

Grandeye Halocorder Digital Recorder

Architectural and Engineering Specification

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PART 1 - GENERAL

1.01 General Requirements

1. The camera shall be based upon standard components and proven technology.

1.02 Quality Assurance

1. All recorder installation, configuration, setup, program and related work shall be performed by trained technicians.

1.03 Certifications and Standards

A Approvals. The recorder shall meet:

1. EMC to CISPR Class A for CE, FCC, ICES-003
2. Safety to UL2044 (UL2043 with conduit kit) (see UL file E313415)

1.04 Warranty

1. The recorder shall be supplied with a full manufacturer warranty against defects in material and craftsmanship for 3 years from purchase date.

PART 2 – PRODUCTS

2.01 General

1. The recorder shall integrate with the Halocam-R to provide
 - a. High-resolution video recording at 3 megapixels via a high-speed dedicated digital connection
 - b. Video playback at up to 4 frames per second
 - c. High speed pan, tilt and zoom functions with static optics during playback
2. The recorder shall:
 - a. Operate on an embedded Linux platform
 - b. Be manufactured in solid state electronics
 - c. Include FTP server capabilities

2.02 Manufacturer

Grandeye Ltd
6 Huxley Road
Guildford
GU2 7RE

2.03 Hardware

1. The recorder shall use a 400GB or 750GB continuous rated server-quality hard disk drive optimised for AV applications.

2.04 Video

A Resolution

1. The recorder shall, via the Halocam-R, record and playback high-quality video at a stored resolution of 3MP
2. Supported video formats for playback via Halocam-R shall include:
 - a. NTSC
 - b. PAL

B Transmission speed

1. The recorder-camera combination shall allow the transmission of images at PAL and NTSC frame rates, and at least 4 frames per second (1744x1536, 3 Megapixel Fisheye).

2.05 Functionality

A User Interface

1. The attached camera shall allow the user to configure the recorder via on-screen menus which shall be password protected.
2. The recorder shall provide a graphical timeline display which indicates motion detection events
3. The recorder shall provide functionality to search for a time/date and for events.

B Retrospective Playback

1. The recorder shall allow retrospective playback with forward and backward modes with speeds up to 32x normal playback.
2. The recorder shall, via the Halocam-R, allow full 360° pan and tilt functionality, and allow 7x optical equivalent zoom.
3. The recorder shall allow forwards and backwards single frame stepping.
4. The recorder shall allow for simultaneous recording and playback (Duplex)

C Recording

1. The recorder shall allow storage for:
 - a. At least 5 days of continuous recording at highest frame rate and quality with reasonable lighting levels
 - b. At least 3 weeks of continuous recording at lower frame rates and quality with reasonable lighting levels
2. The recorder shall allow:
 - a. Event-based recording with configurable frame rate and image quality
 - b. Scheduled recording with configuration frame rate and image quality
 - c. Automatic recording on power up
 - d. Recording speeds of 1, 2 or 4 frames per second
 - e. A preview mode for selected configuration and provide a time estimate of disk space for the selected frame rate and quality setup

C Network Access

1. The recorder shall support both fixed IP addresses and dynamically assigned addresses provided by a Dynamic Host Control Protocol (DHCP) server.
2. The recorder shall provide support for IPv4 addressing.

D Event Functionality

1. The recorder shall enable the protection of user definable sections and/or events from erasure

2. The recorder shall allow storage for up to 30 seconds of pre-alarm and up to 30 seconds of post-alarm data
3. The recorder-camera combination shall be equipped with an integrated event functionality, which can be triggered by:
 - a. External hardware input
 - b. Video motion detection
 - c. Scheduling
4. Response to triggers shall include:
 - a. Activating external hardware output on the Halocam-R

E Security

1. The recorder shall be password protected from clip download via remote viewer software
2. The recorder configuration via on-screen menus on the Halocam-R shall be password protected.

2.06 Recorder Diagnostics

1. The recorder shall be monitored by a Watchdog functionality, which shall automatically reset the recorder chips and software if a malfunction disables normal operation
2. The recorder shall be fitted with a power-on LED and a running LED to signify normal operation
3. The recorder shall allow disk operations to
 - a. Check Disk
 - b. Repair Database
 - c. Format Disk
 - d. Delete all recordings
 - e. Cleanly shut down and restart

2.07 Interfaces

1. The recorder shall have a 100baseTX Fast Ethernet connection using a standard RJ-45 socket for diagnostics, and upgrading of software.
2. The recorder shall have another standard RJ-45 socket for interfacing with HalocamR cameras.

2.08 Physical Specifications

A Enclosure

1. The recorder's enclosure shall be manufactured from die-cast aluminium alloy.
2. The recorder's connector covers and mounting stand shall be manufactured from ABS/PC plastic.
3. The recorder's enclosure shall be fluted, to allow for heat dissipation.

B Finish

1. The recorder shall be finished with metallic grey paint, with matt finish.

C Dimensions

1. The dimensions of the recorder shall be 261mm x 147mm x 156; 10.28" x 5.79" x 6.14"

D Weight

1. The weight of the recorder shall be approximately 3.5 kg; 7 lb 12oz.

2.09 Electrical Specifications

A Input Voltage and Power Consumption

1. The recorder shall use an external power supply with an output voltage range of 24V AC/DC +/-10% and a current rating =>2A, which plugs into side of the unit via a 4 way Phoenix Connector socket.
2. Power consumption of the recorder shall not exceed 30W.

2.10 Environmental Specifications

A Environmental

1. The recorder shall be for indoor use only.
2. The recorder shall operate in the temperature range of 5°C and +35°C (41°F and 95°F), or between 5°C and +40°C (41°F and 104°F) with forced airflow (e.g. an external fan).
3. The camera shall have a storage temperature range of -10°C and +60°C (14°F and 140°F).

2.11 Mechanical Specifications

A Cable Entry

1. The recorder shall receive external power via a 4 way 5.08mm Phoenix connector socket.
2. The recorder shall have a standard RJ-45 socket for 100baseTX Fast Ethernet connection, used for diagnostics, upgrading of software and remote access.
3. The recorder shall be equipped with another standard RJ-45 socket for interfacing with Halocam-R cameras.

B Enclosure Fixings

1. All PCB's shall be mounted to the enclosures using M3x6 dome head screws.
2. The recorder enclosure shall be held together with M3x30 dome head screws with and M3 spring washers.

PART 3- EXECUTION

3.01 Installation

1. The installer shall carefully follow instructions provided in the User Manual to ensure all steps have been taken to provide a safely installed system
2. All equipment shall be tested and configured in accordance with instructions provided by the manufacturer prior to installation
3. The recorder shall be configured with a null default password which is by default turned off.