16-channel Penta-brid HDCVI DVR

Penta-brid 1080p 2U HDCVI Digital Video Recorder



- Embedded Processor
- Dual-stream Recording
- Smart H.264+ Video Compression
- Auto-detect and auto-configuration of HDCVI/AHD/CVBS/TVI/IP cameras
- Maximum 16+8 IP Camera Channels, up to 5 MP per Channel
- Maximum 96 Mbps Incoming Bandwidth
- Smart Search and Intelligent Video System



System Overview

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

The XVR offers advanced options such as built-in motion detection algorithms, and customized recording modes. XVR 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 compatible camera inputs simultaneously. The X38A series supports 24 cameras, up to 16 of which can be HDCVI/AHD/TVI/CVBS cameras and the remainder IP cameras. In addition, the XVR supports a maximum of 16 local live-view channels and 16 playback channels.

Flexible Recording

The XVR offers a variety of configurable recording options and schedules that saves HDD space and active monitoring time. The XVR monitors incoming video and can be programmed to record if motion is detected or if an alarm is triggered. The XVR 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

The XVR provides a spot output channel for a secondary monitor. This monitor allows the operator to view one monitor that is assigned to selected cameras or video inputs from high-security areas.

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/AHD/TVI/CVBS Auto-detect

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

5 MP Resolution

The XVR supports 5 MP resolution (2560 x 1920) on IP camera inputs for recording and live viewing.

Intelligent Video System (IVS)

With built-in intelligent video analytics on one (1) analog channel, the XVR has the ability to detect and analyze moving objects for improved video surveillance and perform actionable detection of edge camera tampering or malfunction. IVS also supports Tripwire analytics, allowing the XVR to detect when a pre-determined line has been crossed. IVS also offers facial detection, on the first analog channel, to detect and capture a snapshot of human face in a defined area within a scene.

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	Two (2) HDMI ports One (1) VGA port One (1) 1 TV port
Spot Output (Matrix Video)	HDMI-2 Interface
Resolution	1920 x 1080, 1280 x 1024, 1280 x 720, 1024 x 768
Multi-screen Display	1/4/8/9/16/25
On-screen Display	Camera Title, Time, Video Loss, Camera Lock, Motion Detection, 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
Alarm Input	16 Channels
Relay Output	Six (6) Channels

Playback and Backup

Playback	1/4/9/16
Search Mode	Time /Date, Alarm, MD and Exact Search (accurate to one second), Smart Search
Playback Function	Play, Pause, Stop, Rewind, Fast Play, Slow Play, Next File, Previous File, Next Camera, Previous Camera, Full Screen, Repeat, Shuffle, Backup Selection, Digital Zoom
Backup Mode	USB Device and Network

Storage

Internal HDD	8 SATA Ports, up to 8 TB capacity for each disk
HDD Mode	Single
eSATA	One (1) Port

Auxiliary Interface

USB	Two (2) USB 2.0 Ports Two (2) USB 3.0 Ports
Serial/RS232	RS232: PC Communication/Keyboard Control
	RS422/485: 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 more

Audio and Video

HDCVI Camera Input	16 Channels
IP Camera Input	16+8 Channels, each channel up to 5 MP
Audio	Inputs: 16 Channels Outputs: One (1) Channel
Two-way Talk	Input: One (1) BNC Microphone Connector Output: One (1) BNC Microphone Connector

Recording

Compression		Smart H.264+, H.264, MJPEG
Resolution		1080p, 720p, 960H, D1, HD1, BCIF, CIF, QCIF
Record Rate		
	Main Stream	1080p, 720p, 960H, D1, HD1, BCIF, CIF, QCIF at 30 fps
	Sub Stream	D1, CIF, QCIF at 30 fps
Bit Rate		1 Kbps to 6144 Kbps per Channel
Record Mode		Manual, Schedule (Regular, Continuous), MD (Video Detection: Motion Detection, Video Loss, Tampering), Alarm, Stop
Record Interval		1 to 60 minutes (default: 60 minutes) Pre-record: 1 to 30 s Post-record: 10 to 300 s

Network

Interface	Two (2) RJ-45 Ports (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 for Dahua IP Cameras, DVRs, NVS)
Maximum User Access	128 Users
Mobile Operating System	IOS and Android
Interoperability	ONVIF 2.4.1, CGI Conformant

Electrical

Power Supply	100 to 240 VAC, 50/60 Hz
Power Consumption	< 35 W, without HDD

Environmental

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

Construction

Dimensions	2U, 440.0 mm x 455.10 mm x 94.90 mm (17.30 in. x 17.90 in. x 3.70 in.)
Net Weight	6.50 kg (14.32 lb), without HDD
Gross Weight	9.80 kg (21.60 lb)
Installation	Desktop or Rack-mount Installation

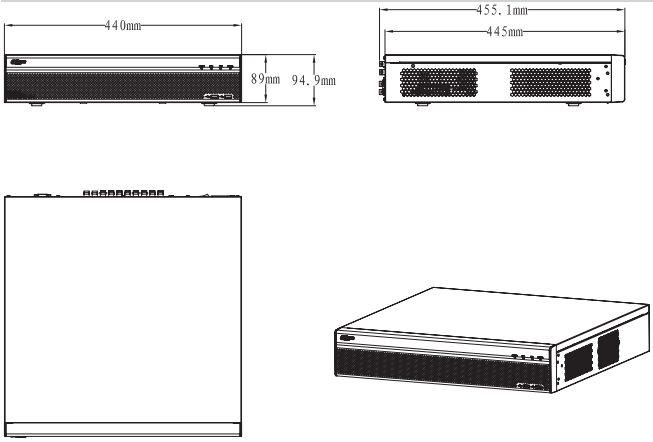
Certifications

Safety	Complies with UL Standard
Electromagnetic Compatibility (EMC)	FCC: VFHKEM1612001678IT CE: SHEM161100752901ITC

Intelligence[1]

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 (available on 1 analog channel)	
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.
Advanced Features (available on the first analog channel)	
Facial Detection	Detects and captures a snapshot of human face in a defined area within a scene.

Dimensions



Ordering Information

Type	Part Number	Description
16-channel XVR	X38A3S	16-channel Penta-brid, 1080p, 2U, HDCVI Digital Video Recorder
	X38A3S2	16-channel Penta-brid, 1080p, 2U, 2 TB HDCVI Digital Video Recorder
	X38A3S4	16-channel Penta-brid, 1080p, 2U, 4 TB HDCVI Digital Video Recorder
	X38A3S6	16-channel Penta-brid, 1080p, 2U, 6 TB HDCVI Digital Video Recorder
	X38A3S12	16-channel Penta-brid, 1080p, 2U, 12 TB HDCVI Digital Video Recorder
	X38A3S24	16-channel Penta-brid, 1080p, 2U, 24 TB HDCVI Digital Video Recorder

1. The IVS features are operational only when the additional IP channel feature is not active. The XVR supports only IVS or the additional IP channel inputs, both features cannot be in use simultaneously.

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