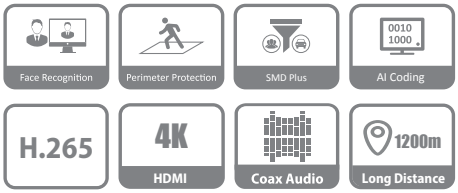
XVR708S-16-4K-I2

16 Channel Penta-brid 4K 2U 8HDDs WizSense Digital Video Recorder

- H.265+/H.265 dual-stream video compression
- Supports HDCVI/AHD/TVI/CVBS/IP video inputs
- Max 32 channels IP camera inputs, each channel up to 12MP; Max 128 Mbps incoming bandwidth
- Up to 6 channels video stream (analog channel) perimeter protection
- Up to 16 channels video stream (analog channel) SMD plus
- Up to 6 channels video stream (analog channel) human face recognition
- IoT & POS functionalities



Launched by Diamond Technology, WizSense is a series of AI products and solutions that adopt independent AI chip and deep learning algorithm. It focuses on human and vehicle with high accuracy, enabling users to fast act on defined targets. Based on Diamond's advanced technologies, WizSense provides intelligent, simple and inclusive products and solutions.

Series Overview

Diamond Technology, a world-leading video-centric smart IoT solution and service provider, debuted its new XVR series, XVR7000-4K-I2 featuring full-channel SMD Plus to benefit customers from AI upgrade. The series are designated to reduce false-alarm rates and human surveillance costs, thus bringing great value to customers in search of products with accurate human/vehicle alarm to raise the security level of various indoor and outdoor facilities.

Functions

Real Time Face Recognition

Video stream real time face recognition. Facial attributes analysis features including gender, age, expression, glasses, moustache, mouth mask. Identify people and also capture, record faces with metadata. Facial feature filtering while real time display, only show faces with target features.

*The Face Recognition is conflicted with SMD Plus and Perimeter Protection

Perimeter Protection

Automatically filtering out false alarms caused by animals, rustling leaves, bright lights, etc. Enables system to act secondary recognition for the targets. Improving alarm accuracy.

SMD Plus

SMD Plus, referred to as Smart Motion Detection Plus, which is an upgrading version of SMD that greatly improves the alarm accuracy by loading deep-learning algorithm. It analyzes person and vehicle shapes based on motion detection and send alarms only when person and vehicle intrudes.

AI Coding

Compared with H.265, AI codec can reduce up to 50% bit rate and storage requirements while have no loss of decoding compatibility, providing clear human and vehicle details.

Smart H.265+

Smart Codec, H.265+ can reduce up to 90% bit rate and storage requirements compared with H.264 without having to invest in new cameras.

HDCVI/AHD/TVI/CVBS Auto-detect

The XVR can auto recognize the signal of front-camera without any setting. It makes operation more friendly and convenient.

Coaxial Audio/Upgrade/Alarm

The integrated design can reduce wiring troubles which makes it much more cost-effective and convenient for installation.

Long Distance Transmission

The HDCVI system supports long distance transmission over coaxial cable and UTP, max. 700m for 4K/4MP, 800m for 1080P and 1200m for 720P.

AI Search

Extract and classify person and vehicles from massive video data, easy for end users to trace historical information and analyze. Person & Vehicle optional for playback to achieve quick target search, saving event retrieval time.

Technical Specification

System

Main Processor	Embedded Processor
Operating System	Embedded LINUX

Perimeter Protection

Performance	6 channels, 10 IVS for each channel
Object classification	Human/Vehicle secondary recognition for tripwire and intrusion
AI Search	Search by target classification (Human, Vehicle)

Face Recognition

Performance	6 channels, max 12 face pictures/sec processing
Stranger Mode	Detect strangers' faces (not in device's face database). Similarity threshold can be set manually.
AI Search	Up to 8 target face images search at same time, similarity threshold can be set for each target face image.
Database Management	Up to 10 face databases with 20,000 face images in total. Name, gender, birthday, address, certificate type, cerificate No., countries&regions and state can be added to each face picture.
Database Application	Each database can be applied to video channels independently .
Trigger Events	Buzzer, Voice Prompts, Email, Snapshot, Recording, Alarm Out, PTZ Activation, etc.

SMD Plus

Performance	16 channels
AI Search	Search by target classification (Human, Vehicle)

Video and Audio

Analog Camera Input	16 channels, BNC
HDCVI Camera Input	4K, 6MP, 5MP, 4MP, 1080P@25/30fps, 720P@50/60fps, 720P@25/30fps
AHD Camera Input	4K, 5MP, 4MP, 3MP, 1080P@25/30, 720P@25/30fps
TVI Camera Input	4K, 5MP, 4MP, 3MP, 1080P@25/30, 720P@25/30fps
CVBS Camera Input	PAL/NTSC
IP Camera Input	16+16 channels, each channel up to 12MP
Audio In/Out	16/1, BNC
Two-way Talk	1 Mic In, 1 Mic Out, BNC

Recording

Compression	AI Coding/H.265+/H.265/H.264+/H.264
Resolution	4K, 6MP, 5MP, 4K-N, 4MP, 3MP, 1080P, 720P, 960H, D1, CIF
Record Rate	Main stream: 4K (1fps–15fps); 6MP(1fps–20fps); 5MP(1fps–25fps); 4K-N/4MP/3MP/1080P/720P/960H/D1/CIF (1fps–25/30fps) Sub steram:960H(1fps–15fps); D1/CIF(1fps–25/30fps)
Bit Rate	32 Kbps–8192 Kbps Per Channel
Record Mode	Manual, Schedule (General, Continuous), MD (Video detection: Motion Detection, Video Loss, Tampering), Alarm, Stop
Record Interval	1 – 60 min (default: 60 min), Pre-record: 1 s–30 s, Post-record: 10 s–300 s
Audio Compression	G.711A, G.711U, PCM
Audio Sample Rate	8 KHz, 16 bit Per Channel
Audio Bit Rate	64 Kbps Per Channel

Display

Interface	2 HDMI, 1 VGA, 1 TV
Resolution	HDMI 1:3840×2160, 1920×1080, 1280×1024, 1280×720 HDMI2/VGA: 1920×1080, 1280×1024, 1280×720
Multi-screen Display	When IP extension mode not enabled: 1/4/8/9/16 When IP extension mode enabled: 1/4/8/9/16/25/36
OSD	Camera title, Time, Video loss, Camera lock, Motion detection, Recording

Network

Interface	2 RJ-45 Ports (1000 Mbps)
Network protocol	HTTP, HTTPS, TCP/IP, IPv4/IPv6, Wi-Fi, 3G/4G, SNMP, UPnP, RTSP, UDP, SMTP, NTP, DHCP, DNS, IP Filter, PPPoE,DDNS, FTP, Alarm Server, P2P,IP Search (Supports Diamond IP camera, DVR, NVS, etc.)
Max. User Access	128 users
Smart Phone	iPhone, iPad, Android
Interoperability	ONVIF 16.12, CGI Conformant

Video Detection and Alarm

Trigger Events	Recording, PTZ, Tour, 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
Relay Output	6

Playback and Backup

Playback	1/4/9/16
Search Mode	Time /Date, Alarm, MD and Exact Search (accurate to 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, Digital Zoom
Backup Mode	USB Device/Network

Storage

Internal HDD	8 SATA Ports, up to 10TB capacity for each disk
eSATA	1 Port

Auxiliary Interface

USB	4 USB Ports (2 USB 2.0 , 2 USB 3.0)
RS485	1 Port, for PTZ Control
RS232	1 Port, For PC Communication & Keyboard

Electrical

Power Supply	AC100V-240V, 50/60Hz
Power Consumption (Without HDD)	<30W

Construction

Dimensions	2U, 440 mm × 456 mm × 95 mm (17.32'' × 17.94'' × 3.73'')
Net Weight (without HDD)	6.9 kg (15.2 lb)
Gross Weight	9.5 kg (20.9 lb)
Installation	Desktop/racket mounted

Environmental

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

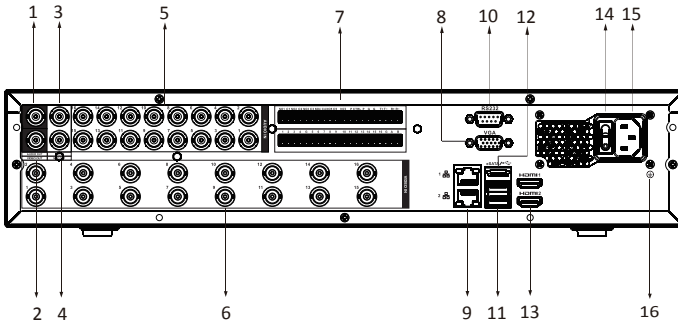
Third-party Support

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

Certifications

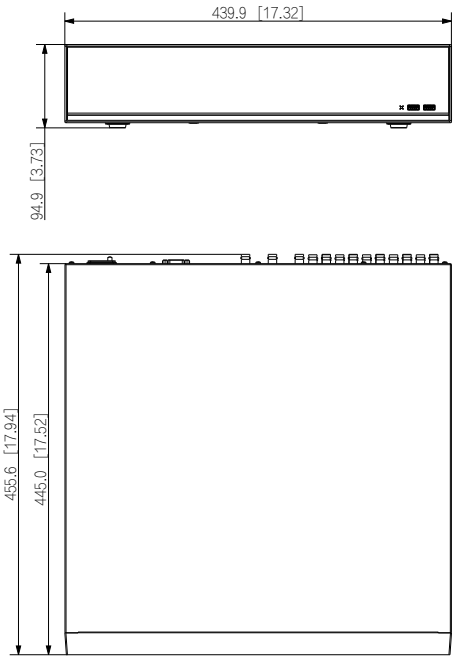
Certifications	FCC: Part 15 Subpart B CE: CE-LVD: EN 60950-1/IEC 60950-1 CE-EMC: EN 61000-3-2, EN 61000-3-3, EN 55032, EN 50130, EN 55024

Panels



1	Audio Out	2	Video Out
3	Mic In	4	Mic Out
5	Audio In	6	Video In
7	Alarm Input/Output	8	VGA Port
9	Network Ports	10	RS-232 Port
11	USB Ports	12	eSATA Port
13	HDMI Ports	14	Power Switch
15	Power Input	16	Ground

Ordering Information

Type	Model	Description
16 Channel WizSense XVR	XVR708S-16-4K-I2	2U WizSense Digital Video Recorder

Dimensions (mm[inch])