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 IP 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

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.

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 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

System

Main Processor	Embedded Processor
Operating System	Embedded LINUX

Display

Interface	One (1) HDMI (up to 3840 x 2160) One (1) VGA
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

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

Playback and Backup

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

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

Auxiliary Interface

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

Third-party Support

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

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

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	D1, CIF, QCIF at 30 fps
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

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

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

Environmental

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

Dimensions	1U, 375.0 mm × 287.0 mm × 53.0 mm (14.80 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

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

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	
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

Dimensions (mm)