

Tri-brid 4K DVR

4/8/16-channel 4K 1U Digital Video Recorder



- Embedded Processor
- Smart H.264+/H.264 Dual-stream Video Compression
- Supports HDCVI/CVBS Video Inputs
- 4, 8, or 16 HDCVI/CVBS Channels
- 4 + 2, 8 + 4, or 16 + 8 IP Channels, up to 4K (8 MP) per Channel
- Maximum 24/48/96 Incoming Bandwidth
- HDMI Output up to 4K Resolution
- Built-in Smart Search
- Intelligent Video System (one channel)



System Overview

Dahua, a global leader in security systems, introduces HCVR technology - the perfect affordable solution to upgrade existing video surveillance systems while leveraging existing networks, cabling, and cameras. HCVR technology utilizes tri-brid access technology to seamlessly record video from HDCVI, CVBS, and IP sources simultaneously.

The HCVR offers advanced options such as built-in motion detection algorithms, alarm triggers, and customized recording modes. HCVR technology is the ideal solution for actively monitoring and recording video feeds in wide range of applications including public venues, retail stores, transportation hubs and access ways, personal property and homes, and educational institutions.

Camera Connections

Record and monitor video from analog/HDCVI camera inputs and IP camera inputs simultaneously. The C52 series supports a maximum of 24 channels, with up to 16 channels of HDCVI/CVBS inputs and up to an additional 8 channels of IP inputs. The flexibility of the HCVR allows all 24 channels to record input from IP cameras, or from a combination of input from analog and IP sources (not to exceed the maximum number of analog cameras allowed per HCVR). In addition, the HCVR supports a maximum of 16 local live-view channels and 16 playback channels.

Flexible Recording

The HCVR offers a variety of configurable recording options and schedules that saves HDD space and active monitoring time. The HCVR monitors incoming video and can be programmed to record if motion is detected. The HCVR can also be programmed to record on a schedule or at different intervals. The recording options and schedules can be set for each individual camera or copied to all cameras.

Functions

Spot Output

Spot Output allows an operator to view a secondary monitor assigned to selected cameras or video inputs in a high-security area.

Smart H.264+

The Smart H.264+ video compression standard can reduce bit rate and storage requirements by up to 70% without having to invest in new cameras.

HDCVI/CVBS Auto-detect

The HCVR automatically recognizes the incoming signals of each attached camera without any setup, making installation easy and operation convenient.

8 MP Resolution

The HCVR supports 8 MP (3480 x 2160) resolution on HDCVI channel one and all IP camera inputs for recording and live viewing. Remaining analog channels support up to 4 MP each.

Intelligent Video System (IVS)

IVS is a built-in video analytic algorithm that delivers intelligent functions to monitor a scene for Tripwire violations, intrusion detection, and abandoned or missing objects. A device with IVS quickly and accurately responds to monitoring events in a specific area. The camera also offers tamper detection by recognizing a dramatic scene change and generating a warning message to inspect the camera.

Smart Search

Smart Search allows an operator to specify a region in the playback video to search for a motion detection event, saving time and manpower.



Technical Specification

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|----------------------------|--|------------|---------------|
| System | | | |
| Main Processor | Embedded Processor | | |
| Operating System | Embedded LINUX | | |
| Display | | | |
| Interface | One (1) HDMI (up to 3840 x 2160) One (1) VGA | | |
| Spot Output (Video Matrix) | HDMI or VGA Interface, configurable | | |
| Resolution | 3840 x 2160, 1920 x 1080, 1280 x 1024, 1280 x 720, 1024 x 768 | | |
| Multi-screen Display | C52A1N | C52A2N | C52A3N |
| | 1/4/6 | 1/4/8/9/16 | 1/4/8/9/16/25 |
| On-screen Display Options | Camera Title, Time, Video Loss, Camera lock, Motion Detection, and Recording | | |

Video Detection and Alarm

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|-----------------|--|
| Trigger Events | Recording, PTZ, Tour, Alarm Out, Video Push, Email, FTP, Snapshot, Buzzer, and Screen Tips |
| Video Detection | Motion Detection, MD Zones: 396 (22 x 18), Video Loss, Tampering, and Diagnosis |

Playback and Backup

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|-------------------|---|--------|----------|
| Playback | C52A1N | C52A2N | C52A3N |
| | 1/4 | 1/4/9 | 1/4/9/16 |
| Search Mode | Time / Date, Alarm, Motion Detection, and Exact Search (accurate to 1 second) | | |
| Playback Function | Play, Pause, Stop, Rewind, Fast play, Slow Play, Next File, Previous File, Next Camera, Previous Camera, Full Screen, Repeat, Shuffle, Backup Selection, and Digital Zoom | | |
| Backup Mode | USB Device Network | | |

Storage

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| Internal HDD | 2 SATA Ports, up to 8 TB capacity for each disk |
| HDD Mode | Single |

Auxiliary Interface

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| USB | 1 USB 2.0 and One (1) USB 3.0 |
| RS485 | One (1) Port, for PTZ Control |

Third-party Support

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|---------------------|---|
| Third-party Support | Dahua, Arecont Vision, AXIS, Bosch, Brickcom, Canon, CP Plus, Dynacolor, Honeywell, Panasonic, Pelco, Samsung, Sanyo, Sony, Videotec, Vivotek, and others |
|---------------------|---|

Audio and Video

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|---------------|-------------------------|--------------------------------|-----------------------------|
| Camera Inputs | Model | Analog Inputs | IP Inputs |
| | C52A1N | 4 | 4 + 2 |
| | C52A2N | 8 | 8 + 4 |
| | C52A3N | 16 | 16 + 8 |
| Resolution | | Up to 4K (8 MP), first channel | Up to 4K (8 MP) per channel |
| Audio In/Out | 1/1 | | |
| Two-way Talk | Reuse Audio In/Out, RCA | | |

Recording

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|------------------------------|---|
| Compression | Smart H.264+/H.264 |
| Resolution | 4K (8 MP), 4 MP, 1080p, 720p, 960H, D1, HD1, BCIF, CIF, QCIF |
| Record Rate, Analog Channels | |
| Main Stream | First Channel: 4K (8 MP) at 15 fps or 4 MP at 15 fps Other Channels: 4 MP at 15 fps or 1080p, 720p, 960H, D1, HD1, BCIF, CIF, QCIF at 30 fps |
| | Sub Stream |
| Bit Rate | 1 Kbps to 12288 Kbps per Channel |
| Record Mode | Manual, Schedule (Regular, Continuous), Motion Detection (Video detection: Motion Detection, Video Loss, Tampering), Alarm, and Stop |
| Record Interval | 1 to 60 minutes (default: 60 minutes) Pre-record: 1 s to 30 s Post-record: 10 s to 300 s |

Network

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| Interface | 1 RJ-45 Port (1000 Mbps) |
| Network Function | HTTP, TCP/IP, IPv4/IPv6, UPnP, RTSP, UDP, SMTP, NTP, DHCP, DNS, IP Filter, PPPoE, DDNS, FTP, Alarm Server, P2P, IP Search (Support Dahua IP camera, DVR, NVS) |
| Max. User Access | 128 users |
| Mobile Operating System | IOS and Android |
| Interoperability | ONVIF 2.4.1, CGI Conformant |

Electrical

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|-------------------|---------------------|--------|-------------|
| | C52A1N | C52A2N | C52A3N |
| | 12 VDC, 4 A | | 12 VDC, 5 A |
| Power Consumption | < 15 W, without HDD | | |

Environmental

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|----------------------|---|
| Operating Conditions | -10° C to +55° C (-14° F to +131° F), 0 to 90% RH |
| Storage Conditions | -20° C to +70° C (-4° F to +158° F), 0 to 90% RH |

Construction

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| Dimensions | |
| NVR | 1U, 375.0 mm x 287.0 mm x 53.0 mm (14.80 in. x 11.30 in. x 2.10 in.) |
| NVR with PFH101 Rack Mount Tray | 482.60 mm x 287.0 mm x 53.0 mm (19.0 in. x 11.30 in. x 2.10 in.) |
| Net Weight | 2.35 kg (5.20 lbs), without HDD |
| Gross Weight | 3.20 kg (7.05 lb) |
| Installation | Desktop installation |

Certifications

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| Safety | UL 60950-1 CAN/CSA C22.2 No. 60950-1-07 |
| Electromagnetic Compatibility (EMC) | FCC Part 15 Subpart B ICES 003 Issue 6 EN 55032: 2012+AC:2013 (Class B) EN 50130-4: 2011 EN 61000-3-2 : 2014 EN 61000-3-3 : 2013 |
| Immunity | EN 55024 : 2010 |

Intelligence

IVS triggers an alarm and takes a defined action for the following events:

Standard Features

- Tampering with the camera.
- Error writing to an onboard Micro SD card.
- Error sending or receiving data over the network.
- Unauthorized access to the camera.

Premium Features

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| Motion | An object moves through any part of the scene. |
| Tripwire | A target crosses a user-defined line. |
| Intrusion | A target enters or exits a defined perimeter. |
| Scene Change | A person or object moves the camera to change the scene or covers the camera to obscure the scene. |
| Abandoned/Missing Object | A target leaves an object in designated area, or a target removes an object from the same designated area. |

Ordering Information

| Type | Part Number | Description |
|---------------------|-------------|--|
| HCVR | C52A1N | 4 Analog/HDCVI Inputs, 4 + 2 IP Inputs, 4K (8 MP) 1U Digital Video Recorder |
| | C52A2N | 8 Analog/HDCVI Inputs, 8 + 4 IP Inputs, 4K (8 MP) 1U Digital Video Recorder |
| | C52A3N | 16 Analog/HDCVI Inputs, 16 + 8 IP Inputs, 4K (8 MP) 1U Digital Video Recorder |
| Accessory, optional | PFH101 | Rack Mount Tray 482.60 mm x 281.20 mm x 43.70 mm (19.0 in. x 11.07 in. x 1.72 in.) |

Dimensions (mm)

