LTC 8800 Series

Allegiant® Video Switcher/Control Systems

Security Systems

Formerly known as Philips CSI

- 256 Camera by 64 Monitor Switching
- Expandable to Larger Matrix Sizes
- Modular Construction
- Powerful Alarm Handling Capabilities
- SalvoSwitching® and SatelliteSwitch® Capability
- PC-based Software Package Available

The LTC 8800 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 8800 Series provide versatile modular construction, accommodating up to 256 camera inputs, 64 monitor outputs, 32 keyboards, 1024 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 the week.

On-site receiver/drivers permit operator control of pan, tilt, zoom, multiple pre-positions, four auxiliaries, autopan, and random scan. An integral local test function is also a standard feature. The LTC 8800 Series also support 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 staus 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 unit, 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 & display. In addition to these three modes, the PC-based software packages now include the ability to combine any or all 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.

System operation and programming is accomplished using a full-function, ergonomically designed keyboard. Up to 32 keyboards may be used in the system. Built-in operator priority levels and the ability to restrict certain operators from controlling designated functions provide maximum flexibility.

The LTC 8800 Series include 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, or 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 8800 Series contain a logging printer output port which accepts a standard RS-232 serial printer. This provides a permanent record of system status showing the 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 8800 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 8800 Series can serve as the master switcher in a SatelliteSwitch® configuration. This innovative SatelliteSwitch feature enables a single LTC 8800 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 large distributed type 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 8800 system can access up to 2048 cameras located anywhere in the system. By combining multiple Satellite systems of this type, matrix sizes of 2048 cameras by 256 monitors can be designed in an extremely reliable "Distributed Processing" configuration.

LTC 8800 Series System Specifications

Capacities			
Video Inputs			
Standard	256		
Satellite Configuration	2048		
Video Outputs	64		
Keyboards	32		
Alarm Inputs	1024		
Receiver/Drivers			
Standard	256		
Satellite Configuration	2048		

Electrical

Input Voltage Level	0.5Vp-p to 2Vp-p (Composite Negative Sync)		
Gain	Unity ± 4% (75Ω terminated)		
Pulse/Bar Ratios[1]	**Min.**	**Nom.**	**Max.**
	94%	98%	106%
2T Pulse K Factor[1]	**Min.**	**Nom.**	**Max.**
	---	0.2%	2.5%
Bar Amplitude (IRE)[1]	**Min.**	**Nom.**	**Max.**
	96	98	104
Sync Amplitude (% Bar)[1]	**Min.**	**Nom.**	**Max.**
	36%	39%	44%
Field Time Waveform Distortion[1]		2% maximum	
Line Time Waveform Distortion[1]		1% maximum	
Short Time Waveform Distortion[1]		2% maximum	
Long Time Waveform Distortion:[1]		0.8% maximum	
Video Bandwidth (–3 dB)[2]		15MHz	
Frequency Response (± 0.5 dB)[2]		12MHz	
Signal-to-noise[1]		70dB at 3.58MHz unified unweighted minimum	
Crosstalk (at 3.58MHz)			
Input to Input	–61dB		
Adjacent Channel:	–50dB (typical)		
Hum	60dB below the composite 1Vp-p video signal from 60Hz to 6MHz		
Differential Gain[1]	**Min.**	**Nom.**	**Max.**
	---	0.6%	2%
Differential Phase[1]	**Min.**	**Nom.**	**Max.**
	---	0.6°	1.3°
Chrominance Luminance Gain[1]	**Min.**	**Nom.**	**Max.**
	96%	100%	104%
Chrominance Luminance Delay[1]	**Min.**	**Nom.**	**Max.**
	-33 ns	+3 ns	+33 ns
Luminance Nonlinearity[1]	**Min.**	**Nom.**	**Max.**
	---	0.3%	4%
Switching	Crosspoint matrix		
DC Output	0.34V		

[1]Meets EIA/TIA - 250C Medium Haul Standard for 256 cameras x 32 monitors.

[2]One camera to one monitor.

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	4500m (15,000ft)
Humidity	0% to 95% relative, noncondensing
Vibration	3g swept sine wave, 15Hz to 2000Hz
Shock	50g, 11ms, 1/2sine wave

Product Regulatory Compliance

Electromagnetic Compatibility (EMC)	
	Complies with FCC Part 15, ICES-003, and CE regulations
Product Safety	Complies with CE regulations, UL, CSA, EN, and IEC Standards

LTC 8801 Series Main CPU Bay

Includes equipment rack, LTC 8810/00 microprocessor module, and LTC 8805 Series power supply.

Power

Model No.	**Rated Voltage**	**Voltage Range**	**Nominal Power**[1]
LTC 8801/60	120VAC, 50/60Hz	100 to 140	200W
LTC 8801/50	220-240VAC, 50/60Hz	198 to 264	200W

[1]Power at rated voltage fully loaded.

Connectors

Video Inputs 1 to 96, 1 Sync Input, and 32 Monitor Outputs	BNC
Video Connections 97 to 256	Ten 34-pin ribbon connectors used in conjunction with the LTC 8808/00 video interconnect panel (purchased separately)
Looping Video Connections 1 to 256	Sixteen 34-pin ribbon connectors used in conjunction with the LTC 8808/00 video interconnect panel (purchased separately)

External Accessory Interfaces

	9-pin D-type connectors
CONSOLE	RS-232 port for external PC or control interface (default = 19,200 baud)
ALARM	RS-232 port for Allegiant alarm accessory unit (default = 19,200 baud)
PRINTER	RS-232 port for system logging printer (default = 19,200 baud)
SDA	TTL level, high speed control data output (biphase) for interface to Allegiant series signal distribution units (data clock rate = 31.25kHz)
COMM PORT 1	RS-485 port for interbay communication use (default = 125,000 baud)
COMM PORT 2	RS-485 port for external Allegiant accessory use (default = 125,000 baud)
KEYBOARDS	Eight 6-pin RS-485 ports for Allegiant keyboard use (default = 9600 baud)

Equipment Rack (LTC 8801)	
Size	EIA 19in rack 483W x 420D x 267H mm
	(19 x 16.5 x 10.5in)
Weight	11.1kg (24.5lb)
Construction/Finish	
Top and Bottom	Steel
Front, Sides, and Back	Aluminum
Finish	Charcoal
Microprocessor Module (LTC 8810/00)	
Size	300D x 250H mm (11.8 x 9.8in)
Weight	0.5kg (1.1lb)
Power Supply	
(LTC 8805/60 - 120VAC, LTC 8805/50 - 220-240VAC)	
Size	67W x 360D x 247H mm
	(2.63 x 14.2 x 9.7in)
Weight	5.2kg (11.5lb)
Indicators	One power On/Off, ten fuse alert, and
	one external sync LED

LTC 8802 Series Monitor Expansion Bay			
Includes equipment rack, LTC 8816/00 data receiver module, and			
LTC 8805 Series power supply.			
Power			
Model	**Rated**	**Voltage**	**Nominal**
No.	**Voltage**	**Range**	**Power**[1]
LTC 8802/60	120VAC, 50/60Hz	100 to 140	200W
LTC 8802/50	220–240VAC, 50/60Hz	198 to 264	200W
[1]Power at rated voltage fully loaded.			
Connectors			
Video Inputs 1 to 96, and 32 Monitor Outputs			
	BNC		
Sync Input	Not used		
Video Connections 97 to 256	Ten 34-pin ribbon connectors used in		
	conjunction with the LTC 8808/00 video		
	interconnect panel (purchased separately)		
Looping Video Connections 1 to 256			
	Sixteen 34-pin ribbon connectors used		
	in conjunction with the LTC 8808/00		
	video interconnect panel		

External Accessory Interfaces	
	9-pin D-type connectors
CONSOLE	Not used
ALARM	Not used
PRINTER	Not used
SDA	Not used
COMM PORT 1	RS-485 port for interbay communication
	use (default = 125,000 baud)
COMM PORT 2	Not used
KEYBOARDS	Eight 6-pin RS-485 ports for Allegiant
	keyboard use (default = 125,000 baud)

Equipment Rack (LTC 8802 Series)	
Size	EIA 19in rack, 483W x 420D x 267H mm
	(19 x 16.5 x 10.5in)
Weight	11.1kg (24.5lb)
Construction/Finish	
Top and Bottom	Steel
Front, Sides, and Back	Aluminum
Finish	Charcoal
Data Receiver Module (LTC 8816/00)	
Size	EIA 19in rack, 483W x 420D x 267H mm
	(19 x 16.5 x 10.5in)
Weight	0.5kg (1.1lb)
Power Supply	
(LTC 8805/60 - 120VAC, LTC 8805/50 - 220–240VAC)	
Size	67W x 360D x 247H mm
	(2.63 x 14.2 x 9.7in)
Weight	5.2kg (11.5lb)
Indicators	One power On/Off, ten fuse alert, and
	one external sync LED

LTC 8821/00 Video Input Module	
Use up to eight per bay in main CPU bay. If monitor expansion bay is	
being used, equip with duplicate number of modules.	
Camera Inputs	32
Size	300D x 250H mm (11.8 x 9.8in)
Weight	0.41kg (0.9lb)

LTC 8834/00 Video Output Module	
Use up to eight per bay in main CPU or monitor expansion bay.	
Monitor Outputs	4
Size	300D x 250H mm (11.8 x 9.8in)
Weight	0.41kg (0.9lb)

LTC 8808/00 Video Interconnect Panel

NOTE: Use of the LTC 8808/00 assemblies are required for system video inputs 97 to 256 and must be purchased separately.

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 8800 Series system. In addition to being used for video inputs 97 to 256, the LTC 8808/00 assembly can also be ordered as an option to provide looping output capability. For looping purposes, one LTC 8808/00 (includes panel and two ribbon cables) is required for each group of 32 cameras.

The following table can be used to determine the number of LTC 8808/00 assemblies that must be purchased:

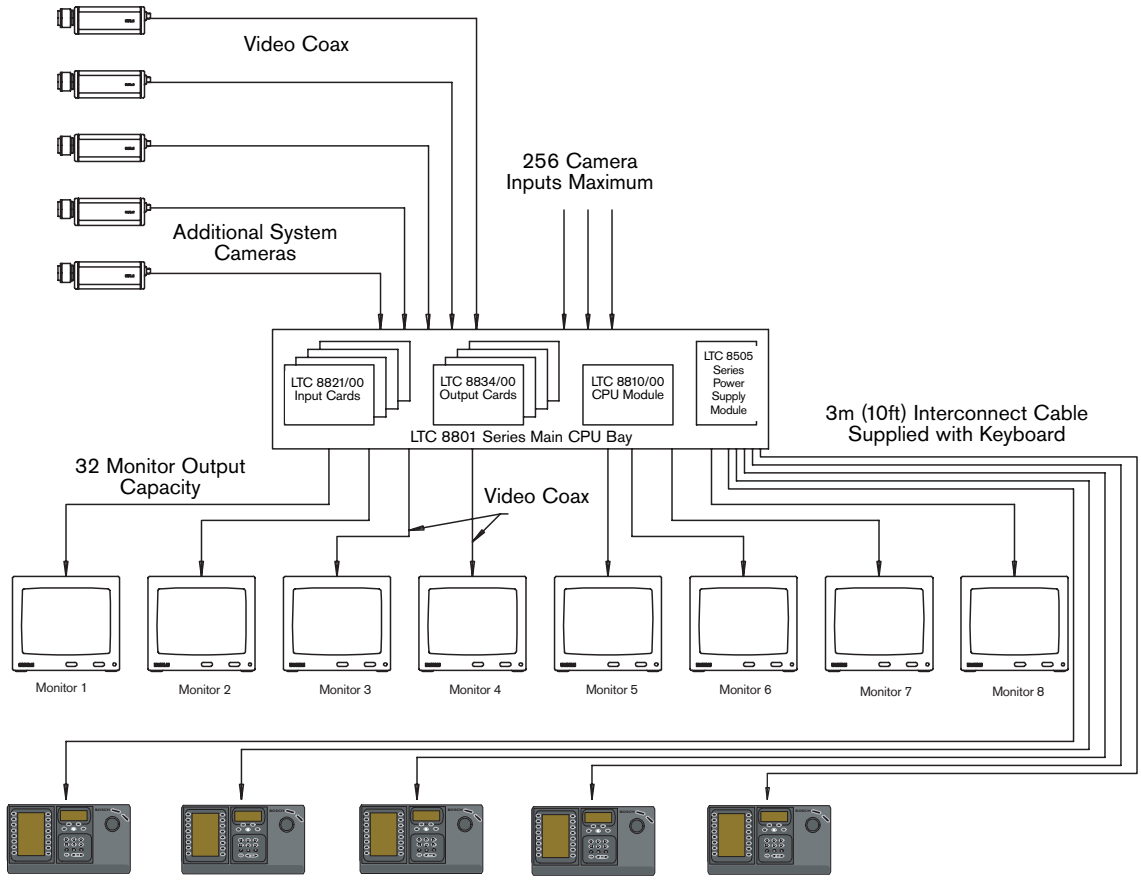
Number of System Cameras	Number of LTC 8808 Required for Camera Input Connections Only	Number of LTC 8808 Required for Inputs & Looping Video Outputs
1 to 32	None	1
33 to 64	None	2
65 to 96	None	3
97 to 128	1	5
129 to 160	2	7
161 to 196	3	9
197 to 224	4	11
225 to 256	5	13

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

Allegiant Accessories

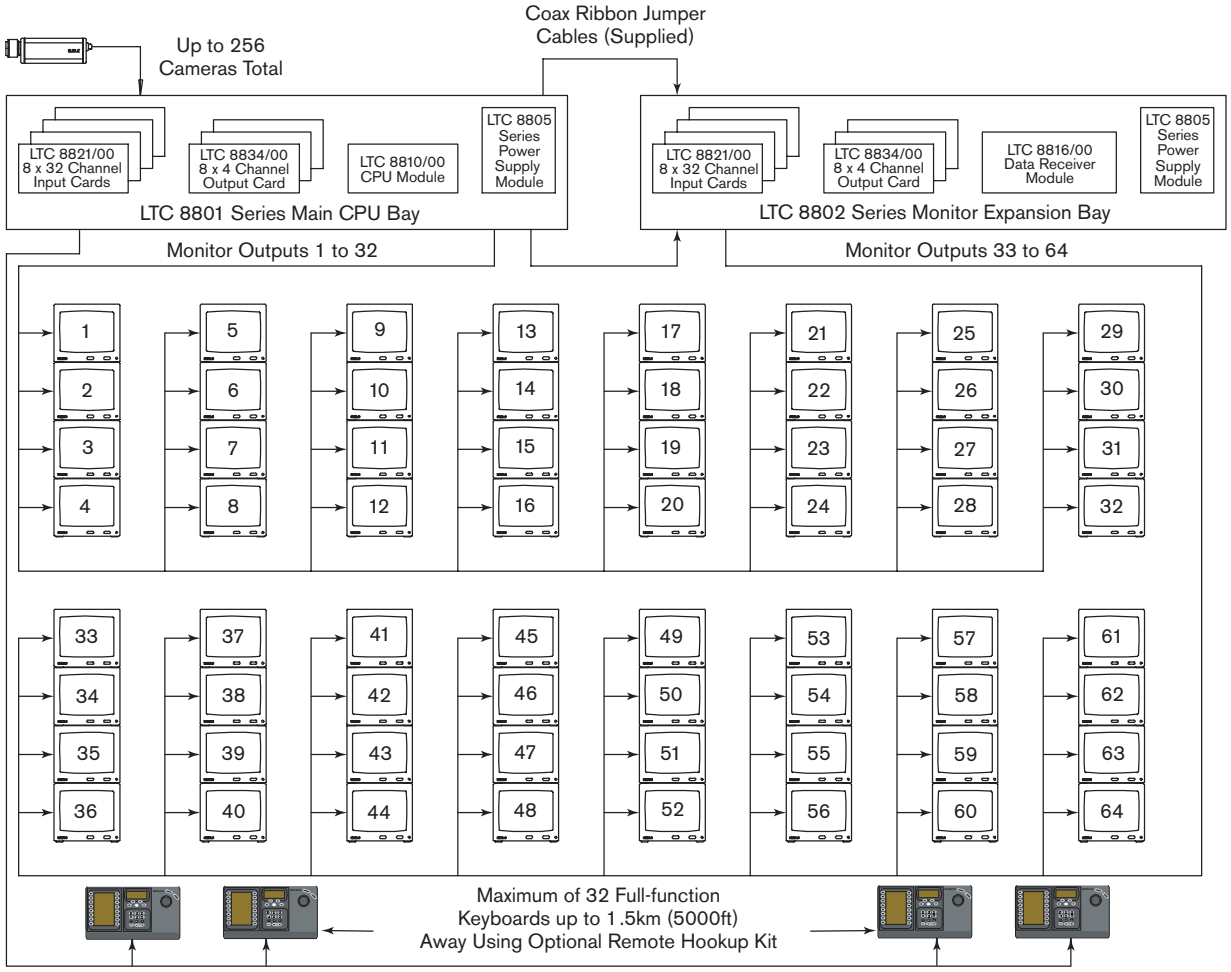
The LTC 8800 Series accessory products provide many optional features to the base Allegiant switching systems. Accessory products include keyboard extension kits, Allegiant Bilinx Data Interface unit, receiver/driver units, switcher/followers, code merger units, and keyboard expansion units. All accessory products are designed to be installer-friendly and compatible throughout the Allegiant series systems. See Allegiant accessories datasheet.

LTC 8800 Series Configuration Diagram (256 Cameras by 32 Monitors)

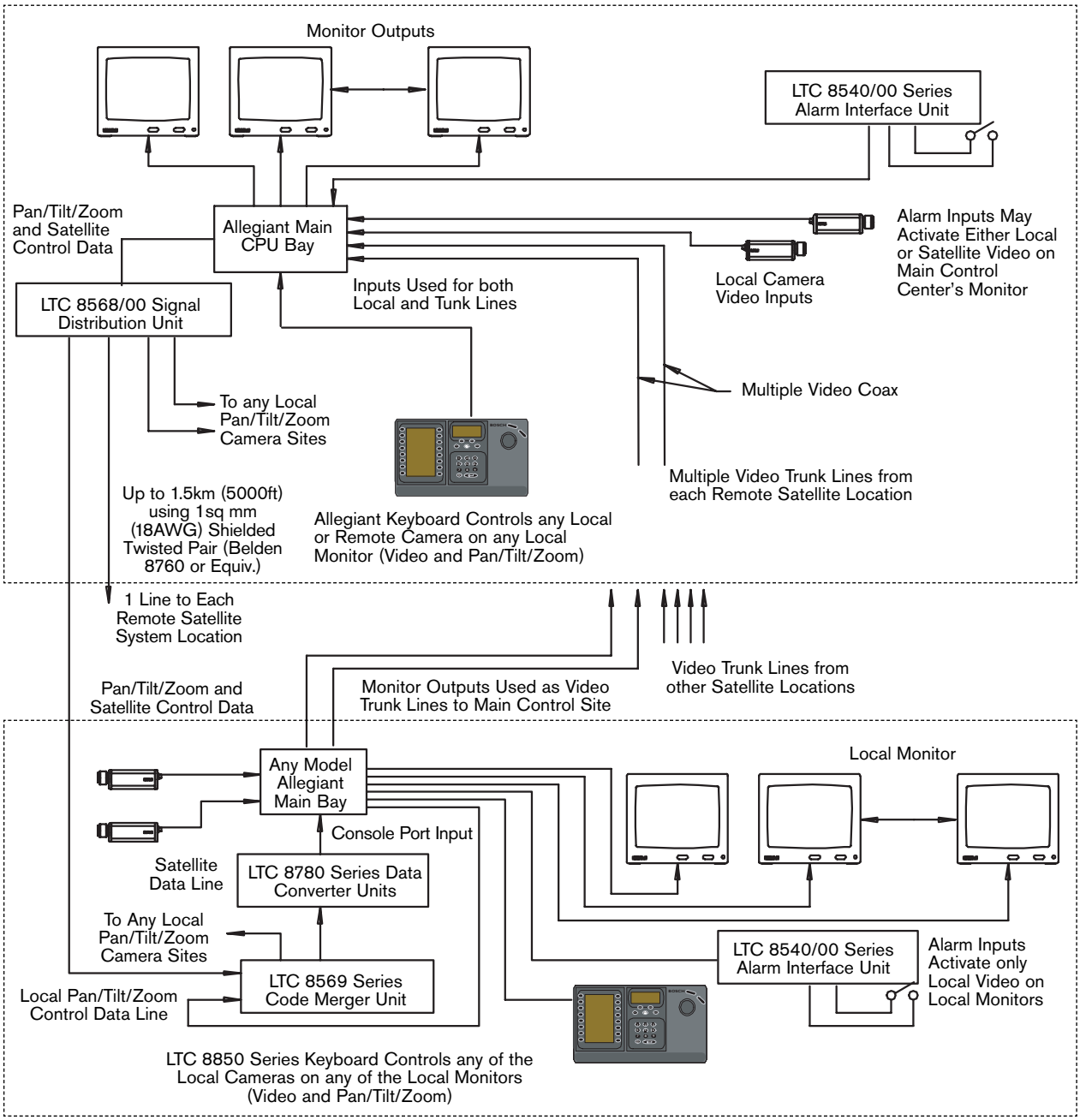


32 Full Matrix Monitor Outputs Maximum
32 Full Function Keyboards Maximum

LTC 8800 Series Dual-bay System (256 Cameras by 64 Monitors)



Allegiant Satellite Switching System



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