on the phone. For Android, notifications can be configured so that alarms are notified even when the phone is in idle mode.



- Event log to ensure all events are completely documented (including messages received and actions taken)
- Audit trail to ensure that all configuration changes are completely documented in terms of who did what when
- 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
- Support of next generation OPC UA (Unified Architecture) for higher security, easier deployment and higher performance.
- Online Help

Action plans and location maps

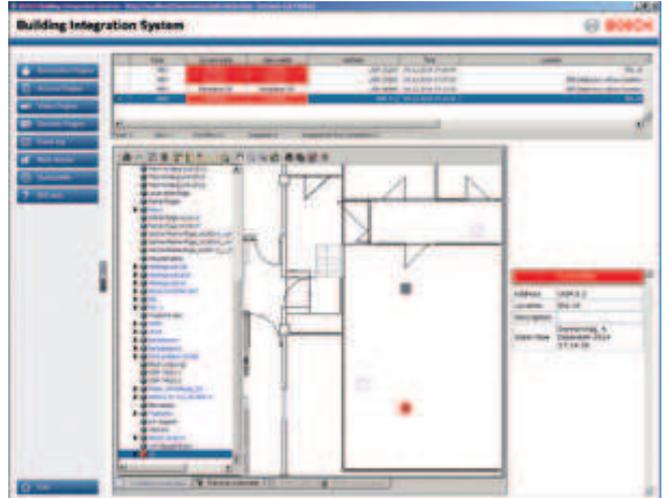
BIS amplifies standard alarm handling by its ability to display action plans and location maps, including graphical navigation and the alarm-dependent visualization of layers inside those maps. This ensures optimal guidance to operators especially in stress situations, such as fire or intrusion alarms.



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.

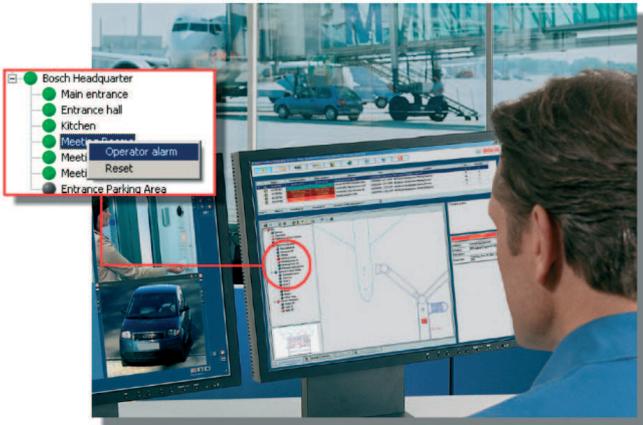
BIS optional accessories

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)

Technical specifications

Minimum technical requirements for a login or connection server

Servers	
Supported operating systems (standalone or client/server mode). Installations of BIS on other operating systems may succeed, but	<ul style="list-style-type: none"> Windows Server 2016 (64 bit, Standard, Datacenter) Windows Server 2019 (64 bit, Standard, Datacenter) Windows 10 Enterprise LTSB (64 bit) Note: The default database delivered with this BIS Version is SQL Server 2017 Express edition with advanced services

Servers

are entirely without warranty.	
Other Software	<p>Always install the latest drivers and OS updates.</p> <ul style="list-style-type: none"> IIS 10.0 for Windows 10, Windows Server 2016 and Windows Server 2019 <p>Note: IIS is not necessary on BIS connection servers</p> <ul style="list-style-type: none"> Internet Explorer 9, 10 or 11 in compatibility mode .NET: <ul style="list-style-type: none"> On Windows 10, Windows Server 2016 and Windows Server 2019: .NET 3.51 and .NET 4.8 (includes .NET 4.0)
Minimum hardware requirements	<ul style="list-style-type: none"> Intel i5 processor with at least 4 physical cores 8 GB RAM (32 GB recommended) 200 GB of free hard disk space Graphics adapter with <ul style="list-style-type: none"> 256 MB RAM, a resolution of 1280x1024 at least 32 k colors OpenGL® 2.1 and DirectX® 11 1 Gbit/s Ethernet card A free USB port or network share for installation files

Minimum technical requirements for a client computer

Clients

Supported operating systems (standalone or client/server mode). Installations of BIS on other operating systems may succeed, but are entirely without warranty.	<ul style="list-style-type: none"> Windows 8.1 (64 bit, Pro, Enterprise) Windows Server 2016 (64 bit, Standard, Datacenter) Windows Server 2019 (64 bit, Standard, Datacenter) Windows 10 (32 or 64 bit, Pro or Enterprise LTSB) <ul style="list-style-type: none"> 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
--	--

Clients	
Other Software	<ul style="list-style-type: none"> • ASP.NET • Internet Explorer 9, 10 or 11 in compatibility mode (Note: The SEE client requires IE 9.0) • .NET: <ul style="list-style-type: none"> – On Windows 10, Windows Server 2016 and Windows Server 2019: .NET 3.51 and .NET 4.8 (includes .NET 4.0)
Minimum hardware requirements	<ul style="list-style-type: none"> • Intel i5 or higher • 8 GB RAM (16 GB recommended) • 20 GB free hard disk space • Graphics adapter with <ul style="list-style-type: none"> – 256 MB RAM, – a resolution of 1280x1024 – at least 32 k colors – OpenGL® 2.1 and DirectX® 11 • 100 Mbit/s Ethernet card
Additional minimum requirements for VIE (Video Engine) clients	<ul style="list-style-type: none"> • No Windows Server operating systems • 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:

- AR = Arabic
- 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-BGEN-B48 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-B48 | F.01U.386.750**

BIS-BGEN-BAS48 Basic license without alarm documents

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-BAS48 | F.01U.392.550**

BIS-XGEN-LSCB48 Local site client (bundle)

License bundle for the BIS Local Site Client, including 32 doors and 500 detector points.

Order number **BIS-XGEN-LSCB48 | F.01U.386.787**

BIS-BGEN-LSSB48 Local site server (bundle)

License bundle for the BIS Local Site Server, including AUE, ACE, 32 doors, 500 detector points.

Order number **BIS-BGEN-LSSB48 | F.01U.386.785**

BIS-BGEN-CSSB48 Central single server (bundle)

License bundle for the BIS Central Single Server, including AUE, ACE, 32 doors, 10.000 cardholders.

Order number **BIS-BGEN-CSSB48 | F.01U.386.786**

BIS-BGEN-CESB48 Central enterprise server (bundle)

License bundle for the BIS Central Enterprise Server, including AUE, ACE, 10 clients, 99 divisions, 32 doors, 10.000 cardholders.

Order number **BIS-BGEN-CESB48 | F.01U.386.784**

BIS-FGEN-AMPK48 License for alarm management

License for the BIS Alarm Management package

Order number **BIS-FGEN-AMPK48 | F.01U.386.751**

BIS-XGEN-1CLI48 License for 1 operator client

License for 1 additional BIS Operator Client

Order number **BIS-XGEN-1CLI48 | F.01U.386.752**

BIS-XGEN-5CLI48 License for 5 operator clients

License for 5 additional BIS Operator Clients

Order number **BIS-XGEN-5CLI48 | F.01U.386.753**

BIS-XGEN-10CL48 License for 10 operator clients

License for 10 additional BIS Operator Clients

Order number **BIS-XGEN-10CL48 | F.01U.386.754**

BIS-XGEN-1DIV48 License for 1 division

License for 1 additional BIS Division

Order number **BIS-XGEN-1DIV48 | F.01U.386.755**

BIS-XGEN-10DV48 License for 10 divisions

License for 10 additional BIS Divisions

Order number **BIS-XGEN-10DV48 | F.01U.386.756**

BIS-FGEN-MSRV48 License for multi server connect

License for 1 additional BIS server in a multi-server topology. Required for adding servers to a hierarchy of ACE servers providing centralized cardholder management.

Order number **BIS-FGEN-MSRV48 | F.01U.386.757**

BIS-FGEN-BVMS48 License for BVMS connectivity

License for the connection between 1 BIS and 1 BVMS installation

Order number **BIS-FGEN-BVMS48 | F.01U.386.761**

BIS-BUPG-B2TO42 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 | F.01U.327.525**

BIS-BUPG-B3TO42 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 | F.01U.327.526**

Represented by:

Europe, Middle East, Africa:

Bosch Security Systems B.V.
 P.O. Box 80002
 5600 JB Eindhoven, The Netherlands
 Phone: + 31 40 2577 284
 emea.securitysystems@bosch.com
 emea.boschsecurity.com

Germany:

Bosch Sicherheitssysteme GmbH
 Robert-Bosch-Ring 5
 85630 Grasbrunn
 Germany
 www.boschsecurity.com

North America:

Bosch Security Systems, LLC
 130 Perinton Parkway
 Fairport, New York, 14450, USA
 Phone: +1 800 289 0096
 Fax: +1 585 223 9180
 onlinehelp@us.bosch.com
 www.boschsecurity.us

Asia-Pacific:

Robert Bosch (SEA) Pte Ltd, Security Systems
 11 Bishan Street 21
 Singapore 573943
 Phone: +65 6571 2808
 Fax: +65 6571 2699
 apr.securitysystems@bosch.com
 www.boschsecurity.asia