

## VideoBloX System

www.honeywellvideo.com

### EMBEDDED VIDEO MATRIX

Honeywell's VideoBloX matrix system is a robust video and audio full crosspoint matrix switch that is scalable from small to large applications. Versatile in design, it makes integration to access control and other systems possible through a simple auxiliary control protocol. Its compact size and rugged chassis are designed to withstand harsh environments and require limited maintenance.

The VideoBloX embedded CPU is a ½U size module programmed using Windows-based configuration software. The system is expandable to 1248x256 on one CPU, but up to 15 systems can be networked together using RS422 and video trunks or TCP/IP. A 1024x25 line sequence engine allows for building custom actions based on system events such as alarms, time of day or key presses, or externally triggered through the auxiliary port.

Both video and audio switching can be performed in the same chassis, providing easier configuration with enhanced features. Modules are small—occupying only ½U in rack height—position independent and hot swappable. Matrix inputs can either be traditional BNC or UTP (RJ45). UTP inputs further simplify system design by incorporating the active UTP receiver and switching hardware on one 16 channel input board.

Control of PTZ dome cameras from Honeywell and from other manufacturers is handled by the multipurpose protocol interface translator (PIT). The PIT also provides remote alarm point inputs and output gathering over RS422.

An easy-to-use sequence engine allows customization of system events. Programmed actions can be triggered by alarms, by time of day or by key presses on the HEGS5BLX keyboard as well as external triggers through the auxiliary port. The HVBPI44 can be added to interface with serial devices such as multiplexers or PTZ domes. Locally, 32 alarm inputs and four relay outputs are available through a convenient termination panel. When combined with the HEGS5BLX keyboard the VideoBloX system can control DVRs and up to 25 types of PTZ domes.

#### Market Opportunities

The VideoBloX system is a full featured, high capacity, video and audio matrix switcher that provides a simple interface for access control, intrusion alarm and programmable logic control. Its high density, compact design occupies smaller rack space making it well suited to retail outlets, correctional facilities, airports, and other installations. Fewer interconnects are required, thus saving material and labor costs.

#### Features

- Stainless steel fabrication
- High density, low profile design
- Audio and video switched in same chassis
- Modules are position independent
- Modules are “hot-swappable”
- Secondary power supply possible
- Multiple chassis may be interconnected
- Configuration updates done in real time, most without system interruption
- Powerful 1024x25 line sequence engine for custom event handling
- Powerful onscreen diagnostic monitoring tools
- Supply voltage monitor and internal processor watchdog
- Available Graphical User Interface for control without a keyboard
- Groups and scenes allow for logical camera selection



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## SPECIFICATIONS

### Central Processing Unit (CPU)

The VideoBloX embedded CPU is the main system processor and contains the operating program and the system database in non-volatile memory that can retain critical data for up to one month without power. The CPU incorporates onboard alarm inputs which can connect to up to 32 keyboards or networked workstations and four relay outputs. Additional alarm inputs and outputs can be added using the two I<sup>2</sup>C serial ports. The CPU communicates with peripherals through the rear termination panel utilizing five serial ports: Two RS422 for keyboards and PIT devices (master port), one RS232 for PC configuration and GUI control, one RS232 for external integration (AUX port), and one RS422 for networking other VideoBloX CPUs (SAT port).



### Chassis with Video Input, Output Modules and Chassis Interlinking Modules

Designed specifically to reduce the space required for a matrix switch, the chassis has a high density, low profile format. It will mount in an industry standard 19 inch rack and has a depth of less than 10 inches. The compact design reduces rack size, saves space, limits the amount of interconnection cabling, produces less heat and is easier to install – all of which adds up to lower installation and maintenance costs. System chassis are available in 2U, 4U, 8U and 12U sizes and all except the 2U support 64 output bus channels.

Power and data connectivity to I/O modules are provided by the chassis in a hot swappable, position-independent environment. Removal of any input/output module is done without disconnecting cables by using the rear termination panels. Multiple chassis can be interlinked – providing the system designer with the flexibility of distributing the system throughout the site or even to remote sites with the appropriate communications network.

The chassis includes a power supply module, which connects to the main power, preferably an uninterruptible power source (UPS). A secondary power supply, 12 to 24 VAC or 12 to 30 VDC, provides added security and system availability.

Composite video is received into the chassis through the 16 channel BNC rear termination panel or in the case of the unshielded twisted pair (UTP) input board through four RJ45s. Three versions of video input boards switch video from the 16 inputs to any one of 16, 32 or 64 output bus channels. Each video input board performs video loss detection and incorporates its own processor and power regulation for true distributed processor architecture.

Video output modules connect 16 of the available 64 output bus channels to monitors or other video receivers. The rear termination consists of 16 BNCs. Video output modules overlay system titling in a 18 line by 44 character array with changeable fonts and multi-language character support.



### HEGS5BLX Keyboard

The HEGS5BLX is a programmable joystick keyboard controller that provides the operator with full control of VideoBloX system. Basic functions such as switching video inputs to video outputs, controlling high speed domes and DVRs are all easily performed using the 16 multipurpose function keys. The function keys can be mapped to groups, scenes or sequences for a quick view of selected cameras. Firmware can be upgraded to internal flash memory through the serial port



### Protocol Interface Translator (PIT)

The PIT is a versatile device that provides the capability for interface to high speed PTZs and also converts VideoBloX protocol to that of other manufacturers – enabling retrofit installation to third party equipment. The VideoBloX system supports protocol from Honeywell and up to 25 other manufacturers utilizing RS232/RS485. Simple dipswitch configuration selects a variety of protocols through a DB9 using RS422 format.



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### SPECIFICATIONS

#### Data Port Expander (DPE)

The HVB422FT16 is a 1 input/16 output 1U RS422. The HVB422C4 is a 1 input/4 output data distributor. The DPE is used to connect multiple devices such as chassis and PITs to the controlling source.



#### Alarm Input/Output

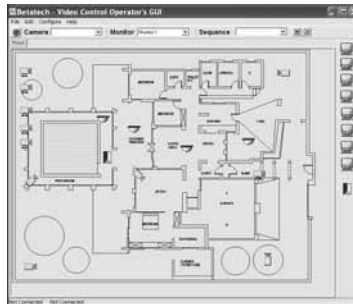
Alarm inputs are utilized to activate sequence actions in response to alarm conditions. The CPU incorporates eight alarm inputs and two relay outputs. If additional alarm I/Os are needed, alarms can also be received using a PIT module on the RS422 port with the 16 channel I<sup>2</sup>C expansion modules connected to the PIT. This provides a total of 80 additional alarm inputs or control outputs or any combination of the two.



#### VideoGUI Software

VideoGUI is a graphical user interface application run on a Windows-based PC. User access control is limited by user logon and associated keyboard credentials configured in the VideoBloX CPU. PTZ control, camera switching, direct start and stop of sequences are controllable from the desktop. Flashing alarm icons are possible when using the AVServer application which allows the GUI to connect to the VideoBloX CPU in a server client basis.

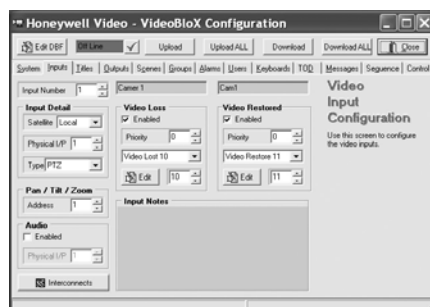
Custom device front panels can be designed through the Designer application installed with GUI. Graphic backgrounds are imported with \*.wmf, \*.jpg or \*.bmp files. These may reside on network drive locations. Multiple sites consisting of multiple areas can be configured with tabs or icons.



#### VideoBloX Configuration Software (VideoCFG)

The configuration software is a 32-bit application that is compatible with Windows 95/98/NT/2000, and provides easy-to-use programming for system configuration. The software is installed in a PC that is only required for system configuration and editing. It does not have to be permanently connected to the VideoBloX CPU.

The system utilizes a 32-bit, ODBC-compliant, Borland Paradox 7.0 database manager. Data is organized into tabbed folders, each representing a logical function. Information is entered into named fields or selected from lists of parameters. Interactive "help" is available to assist the user. For the more experienced operator, system programming such as input/output configurations, system sizing, and group or scene configuration can be configured using the VideoCFG software.



## VideoBloX System

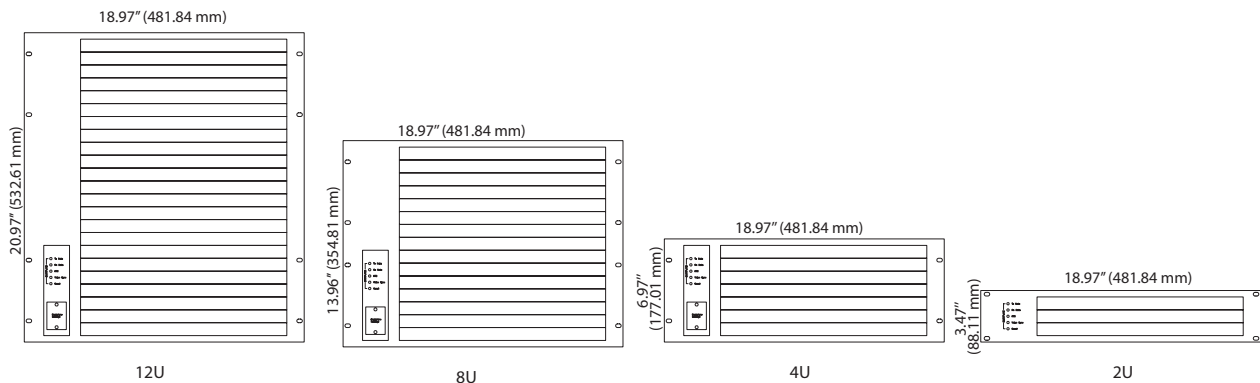
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### SPECIFICATIONS

Operational	
Video Inputs	16 BNC or RJ45 for UTP option
Bandwidth*	20 MHz @ -3db
Frequency Response*	12.1 @ ±0.5db
Differential Gain*	0.35%
Differential Phase*	0.78°
Luminance Non Linearity*	.48%
Crosstalk*	-62.8db @ 3.58 Mhz
Gain*	99.9%
Tilt*	.94%
Signal to Noise Ratio (EIA)*	-70.3 db
Switching time	<0.5 sec
Video Outputs	16 BNC
OSD	16 Lines x 44 characters
Connection	8 Port RS232 DB9, expandable to 20 Ports

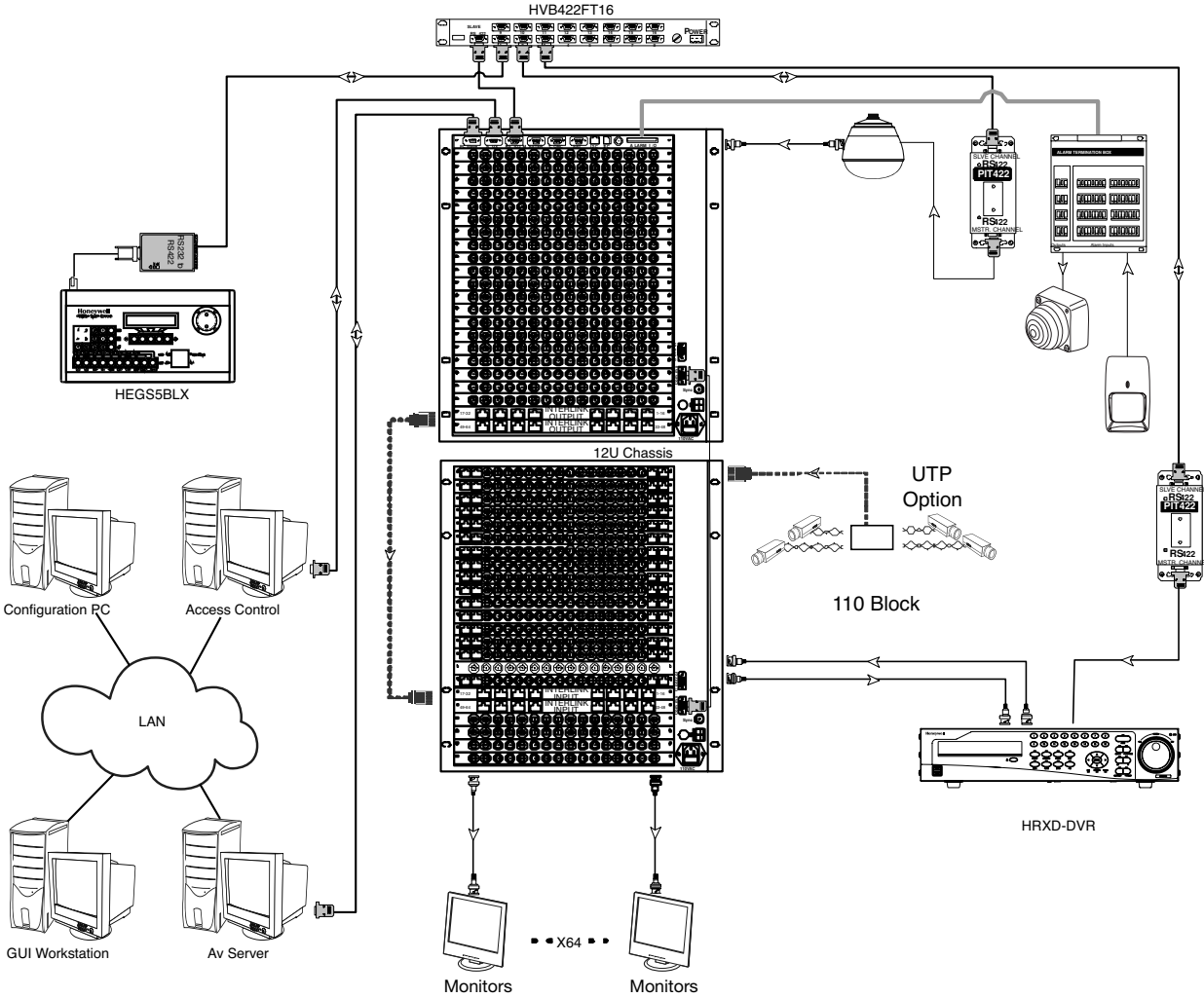
Electrical	
Chassis	110V/50 Hz or 220V/60 Hz AC
Chassis Redundant	24 VDC as backup supply
Power Consumption	2U: 40 VA 4U: 80 VA 8U: 120 VA 12U: 160 VA
Mechanical	
Construction	Chassis: Brushed stainless steel
Dimensions (W x H x D)	See Diagrams
Weight	2U Chassis: 15 lbs (6.8 Kgs) 4U Chassis: 30 lbs (13.6 Kgs) 8U Chassis: 60 lbs (27.2 Kgs) 12U Chassis: 90 lbs (40.8 Kgs)
Environmental	
Temperature	32°F to 104°F (0°C to 40°C)
Relative Humidity	0–80% non-condensing
Regulatory	
Emissions	FCC Part 15, Subpart B, Class A CE: 61000-6-3:2007
Immunity	CE: 50130-4/A2:2003
Safety	CE: EN60065

\* Test condition: 12U chassis, 160x64 BNC input NTSC using 12U, HVBM64, HVBNET16TO



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### SPECIFICATIONS



## ORDERING

Ordering	
<b>CPU and Software</b>	
HVBCPU (NTSC) HVBCPUX (PAL)	Embedded CPU Controller for VideoBloX includes CPU module and rear termination. No accessories included.
HVBCPUAL-KT (NTSC) HVBCPUAL-KTX (PAL)	Embedded CPU Controller for VideoBloX includes CPU module, rear termination board, alarm box, software, documentation, data cable and accessories.
<b>Chassis</b>	
HVB12U (NTSC) HVB12UX (PAL)	VideoBloX Chassis - 12U, supports 23 modules, maximum size is 336 inputs by 32 outputs or 304 inputs by 64 outputs.
HVB8U (NTSC) HVB8UX (PAL)	VideoBloX Chassis - 8U, supports 15 modules, maximum size is 208 inputs by 32 outputs or 176 inputs by 64 outputs.
HVB4U (NTSC) HVB4UX (PAL)	VideoBloX Chassis - 4U, supports 7 modules, maximum size is 80 inputs by 32 outputs or 48 inputs by 64 outputs.
HVB2U	VideoBloX Chassis - 2U, supports 3 modules, maximum size is 32 inputs by 16 outputs. Requires 18 VAC or 24 VDC power.
HVB2U-KT	HVB2U and 24 VDC power supply
<b>Video Input and Output Modules</b>	
HVBM16	Video Input Module - 16 Inputs into 16 Outputs with BNC Terminals –Terminating
HVBM32	Video Input Module - 16 Inputs into 32 Outputs with BNC Terminals – Terminating
HVBM64	Video Input Module - 16 Inputs into 64 Outputs with BNC Terminals – Terminating
HVB16M64ATP	Video Input Module - 16 Input into 64 Outputs with active UTP receivers on RJ45 and IDC ribbon looping output
HVB16M64TP	Video Input Module - 16 Input into 64 Outputs with active UTP receivers on RJ45 and with BNC looping output
HVB16M64Y	Video Input Module - 16 Input into 64 Outputs with IDC Ribbon Cable input and looping BNC Terminal outputs or reverse
HVB16M64B	Crosslink Style "B" rear termination for video output capacity expansion beyond 128 Outputs - Rear termination only
HVB16COAX2M	Crosslink ribbon cable - 16 channel video coax interconnect – 79" (200 cm) long. Use with HVB16M64B and HVB16M64Y
HVBNET16TO	Video Output Module - 16 Outputs with titles with BNC Terminals

Ordering Continued	
<b>Audio Modules</b>	
HVB16AM64	Audio Input Modules - 16 inputs into 64 outputs – RJ45 Termination
HVB16AO	Audio Output Module - 16 balanced outputs
<b>Chassis Interlink Modules</b>	
HVB32LKI	Video Interlink Input Module with RJ45 Interconnections - 32 Interlinks, for connecting chassis for input expansion
HVB32LKO	Video Interlink Output Module with RJ45 Interconnections - 32 Interlinks, for connecting chassis for input expansion
<b>Chassis Accessories</b>	
HVB16MLP	Rear Termination Panel with 16 looping inputs, 1U
HVB2BLANK	Blank Cover Set (front and rear), 1U
HVBBLANK	Blank Cover Set (front and rear)
<b>Keyboards</b>	
HEGS5BLX	Control Keyboard - with integral zoom joystick. Includes power supply for all regions.
HEGS5BLXKT	Includes HEGS5BLX and RS232-RS422 converter required for connection to CPU.
<b>Alarm Inputs/Outputs</b>	
HVBI2C16I	I <sup>2</sup> C 16 Alarm Input Interface unit - For use with dry contact points - stainless housing
HVBI2C16O	I <sup>2</sup> C 16 output 1A/channel - total max. current 8A - stainless housing
<b>Data Port Expanders</b>	
HVB232422	Optically Isolated RS232 to RS422 converter
HVB422C4	RS422 4 Channel Combiner/Splitter
HVB422FT16	RS422 Data Port Expander/Repeater 16 Channel, rack mountable

**NOTE:** Honeywell reserves the right, without notification, to make changes in product design or specifications.

### Honeywell Security

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L/VBxD/D  
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