



Blade4-16

1. Sixteen-Channel Digital Video Streaming Recorder

- 1.1. The Blade4 16-channel digital video streaming recorder shall work with up to 16 conventional analogue cameras and up to 4 IP cameras or encoder/decoder devices to record and transmit images over a network.
- 1.2. Blade4 shall be as manufactured by Vista or an approved equal.
- 1.3. Blade4 shall include, but not be limited to the following:
 - 1.3.1. Blade4 shall use “hybrid” technology by providing both analogue and digital connections for allowing users to integrate existing analogue cameras and Vista digital IP products.
 - 1.3.1.1. Blade4 shall provide 16 channels of analogue recording.
 - 1.3.1.2. Blade4 shall provide four channels of digital recording.
 - 1.3.2. Blade4 shall provide audio recording on four channels (optional).
 - 1.3.3. Blade4 shall incorporate Triplex functionality for simultaneous viewing, playback and recording.
 - 1.3.4. Blade4 shall include full search capabilities by:
 - 1.3.4.1. Time
 - 1.3.4.2. Date
 - 1.3.4.3. Alarms
 - 1.3.4.4. Motion detection
 - 1.3.4.5. Camera
 - 1.3.4.6. Text
 - 1.3.4.7. Events
 - 1.3.4.8. Daily hours
 - 1.3.5. Blade4 shall provide a frame rate of 25 frames per second, per analogue channel for a maximum of 400 frames per second total per unit at CIF / 200 frames per second total per unit at 2CIF / 100 frames per second total per unit at D1.
 - 1.3.6. Blade4 shall be user configured via front panel controls or a connection via Ethernet with a personal computer running included, BladeReader software and a current version of the Internet Explorer web browser.
 - 1.3.6.1. Blade4 shall have an integrated software interface to configure, upgrade and view the following information:
 - 1.3.6.1.1. View live and recorded video
 - 1.3.6.1.2. Set up users
 - 1.3.6.1.3. Configure system settings
 - 1.3.6.1.4. Configure camera settings
 - 1.3.6.1.5. Search recorded video
 - 1.3.6.1.6. View the system information
 - 1.3.6.2. Access to menus shall be set by user status.
 - 1.3.6.2.1. Operator status shall grant access to Display and Info menus.
 - 1.3.6.2.2. Manager status shall grant access to Display, Info and User menus.
 - 1.3.6.2.3. Admin status shall grant access to all menus.
 - 1.3.6.3. Configurable options shall include:
 - 1.3.6.3.1. Search
 - 1.3.6.3.1.1. Date
 - 1.3.6.3.1.2. Cameras/Motion
 - 1.3.6.3.1.3. By Hours



- 1.3.6.3.1.4. Search For...
- 1.3.6.3.2. Archive
- 1.3.6.3.3. Display
 - 1.3.6.3.3.1. Time/Date
 - 1.3.6.3.3.2. Recording/Playback Speed
 - 1.3.6.3.3.3. Playback Time/Date
 - 1.3.6.3.3.4. Camera Titles
 - 1.3.6.3.3.5. Text Insertion
 - 1.3.6.3.3.6. Text Timeout
- 1.3.6.3.4. Users
 - 1.3.6.3.4.1. Add User
 - 1.3.6.3.4.2. Edit User
- 1.3.6.3.5. Cameras
 - 1.3.6.3.5.1. Recording
 - 1.3.6.3.5.2. Rates/Durations
 - 1.3.6.3.5.3. Alarm Input
 - 1.3.6.3.5.4. Motion Detection
 - 1.3.6.3.5.5. Camera Title
 - 1.3.6.3.5.6. Adjust Video
 - 1.3.6.3.5.7. Copy Settings (analogue and IP)
- 1.3.6.3.6. Schedule
 - 1.3.6.3.6.1. Macro
 - 1.3.6.3.6.2. Time
 - 1.3.6.3.6.3. Frequency
- 1.3.6.3.7. Alarms
 - 1.3.6.3.7.1. System Notification
 - 1.3.6.3.7.1.1. Disk Failure
 - 1.3.6.3.7.1.2. Disk Full
 - 1.3.6.3.7.1.3. Network Failure
 - 1.3.6.3.7.1.4. Fan Failure
 - 1.3.6.3.7.1.5. Power Restore
 - 1.3.6.3.7.1.6. Authentication Lockout
 - 1.3.6.3.7.2. Silent Alarm
 - 1.3.6.3.7.2.1. Silent Camera Alarms
 - 1.3.6.3.7.2.2. Silent System Alarms
 - 1.3.6.3.7.3. Alarm Inputs/Outputs
 - 1.3.6.3.7.3.1. Alarm Inputs
 - 1.3.6.3.7.3.2. IP Alarms
- 1.3.6.3.8. IP Settings
 - 1.3.6.3.8.1. Settings
 - 1.3.6.3.8.2. Advanced
 - 1.3.6.3.8.3. Services



- 1.3.6.3.8.4. Streaming
- 1.3.6.3.8.5. Serial Passthrough
- 1.3.6.3.8.6. Network Notification
- 1.3.6.3.8.7. Email Setup
- 1.3.6.3.8.8. Notification Setup
- 1.3.6.3.9. Front Panel
 - 1.3.6.3.9.1. Front Panel
 - 1.3.6.3.9.2. Time/Date
 - 1.3.6.3.9.3. Security
 - 1.3.6.3.9.4. Language
 - 1.3.6.3.9.5. Disk Maintenance
 - 1.3.6.3.9.6. Serial Communications
 - 1.3.6.3.9.7. Firmware Upgrade
 - 1.3.6.3.9.8. Load/Restore Settings
 - 1.3.6.3.9.9. Shutdown
- 1.3.6.3.10. Info
 - 1.3.6.3.10.1. Health
 - 1.3.6.3.10.2. System
 - 1.3.6.3.10.3. Network
- 1.3.7. Blade4 shall have two lighting modes to indicate status.
 - 1.3.7.1. Awake
 - 1.3.7.1.1. Light is 100% bright.
 - 1.3.7.1.2. Light is red or green, depending on function.
 - 1.3.7.2. Alarm
 - 1.3.7.2.1. Light is 100% bright.
 - 1.3.7.2.2. Light is red.
 - 1.3.7.2.3. Light is flashing.
- 1.3.8. Blade4 shall include infrared remote capabilities.
- 1.4. The digital recorder shall have the following operational features:
 - 1.4.1. Streaming
 - 1.4.1.1. Each Blade4 shall support Video Streaming, which is the process that the recorder uses to listen on a specific UDP/TCP port and respond to control messages issued through BladeReader digital video navigation client software or third-party compatible VMS software.
 - 1.4.1.1.1. Blade4 shall support multicasting to deliver source traffic to multiple receivers using the least amount of network bandwidth.
 - 1.4.1.2. Blade4 shall be able to display and record streamed video using TCP or UDP protocols.
 - 1.4.2. Recording
 - 1.4.2.1. Blade4 shall record video on multiple internal hard disk drives. Multiple hard disk drive options shall be available:
 - 1.4.2.1.1. 320GB hard disk drive
 - 1.4.2.1.2. 640GB hard disk drive
 - 1.4.2.2. Blade4 shall support the following user programmable record speeds:
 - 1.4.2.2.1. 25 fps



1.4.2.2.2. 12.5 fps

1.4.2.2.3. 5 fps

1.4.2.2.4. 2.5 fps

1.4.2.2.5. 1 fps

1.4.2.3. Blade4 shall allow the user to select whether the hard disk recording should automatically overwrite data and how using one of three settings:

1.4.2.3.1. No overwrite

1.4.2.3.2. Overwrite once

1.4.2.3.3. Continuous overwrite

1.4.2.4. Blade4 shall be able to continue recording without disruption when the user adjusts the normal record speed.

1.4.2.5. The user shall be able to play back images smoothly at normal or fast speeds and in forward or reverse modes, without distortion.

1.4.2.6. Blade4 shall include a Search Interface feature that allows the user to search the hard disk for recorded events, such as an alarm condition or a previous recording session.

1.4.2.7. Blade4 shall use MPEG-4 video compression to achieve extremely high video compression per megabyte on the hard disk.

1.4.2.7.1. MPEG quality shall be user-selectable on a scale of 1 through 9.

1.4.2.7.2. Resolution shall be user-selectable as CIF, 2 CIF or D1.

1.4.3. Connections

1.4.3.1. Blade4 shall include the following connectors:

1.4.3.1.1. Accessory I/O ports

1.4.3.1.1.1. RS-485/422 (2)

1.4.3.1.1.2. Alarm input (16)

1.4.3.1.1.3. Form C alarm relay (4)

1.4.3.1.1.4. USB (4)

1.4.3.1.2. RS-232 serial port: DB-9

1.4.3.1.3. Composite video in: BNC (16) looping auto terminating

1.4.3.1.4. Composite video out: BNC (1), VGA (1)

1.4.3.1.5. Audio in: RCA (4)

1.4.3.1.6. Audio out: RCA (1)

1.4.3.1.7. 10/100/1000 Ethernet: RJ-45

1.4.4. Ethernet communications

1.4.4.1. Blade4 shall support LAN/WAN Ethernet access.

1.4.4.2. Blade4 shall support 10/100/1000 Base T networks.

1.4.4.3. Blade4 shall support Dynamic IP Addressing (DHCP).

1.4.4.4. Blade4 shall support Dynamic Domain Name Server (DDNS).

1.5. Blade4 shall have the following additional specifications:

1.5.1. Video

1.5.1.1. Available colours shall be to specification YUV 4:2:2, providing up to 16.8 million colours .

1.5.1.2. There shall be 256 grayscales levels.

1.5.1.3. Horizontal resolution shall be 720 pixels (NTSC) or 704 pixels (PAL).

1.5.1.4. Vertical resolution shall be 480 active lines (NTSC) or 540 active lines (PAL).



1.5.2. Audio

1.5.2.1. Input: 315 mV, 400 KOhms, unbalanced

1.5.2.1.1. 4 inputs available

1.5.2.2. Output: 315 mV, 600 ohms, unbalanced

1.5.2.2.1. 1 output available

1.5.2.3. Compression standard: MPEG-1

1.5.3. Electrical

1.5.3.1. Power supply: 120 to 240 VAC, 50/60 Hz, auto ranging

1.5.4. Environmental

1.5.4.1. Operating temperature range: 32 to 104°F (0 to 40°C)

1.5.4.2. Storage temperature: -4 to 140°F (-20 to 60°C)

1.5.4.3. Relative humidity: 10 to 95% non-condensing

1.5.5. Physical

1.5.5.1. Dimensions: 3.51 x 17.42 x 19.92 inches (89 x 442.5 x 509 mm)

1.5.5.2. Weight: 25.0 lb. (11.34 kg)

1.5.5.2.1. Weight shall be the maximum with four hard disk drives installed.

1.6. Blade4 shall conform to these internationally recognized compliance standards:

1.6.1. FCC

1.6.2. CE

1.6.3. UL

1.6.4. C-Tick