# Eyemax 16CH AcuPick AI NVR System, 16 PoE

AcuPick • WizSense AI • 16 PoE • ≤ 130W PoE Output (AF/AT) • ePoE on Port 1-8 • 384Mbps In/Outgoing Bandwidth • Face Recognition • Face Detection • Perimeter Protection • Video Metadata • Heat Map • ANPR • SMD Plus • 2 × SATA • 1U

## Introduction

WizSense is a series of AI products using an independent AI chip and deep learning algorithm. It focuses on high-accuracy human and vehicle detection, enabling quick action on defined targets. WizSense offers intelligent, simple, and inclusive solutions.

## Overview

The NVR offers high performance and advanced recording technology for IP video surveillance. Its powerful processor ensures high access, forwarding bandwidth, and strong decoding capabilities for smooth streaming. With a built-in AI chip and advanced deep learning algorithms, it supports high-precision face

recognition and perimeter protection, enhancing event response and video interactivity. Compatible with numerous third-party devices, it is an excellent solution for surveillance systems with Video Management Software (VMS).

## AcuPick

This leading search technology uses front-end and back-end intelligence to quickly and accurately locate targets in vast video data.

## Perimeter Protection

Automatically filters false alarms from animals, leaves, and bright lights. Enables secondary target recognition, improving alarm accuracy.

## Face Detection

Face detection identifies human faces in video using deep learning algorithms. It supports detection, tracking, optimization, and capturing, outputting the best face snapshot.

## Face Recognition

Face recognition technology extracts features from captured faces and compares them to a face database to identify individuals.

## Heat Map by Camera

Heat map technology displays crowd density and appearance probability using color-coded statistics of people over time and space.

## ANPR by Camera

Using deep learning algorithms, ANPR technology recognizes vehicle license plates with ANPR cameras. It supports blocklist/allowlist modes and searches for target vehicles in recorded video.

## SMD Plus

Smart Motion Detection technology uses intelligent algorithms to categorize targets and filter out non-essential motion detection alarms, ensuring effective and accurate alerts.

## FEATURES

- Smart H.265+/H.265/Smart H.264+/H.264/MJPEG decoding format.
- Max. decoding capability: 32 × 1080p@30 fps or 16 × 4MP@30 fps
- Max. 384 Mbps incoming/recording/outgoing bandwidth.
- Support AcuPick with Max. 16-Channel.
- Support N+M cluster.
- AI by recorder: 2-channel face detection and recognition, 4-channel perimeter protection, and 8-channel SMD Plus.
- AI by camera: Face detection and recognition, perimeter protection, SMD Plus, metadata, ANPR, and people counting.
- Security baseline 2.3

## SPECIFICATIONS

| **System** | |
|---|---|
| Main Processor | Industrial-grade processor |
| Operating System | Embedded Linux |
| Operating Interface | Web, Local GUI |
| **AI** | |
| AI by Recorder | Face detection; face recognition; perimeter protection; SMD Plus |

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|---|---|
| AI by Camera | Face detection; face recognition; video metadata (human, motor vehicles, and non-motor vehicles); perimeter protection; SMD Plus; stereo analysis; crowd distribution; people counting; ANPR; vehicle density; heat map |
| AcuPick AI by Camera + Recorder | Max. 16-channel, 1 combined event per channel / s |
| **Perimeter Protection** | |
| Perimeter Performance AI by Recorder (Number of Channels) | 4 channels, 10 IVS rules for each channel |
| Perimeter Performance of AI by Camera (Number of Channels) | 16 channels |
| **Face Detection** | |
| Face Attributes | Gender; age group; glasses; expressions; face mask; beard |
| Face Detection Performance of AI by Recorder (Number of Channels) | 2 channels (up to 12 face images/s each channel) |
| Face Detection Performance of AI by Camera (Number of Channels) | 16 channels |
| **Face Recognition** | |
| Face Database Capacity | Up to 20 face databases with 20,000 images, with a total capacity of 2.5 G. Name, gender, birthday, address, credential type, credential No., countries & regions and state can be added to each face image. |
| Face Recognition Performance of AI by Recorder (Number of Channels) | 1. 16-channel FD (by camera) + FR (by recorder), image stream: 16 face images / s<br>2. 2-channe FD (by recorder) + FR (by recorder), video stream: 12 face images / s |
| Face Recognition Performance of AI by Camera (Number of Channels) | 16 channels |
| **SMD Plus** | |
| SMD Plus by Recorder | 8 channels: Secondary filtering for human and motor vehicle , reducing false alarms caused by leaves, rain and lighting condition change |
| SMD Plus by Camera | 16 channels |
| **Video Metadata** | |
| Metadata Performance of AI by Camera (Number of Channels) | 8 channels |

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|---|---|
| Human Attributes | Top color, top type, bottom color, bottom type, hat, bag, age, gender and umbrella |
| Motor Vehicle Attributes | License plate, plate color, vehicle body, vehicle model, vehicle logo, calling, seatbelt, vehicle interior, vehicle registration location. |
| Non-motor Vehicle Attributes | Vehicle model, vehicle color, number of persons, helmet. |
| **Vehicle License Plate Comparison** | |
| ANPR by Camera (Number of Channels) | 8 channels |
| License Plate Database Capacity | 1. Create up to 20,000 plate numbers.<br>2. Blocklist and allowlist |
| **Audio and Video** | |
| Access Channel | 16 |
| Network Bandwidth | AI disabled: 384 Mbps incoming, 384 Mbps recording and 384 Mbps outgoing<br>AI enabled: 200 Mbps incoming, 200 Mbps recording and 200 Mbps outgoing |
| Resolution | 32 MP; 24 MP; 16 MP; 12 MP; 8 MP; 5 MP; 4 MP; 1080p;720p; D1; CIF; QCIF |
| Decoding Capability | AI disabled:<br>2-channel 32 MP@25 fps; 2-channel 24 MP@25 fps; 4-channel 16 MP@30 fps; 5-channel 12 MP@30 fps; 8-channel 8 MP@30 fps; 12-channel 5 MP@30 fps; 16-channel 4 MP@30 fps<br>AI enabled:<br>1-channel 32 MP@25 fps; 1-channel 24 MP@25 fps;<br>2-channel 16 MP@30 fps; 4-channel 12 MP@30 fps; 6-channel 8 MP@30 fps; 8-channel 5 MP@30 fps; 12-channel 4 MP@30 fps |
| Video Output | 1 VGA, 1 HDMI<br>VGA:1920 × 1080, 1280 × 1024, 1280 × 720<br>HDMI:3840 × 2160, 1920 × 1080, 1280 × 1024, 1280 × 720<br>Heterogeneous video source output for HDMI and VGA |
| Multi-screen Display | Main screen: 1 / 4 / 8 / 9 / 16 Sub screen: 1 / 4 / 8 / 9 / 16 |
| Third-party Camera Access | ONVIF; Panasonic; Sony; Axis; Arecont; Pelco; Canon; Samsung |
| **Compression Standard** | |
| Video Compression | Smart H.265+; H.265; Smart H.264+; H.264; MJPEG |
| Audio Compression | G.711a; G.711u; PCM; G726 |
| **Network** | |

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|---|---|
| Network Protocol | HTTP; HTTPS; TCP / IP; IPv4 / IPv6; UDP; SNMP; NTP; DHCP; DNS; SMTP; UPnP; IP Filter; PPPoE; FTP; DDNS; Alarm Server; IP Search (Supports Dahua IP camera, DVR, NVS, etc.); Multicast; P2P; Auto Registration; iSCSI |
| Mobile Phone Access | iOS; Android |
| Interoperability | ONVIF 22.12 (Profile T; Profile S; Profile G); CGI; SDK |
| Browser | Chrome;IE;Safari;Edge;Firefox |
| **Recording Playback** | |
| Multi-channel Playback | Up to 16 channels |
| Record Mode | General, motion detection; intelligent; alarm; POS |
| Backup Method | USB device and network |
| Playback Mode | Instant playback, general playback, event playback, tag playback, smart playback (face and motion detection) |
| **Storage** | |
| Disk Group | Yes |
| **Alarm** | |
| General Alarm | Motion detection; privacy masking; local alarm |
| Anomaly Alarm | Camera offline; storage error; disk full; IP conflict; MAC conflict; login lock; abnormal behavior of fan; cybersecurity exception |
| Intelligent Alarm | Face detection; perimeter protection; face recognition; video metadata (human, motor vehicles, and non-motor vehicles); SMD Plus; stereo analysis; crowd distribution; people counting; ANPR; vehicle density; heat map |
| Alarm Linkage | Record; snapshot (panoramic); local alarm output; IPC external alarm output; access controller; audio; buzzer; log, preset; email |
| **Port** | |
| Audio Input | 1-channel RCA |
| Audio Output | 1-channel RCA |
| Alarm Input | 4 channels |
| Alarm Output | 2 channels |
| HDD Interface | 2 SATA ports, each disk can contain up to 20 TB. This limit varies depending on the environment temperature. |
| RS-232 | 1 |

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| RS-485 | 1 |
| USB | 2 (1 front USB 2.0 port, 1 rear USB 3.0 port) |
| HDMI | 1 |
| VGA | 1 |
| Network Port | 1(10/100/1000 Mbps Ethernet port, RJ-45) |
| PoE Port | 16 ports, 10 / 100 Mbps, IEEE 802.3 af / at, 1 ~ 8 ports support ePoE |
| **General** | |
| Power Supply | 100 ~ 240 VAC, 47 ~ 63 Hz |
| Power Consumption | Total output of NVR is ≤ 10W (without HDD)<br>Total output power of PoE is 130W, the maximum output power of a single port is 25.5W |
| Net Weight | 2.66 kg (5.86 lb) |
| Gross Weight | 3.82 kg (8.42 lb) |
| Product Dimensions | 375.0 mm × 329.3 mm × 53.0mm (14.76" × 12.96" × 2.09") (W × D × H) |
| Packaging Dimensions | 449.0 mm × 170.0 mm × 421.0 mm (17.68" × 6.69" × 16.57") (W × D × H) |
| Operating Temperature | –10 °C to +55 °C (14 °F to +131 °F) |
| Storage Temperature | –20 °C to +60 °C (–4 °F to +140 °F) |
| Operating Humidity | 10% ~ 93% (RH) |
| Installation | Rack or desktop |
| Certifications | FCC: 47 CFR FCC Part15, SubpartB, Class A<br>CE-EMC: EN 55032: 2015+A1: 2020; EN IEC 61000 ~ 3-2: 2019+A1: 2021; EN 61000 ~ 3-3:2013+A1: 2019+A2: 2021;<br>EN 55035: 2017+A11: 2020; EN 50130 ~ 4: 2011+A1: 2014<br>CE-LVD: EN 62368 ~ 1: 2014 |