



LTC 8600 Series Allegiant Matrix/Control Systems - Modular



- ▶ 128 Camera by 16 monitor switching
- ▶ Modular construction
- ▶ Powerful alarm handling capabilities
- ▶ SalvoSwitching and SatelliteSwitch capability
- ▶ PC-based software package available
- ▶ Economical single-bay design

The LTC 8600 Series Allegiant video switcher/control systems combine both switching and computer technology to provide powerful performance and unique system features for the security user. Offering full matrix switching capability, these systems can be programmed to display the video from any camera on any monitor, either manually or via independent automatic switching sequences.

The LTC 8600 Series provide versatile modular construction accommodating up to 128-camera inputs, 16-monitor outputs, 16-keyboards, 512-alarm points, a computer interface port, and a logging printer port. These systems can be programmed with up to 60 sequences which can be run independently of each other in either a forward or reverse direction. Any of the sequences can utilize the SalvoSwitching capability where any number of system monitors may be selected to switch as a group. Using the optional LTC 8059/00 master control software package, or the LTC 8850/00 (GUI) Graphical User Interface Software package, sequences can be made to activate and deactivate automatically based upon the time of day and the day of week. On-site receiver/drivers permit operator control of pan, tilt, zoom, multiple pre-positions, four auxiliaries, auto-pan, and random scan. An integral local test function is also a standard feature. The LTC 8600 Series also supports variable speed operation and full

programming functions of AutoDome Series dome cameras.

When combined with an LTC 8016 Allegiant Bilinx Data Interface unit, these switcher/controllers support operations using Bilinx communication. With Bilinx, PTZ control is accomplished using a bidirectional communication protocol embedded in the video signal of Bosch Dinion and AutoDome CCTV cameras. In addition, Bilinx uses the standard video cable to transmit alarm and status messages from the cameras, providing superior performance without the need for separate data transmission cables.

With the addition of the LTC 8540/00 Series alarm interface accessory units, an external contact closure or logic level can be used to automatically activate any camera to be displayed. Any monitor or group of monitors can be set to display cameras under alarm conditions. The base system contains three built in alarm response modes: basic, auto-build, and sequence and display. In addition to these three modes, the PC based.

software packages now includes the ability to combine any or all of the three standard modes within the same system. Alarm video may be selected to reset either manually or automatically. In addition, a 16-character alarm title can be selected to appear instead of the camera title during alarm conditions.

The LTC 8600 Series includes a black outlined 48-character on-screen display for time-date, camera number, camera ID (16-characters), an icon to identify controllable cameras, and monitor (12-characters) or status information. Over 1000 characters are available when programming camera ID and monitor titles. Utilizing a standard Windows®-based PC and the optional LTC 8059/00 Master Control Software package or LTC 8850/00 Graphical User Interface (GUI) software, enhanced programming and switching features can be obtained. A user-friendly spreadsheet format provides the ability to enter camera titles, operator names, 64 timed events, change system parameters, program camera sequences, install lockouts, and access the advanced alarm handling screens with speed and efficiency. The programmed information may then be transferred into the Allegiant system, stored on disk, or printed out directly from a printer connected to the PC. The LTC 8850/00 GUI software is designed around an intuitive graphic-based interface, the GUI provides high performance programming, control and monitoring of all system functions by using on-screen icons to reflect real time status of the devices controlled by the system. The LTC 8850/00 GUI software also provides the ability to monitor system status events. System alarms, switching functions, sequence events, keyboard actions, and video loss information can be viewed in real time on the PC screen and, if desired, logged to the PC hard drive.

The LTC 8600 Series contain a logging printer output port which accepts a standard RS-232 serial printer. This provides a permanent record of system status showing time and date of changes such as: incoming alarms, acknowledgment of alarms, loading of sequences, user log-on to keyboard, transfer of system tables and sequences, video loss messages, and a power up reset message. In addition, the printer can be used to obtain a hard copy of the system's configuration tables and sequences. The LTC 8600 system provides powerful macro capabilities. The macros can be activated using Allegiant Series system keyboards, system time event functions, alarm activations, and via special function icons in the LTC 8850/00 GUI software. The LTC 8600 Series can serve as the master switcher in a SatelliteSwitch® configuration. This innovative SatelliteSwitch feature enables a single LTC 8600 Series system to communicate with remotely located "Satellite" systems. Any Allegiant system model can serve as a master or remote Satellite switcher. This powerful feature permits the design of a distributed matrix video switching system with control at one central location and individual control at the local sites. The main control site can view/control local cameras plus cameras located at any of the remotely distributed

Satellite sites. The Satellite sites can view/control only cameras associated with their own site. When used in this type of configuration, the main LTC 8600 Series system can access up to 1024 cameras located anywhere in the system. By combining multiple Satellite systems of this type, matrix sizes of 1024 cameras by 16 monitors can be designed in an extremely reliable, "Distributed Processing" configuration.

Functions

These systems can be programmed with up to 60 sequences which can be run independently of each other in either a forward or reverse direction. Any of the sequences can utilize the SalvoSwitching capability where any number of system monitors may be selected to switch as a group. Using the optional LTC 8659/00 master control software package, or the LTC 8850/00 GUI Allegiant Server, sequences can be made to activate and deactivate automatically based upon the time of day and the day of week.

On-site receiver/drivers permit operator control of pan, tilt, zoom; multiple pre-positions; four auxiliaries; auto-pan; and random scan. An integral local test function is also a standard feature. The LTC 8600 Series also supports variable speed operation and full programming functions of AutoDome series dome cameras.

When combined with an LTC 8016 Allegiant Bilinx Data Interface unit, these switcher/controllers support operations using Bilinx communication. With Bilinx, PTZ control is accomplished using a bidirectional communication protocol embedded in the video signal of Bosch Dinion and AutoDome CCTV cameras. In addition, Bilinx uses the standard video cable to transmit alarm and status messages from the cameras, providing superior performance without the need for separate data transmission cables.

With the addition of the LTC 8540/00 Series alarm interface accessory units, an external contact closure or logic level can be used to automatically activate any camera to be displayed. Any monitor or group of monitors can be set to display cameras under alarm conditions. The base system contains three built in alarm response modes: basic, auto-build, and sequence and display. In addition to these three modes, the PC-based software packages now include VersAlarm—a new dimension in alarm handling. VersAlarm has the ability to combine any or all of the three standard modes within the same system. Alarm video may be selected to reset either manually or automatically. In addition, a 16-character alarm title can be selected to appear instead of the camera title during alarm conditions.

The LTC 8600 Series includes a black outlined 48 character on-screen display for time-date, camera

number, camera ID (16 characters), an icon to identify controllable cameras, and monitor (12 characters) or status information. Over 1000 characters are available when programming camera ID and monitor titles. Utilizing a standard IBM®-compatible PC and the optional LTC 8059/00 Master Control Software package or LTC 8850/00 Graphical User Interface (GUI) software, enhanced programming and switching features can be obtained. A user-friendly spreadsheet format provides the ability to enter camera titles, operator names, 64 timed events, change system parameters, program camera sequences, install lockouts, and access the advanced VersAlarm alarm handling screens with speed and efficiency. The programmed information may then be transferred into the Allegiant system, stored on disk, or printed out directly from a printer connected to the PC.

The LTC 8850/00 Bosch GUI software is designed around an intuitive graphic-based interface, the GUI provides high performance programming, control and monitoring of all system functions by using on-screen icons to reflect real time status of the devices controlled by the system.

The LTC 8850/00 GUI software also provides the ability to monitor system status events. System alarms, switching functions, sequence events, keyboard actions, and video loss information can be viewed in real time on the PC screen and, if desired, logged to the PC hard drive.

The LTC 8600 Series contain a logging printer output port which accepts a standard RS-232 serial printer. This provides a permanent record of system status showing time and date of changes such as: incoming alarms; acknowledgment of alarms; sequence loading; user log-on to keyboard, transfer of system tables and sequences; video loss messages; and a power up reset

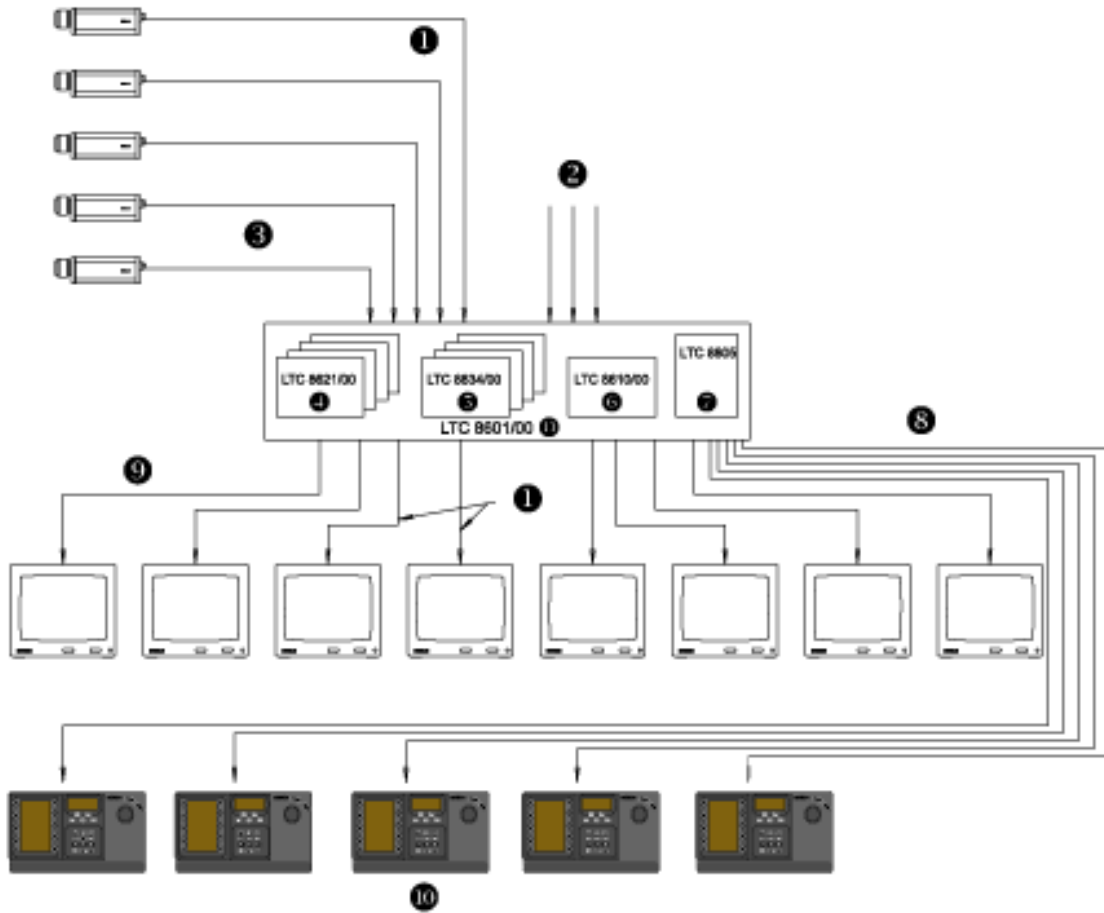
message. In addition, the printer can be used to obtain a hard copy of the system's configuration tables and sequences.

The LTC 8600 system provides powerful macro capabilities. The macros can be activated using LTC 8554/00 and LTC 8555/00 type system keyboards, system time event functions, alarm activations via special function icons in the LTC 8850/00 GUI software. The LTC 8600 Series can serve as the master switcher in a SatelliteSwitch configuration. This innovative SatelliteSwitch feature enables a single LTC 8600 Series system to communicate with remotely located "Satellite" systems. Any Allegiant system or LTC 5112 Series and LTC 5124 Series programmable sequential switcher can serve as a remote Satellite switcher. This powerful feature permits the design of a distributed matrix video switching system with control at one central location and individual control at the local sites. The main control site can view/control local cameras plus cameras located at any of the remotely distributed Satellite sites. The Satellite sites can view/control only cameras associated with their own site. When used in this type of configuration, the main LTC 8600 Series system can access up to 1024 cameras located anywhere in the system. By combining multiple Satellite systems of this type, matrix sizes of 1024 cameras by 16 monitors can be designed in an extremely reliable, "Distributed Processing" configuration.

Certifications and Approvals

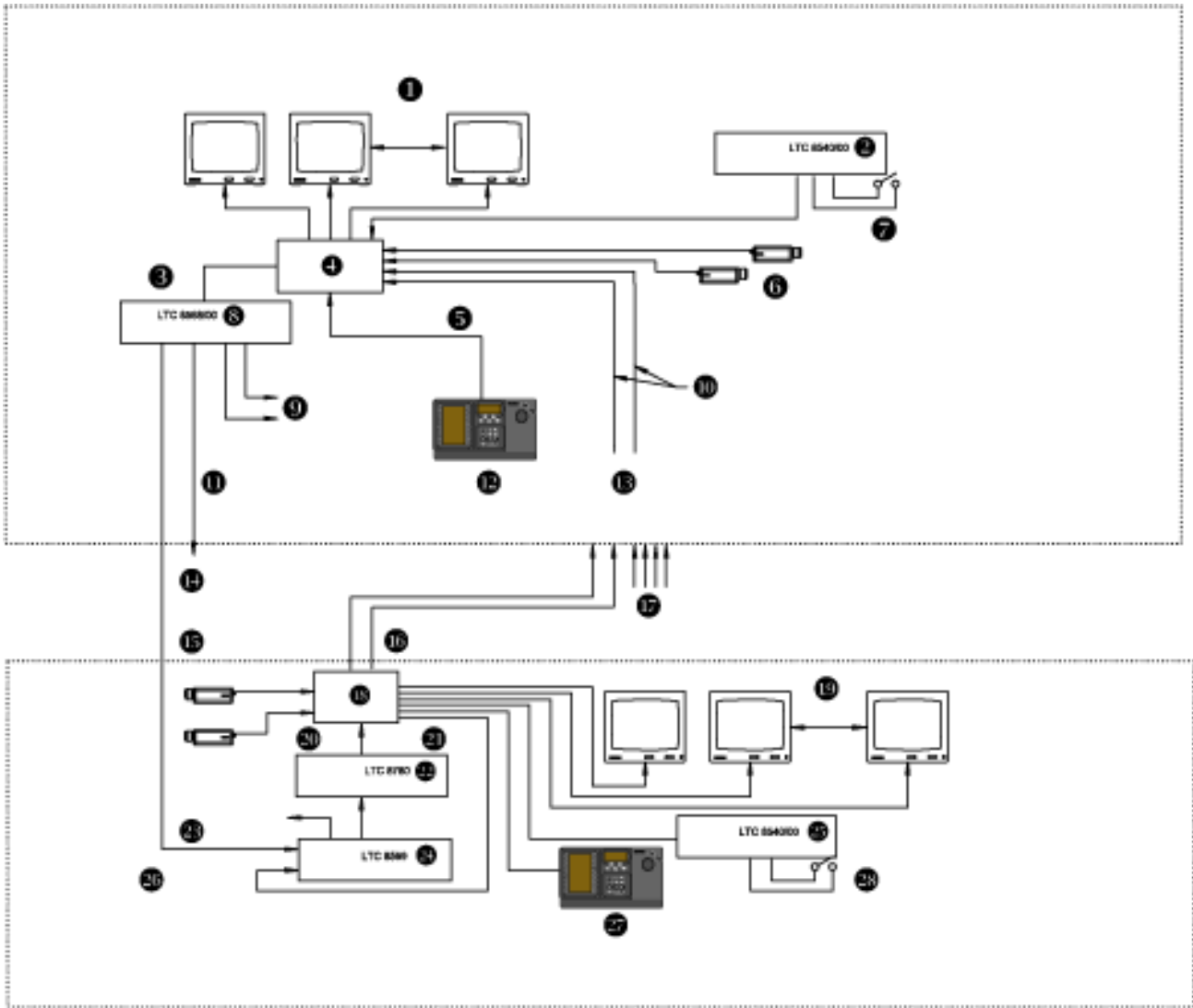
Electromagnetic Compatibility (EMC)	Complies with FCC Part 15, ICES-003, and CE regulations. This product also complies with EN 50121-4 railway application standards. Refer to www.boschsecurity.com website for link to applicable documents.
Product Safety	Complies with CE regulations, UL, CSA, EN, and IEC Standards

Installation/Configuration Notes



LTC 8600 Series Configuration Diagram
(128 Cameras by 16 Monitors)

- | | | | |
|---|-------------------------------|----|---|
| 1 | Video Coax | 6 | CPU-Module |
| 2 | Up to 64 Maximum Video Inputs | 7 | Power Supply Module |
| 3 | Additional System Cameras | 8 | 3 m (10 ft) Interconnect Cable Supplied with Keyboard |
| 4 | Input Cards | 9 | 8 Monitor Output Capability |
| 5 | Output Cards | 10 | 16 Full Matrix Monitor Outputs Maximum, 16 Full Function Keyboard Maximum |
| | | 11 | Main CPU Bay |



Allegiant Satellite Switching System

- | | | | | | | | |
|----|--|----|--|----|---|----|---|
| 1 | Monitor Outputs | 15 | Pan/Tilt/Zoom and Satellite Control Data | 51 | Up to 1.5 km (5000 ft) Using 1 mm ² (18 AWG) Shielded Twisted Pair (Belden 8760 or Equivalent) | 25 | Alarm Interface Unit |
| 2 | Alarm Interface Unit | 16 | Monitor Outputs Used As Video Trunk Lines to Main Control Site | 52 | Allegiant Keyboard controls any local or remote camera on any local monitor (Video and PTZ) | 26 | Local PTZ Control Data Line |
| 3 | Pan/Tilt/Zoom and Satellite Control Data | 17 | Video Trunk Lines From Other Satellite Locations | 53 | Multiple Video Trunk Lines From Each Remote Satellite Location | 27 | Allegiant Keyboard controls any local or remote camera on any local monitor (Video and PTZ) |
| 4 | Allegiant Main CPU Bay | 18 | Any Model Allegiant Main Bay | 54 | One Line to Each Remote Satellite | 28 | Alarm Inputs Activate Only Local Video on Local Monitors |
| 5 | Inputs Used for Both Local and Trunk Lines | 19 | Local Monitors | 55 | | | |
| 6 | Local Camera Video Inputs | 20 | Satellite Data Line | | | | |
| 7 | Alarm Inputs May Activate Either Local or Satellite Video on Main Control Center's Monitor | 21 | Console Port Input | | | | |
| 8 | Signal Distribution Unit | 22 | Data Converter Units | | | | |
| 9 | To Any Local PTZ Camera Sites | 23 | To Any Local PTZ Camera Sites | | | | |
| 10 | Multiple Video Coax | 24 | Code Merger Unit | | | | |

Technical Specifications

LTC 8600 Series System Specifications

Capacities

Video Inputs

- Standard 128
- Satellite Configuration 1024

Video Outputs

- Keyboards 16
- Alarm Inputs 512

Receiver/Drivers

- Standard 128
- Satellite Configuration 1024

Electrical

Video Bandwidth (-3 dB)	12 MHz typical
Differential Gain	1% maximum
Differential Phase	2° maximum
K Factor	0.5%
Signal-to-Noise Ratio	70 dB minimum
Crosstalk (Input to input isolation)	-50 dB typical
Feedthrough (Input to Output Isolation)	-45 dB typical
Gain	Unity ± 2% (into 75 Ohm termination)
Tilt	1% typical

Environmental

Temperature	
• Operating	4°C to 50°C (40°F to 122°F)
• Storage	-40°C to 60°C (-40°F to 140°F)
Altitude	4500 m (15,000 ft)
Humidity	0% to 95% relative, non-condensing
Vibration	3 g swept sine wave, 15 Hz to 2000 Hz
Shock	50 g, 11 ms, 1/2 sine wave

Product Regulatory Compliance

LTC 8601 Series Equipment Bay

Includes equipment rack, LTC 8610/00 microprocessor module, and LTC 8805 Series power supply.

Power

Model No.	Rated Voltage	Voltage Range	Nominal Power ¹
LTC 8601/60	120 VAC, 50/60 Hz	100 to 140	200 W
LTC 8601/50	220-240 VAC, 50/60 Hz	198 to 264	200 W

1. Power at rated voltage fully loaded.

Connectors

Video Inputs 1 to 96	One (1) sync input, and 16 monitor outputs, BNC
Video Connections 97 to 128	Two (2), 34-pin ribbon connectors used in conjunction with the LTC 8808/00 video interconnect panel
Looping Video Connections 1-128	Eight (8), 34-pin ribbon connectors used in conjunction with the LTC 8808/00 video interconnect panel

External Accessory Interfaces

9-pin D-type connectors

CONSOLE	RS-232 port for external PC or control interface (Default = 19.2 k baud)
ALARM	RS-232 port for Allegiant alarm accessory unit (Default = 19.2 k baud)
PRINTER	RS-232 port for system logging printer (Default = 19.2 k baud)
SDA	TTL level, hi-speed control data output (Bi-Phase) for interface to Allegiant series signal distribution units (Data clock rate = 31.25 kHz)
COM PORT 1	RS-485 port for external Allegiant accessory use
COM PORT 2	RS-485 port for external Allegiant accessory use
KEYBOARDS	Eight (8), 6-pin RS-485 ports for Allegiant keyboard use

Equipment Rack

Size (W x D x H)	EIA 48 cm (19 in.) rack, 483 x 420 x 267 mm (19 x 16.5 x 10.5 in.)
Weight	11.1 kg (24.5 lb)
Construction/Finish	Top and bottom: steel Front, sides, and back: aluminum
Finish	Charcoal

Microprocessor Module (LTC 8610/00)

Size (D x H)	300 x 250 mm (11.8 x 9.8 in.)
Weight	0.5 kg (1.1 lb)

Power Supply

(LTC 8805/60-120 VAC, LTC 8805/50-220-240 VAC)

Size (W x D x H)	67 x 360 x 247 mm (2.63 x 14.2 x 9.7 in.)
Weight	5.2 kg (11.5 lb)
Indicators	One power On/Off, ten fuse alert, and one external sync LED

LTC 8621/00 Camera Input Module

Use up to eight (8) per equipment bay

Camera Inputs	16
Size (D x H)	300 x 250 mm (11.8 x 9.8 in.)
Weight	0.41 kg (0.9 lb)

LTC 8834/00 Monitor Output Module

Use up to (4) four per equipment bay

Monitor Outputs	4
Size (D x H)	300 x 250 mm (11.8 x 9.8 in.)
Weight	0.41 kg (0.9 lb)

LTC 8808/00 Video Interconnect Panel

The LTC 8808/00 assembly contains an interconnect panel which is used to convert 32 BNC connectors into two 16-channel ribbon cable connectors. The two 16-conductor ribbon cables (LTC 8809/00), designed especially for use with video signals, are then used to interconnect the video between the panel and the LTC 8600 Series system. One LTC 8808/00 assembly is included at time of shipment and is required for system video inputs 97 to 128. In addition to being used for video inputs 97 to 128, the LTC 8808/00 assembly can also be ordered as an option to provide looping capability. One LTC 8808/00 (includes panel and two, ribbon cables) is required for each group of 32 cameras.

Finish	Charcoal
Size (W x D x H)	EIA 48 cm (19 in.) rack, 483 x 42 x 44 mm (19 x 1.65 x 1.75 in.)
Weight	
• Panel	0.54 kg (1.2 lb)
• Ribbon Cables (2)	0.3 kg (0.7 lb)

Allegiant Accessories

The LTC 8600 Series accessory products provide many optional features to the base Allegiant switching systems. Accessory products include keyboards, keyboard extension kits, receiver/driver units, switcher/followers, code merger units, Allegiant Bilinx Data Interface unit, and keyboard expansion units. All accessory products are designed to be installer-friendly and compatible throughout the Allegiant series systems. See the Allegiant Accessories datasheet.

Ordering Information

LTC 8601/50 Allegiant Matrix Switcher up to 128 camera inputs, 16 monitor outputs, incl. single bay, CPU & power supply, 230 VAC, 50 Hz	896086015001
LTC 8601/60 Allegiant Matrix Switcher up to 128 camera inputs, 16 monitor outputs, incl. single bay, CPU & power supply, 115 VAC, 60 Hz	896086016001
LTC 8621/00 Camera Input Module for 8601a, 16 video inputs per card	896086210001
LTC 8610/00 Spare CPU Module for LTC 8601/50 bay	896086100001
LTC 8834/00 Video Output Module for LTC 8600 and LTC 8800, 4 video outputs per card	896088340001

Hardware Accessories

LTC 8610/00 Spare CPU Module for LTC 8601/50 bay	896086100001
LTC 8805/50 Spare Power Supply for LTC 8601/50, LTC 8802/50 bays, 220-240 VAC, 50 Hz	896088055001
LTC 8805/60 Spare Power Supply for LTC 8902/8903 bay, 120 VAC	896088056001

Americas:
Bosch Security Systems
130 Perinton Parkway
Fairport, New York, 14450, USA
Phone: +1 585 223 4060
Fax: +1 800 289 0096
security.sales@us.bosch.com
www.boschsecurity.us

Europe, Middle East, Africa:
Bosch Security Systems B.V.
P.O. Box 80002
5600 JB Eindhoven, The Netherlands
Phone: +31 40 27 83955
Fax: +31 40 27 86668
emea.securitysystems@bosch.com
www.boschsecurity.com

Asia-Pacific:
Bosch Security Systems Pte Ltd
38C Jalan Pemimpin
Singapore 577180
Phone: +65 6319 3450
Fax: +65 6319 3499
apr.securitysystems@bosch.com
www.boschsecurity.com

Represented by