



## V Series

# FD9387-EHTV-V3 (7-22 mm)

5MP Outdoor Dome AI Camera



## Technical Specifications

| System Information |                                 |
|--------------------|---------------------------------|
| CPU                | Multimedia SoC (System-on-Chip) |
| Flash              | eMMC 8 GB                       |
| RAM                | DDR4 2 GB                       |

  

| Camera Specifications   |   |
|-------------------------|---|
| Image Sensor            | 1/2.8" Progressive CMOS   |
| Max. Resolution         | 2560x1920 (5MP)   |
| Lens Type               | Motorized, Vari-focal, Remote Focus   |
| Focal Length            | f= 7 ~ 22 mm  |
| Aperture                | F1.7(W) ~ F2.9(T)   |
| Iris Type               | P-iris  |
| Field of View           | 39.3° ~ 15.5° (Horizontal)<br>28.8° ~ 11.6° (Vertical)<br>50.8° ~ 19.4° (Diagonal)      |
| Shutter Time            | 1/5 sec. to 1/32,000 sec.   |
| WDR Technology          | WDR Pro   |
| Day/Night               | Yes   |
| Removable IR-cut filter | Yes   |
| Illuminators            | Built-in IR illuminators, effective up to 50 meters with Smart IR III, IR LED*4 (50IRE) |
| Minimum Illumination    | 0.035 lux @ F1.7 (Color)<br><0.005 lux @ F1.7 (B/W)<br>0 lux with IR illumination on    |

|                               |   |
|-------------------------------|---|
| Pan Range                     | ±175°   |
| Tilt Range                    | 80°   |
| Rotation Range                | ±175°   |
| Pan/Tilt/Zoom Functionalities | ePTZ: 48x digital zoom (4x on IE plug-in, 12x built-in)   |
| Storage                       | Seamless Recording to MicroSD/SDHC/SDXC card (1TB Capacity Supported) and recording to network-attached storage (NAS) |
| Built-in Installation Aids    | Remote focus, remote zoom, Micro USB* , pixel calculator<br>*Requires Wi-Fi dongle and Micro B converter              |

## Video

|                    |   |
|--------------------|---|
| Compression        | H.265, H.264, MJPEG   |
| Maximum Frame Rate | 30 fps @ 2560x1920 (WDR Pro on)<br>30 fps @ 2560x1440 (WDR Pro on)<br>60 fps @ 1920x1080 (WDR Pro off)  |
| Maximum Streams    | 3 video streams (Up to 8 configurable profiles)   |
| Main Stream        | 30fps @ 2560x1920, 1600x1200, 1280x960, 640x480 (4:3);<br>30fps @ 2560x1440, 1920x1080, 1600x904, 1280x720,1360x768, 640x360 (16:9)<br>60 fps @ 1920x1080, 1600x904, 1360x768, 1280x720, 640x360 (16:9)   |
| 2nd Stream         | 30fps @ 2560x1920, 1600x1200, 1280x960, 640x480 (4:3);<br>30fps @ 2560x1440, 1920x1080, 1600x904, 1280x720,1360x768, 640x360 (16:9)<br>60 fps @ 1920x1080, 1600x904, 1360x768, 1280x720, 640x360 (16:9)   |
| 3rd Stream         | 30fps @ 1280x960, 640x480 (4:3);<br>30 fps @ 1280x720, 640x360 (16:9);<br>60 fps @ 1280x720, 640x360 (16:9)   |
| S/N Ratio          | 70 dB   |
| Dynamic Range      | 120 dB  |
| Video Streaming    | Adjustable resolution, quality and constant bit rate control, Smart Stream III  |
| Image Settings     | <p>General settings<br/>video title and time stamp overlay, video orientation (flip, mirror, rotation), day/night settings</p> <p>Illuminators<br/>illuminators, anti-overexposure, VCA-based Smart IR III</p> <p>Image settings<br/>white balance, image adjustment (brightness, contrast, saturation, sharpness, gamma curve), defog, 3DNR, EIS (built-in gyro sensor), scene mode (auto, deblur)</p> <p>Exposure<br/>BLC, HLC, exposure control (exposure level, iris adjustment, exposure time, gain control, iris mode), AE speed adjustment, WDR</p> <p>Focus<br/>zoom, focus</p> <p>Privacy mask<br/>pixel calculator<br/>Scheduled profile settings</p> |

## Audio

|                  |  |
|------------------|--|
| Audio Capability | Two-way audio (Full duplex)  |
| Compression      | G.711, G.726, MPEG-2 AAC-LC  |
| Interface        | Built-in microphone<br>External microphone Input<br>External line output |
| Effective Range  | 5 meters   |

| Network   |   |
|-----------|---|
| Users     | Live viewing for up to 10 clients   |
| Security  | Access list, Account block , Audit log, Configurable password strength protection, CSRF protection, Digest authentication, HTTPS , IEEE 802.1x, Secure boot, Session timeout, Signed firmware, Trend Micro IoT Security (Brute force attack event, Cyberattack event, Quarantine event), User access log, User account management |
| Protocols | 802.1X, ARP, Bonjour, CIFS/SMB, DDNS, DHCP, DNS, FTP/SFTP, HTTP/HTTPS, ICMP, IGMPv3, IPv4, IPv6, NTP, PPPoE, QoS (CoS/DSCP), RTSP/RTP/RTCP, SMTP, SNMP, SSL, TCP/IP, TLS 1.2/1.3, UDP, UPnP   |
| Interface | 10 Base-T/100 Base-TX Ethernet<br>*It is highly recommended to use standard CAT5e & CAT6 cables which are compliant with the 3P/ETL standard.   |
| ONVIF     | Profile G, S, T, M supported, specification available at <a href="http://www.onvif.org">www.onvif.org</a>   |

| AI Analytics                       |   |
|------------------------------------|---|
| Compute Capability                 | SoC with built-in hardware deep learning accelerator  |
| Vision Object Analytics            | Object Detection<br>People, Vehicle (4-wheeled, 2-wheeled), Human / Vehicle Bestshot, Path Extraction<br><br>Attribute Extraction<br>People (gender, clothing color, bag, hat), Vehicle (bike, bus, car, motorcycle, truck, color)<br><br>Human face Bestshot, Re-Search Extraction   |
| Application                        | Deep Learning VCA (Smart Motion Detection, Smart VCA)<br>Smart VCA - Group 1<br>Smart Motion Detection (Five-window video motion detection, People detection, Vehicle detection, Time filter), Smart VCA (Intrusion detection, Loitering detection, Line crossing detection, face detection)<br><br>Smart VCA - Group 2<br>Unattended object detection, Missing object detection, Crowd detection |
| Application available with license | Smart VCA - Group 3<br>Running detection, Parking Violation Detection, Restricted Zone Detection<br><br>*Support for more analytic applications and free trial, please visit VIVOTEK website.   |
| AI-powered Image Enhancement       | Smart IR III  |
| RealSight Engine                   | Smart IR III, Deblur, WDR, White Balance, Exposure Control  |

| Solution Integration   |   |
|------------------------|---|
| VADP Package           | Trend Micro IoT Security (3-year free trial)          |
| Video Motion Detection | Motion Detection (Five-window video motion detection) |

| Alarm and Event |   |
|-----------------|---|
| Event Trigger   | Audio detection, camera tampering detection, cybersecurity events (brute force attack event, cyberattack event, quarantine event), digital input, manual trigger, motion detection, periodical trigger, recording notification, SD card life expectancy, shock detection, system boot |
| Event Action    | Event notification via audio clip, camera link, digital output, email, HTTP, FTP/SFTP, NAS server, SD card<br>File upload via email, HTTP, FTP/SFTP, NAS server, SD card  |

## General

|                       |   |
|-----------------------|---|
| Connectors            | <p>Default I/O</p> <ul style="list-style-type: none"> <li>RJ-45 cable connector for 10/100 Mbps PoE network connection</li> <li>Audio line input</li> <li>Audio line output</li> <li>DC 12V power input</li> <li>Digital input*1</li> <li>Digital output*1 (12V, 50mA)</li> <li>Micro USB</li> </ul> <p>Module I/O (AO-011)*</p> <ul style="list-style-type: none"> <li>Digital input *1</li> <li>Digital output *1 (12V, 50mA)</li> <li>AC 24V power input</li> </ul> <p>*Requires extension I/O module kit (AO-011 I/O Kit for dome cameras)</p>                |
| LED Indicator         | System power and status indicator   |
| Power Input           | AC 24V*, DC 12V, IEEE 802.3af PoE Class 0 (Power Redundancy)<br>*Requires extension I/O module kit (AO-011)   |
| Power Consumption     | <p>PoE: Max. 12.95W/ 10.05W (IR on/off)</p> <p>DC 12V: Max. 14.4W/ 11.5W (IR on/off)</p> <p>AC 24V*: Max. 12W/ 9.1W (IR on/off)</p>   |
| Dimensions            | ø 173.6 x 122.6 mm  |
| Weight                | 1.30 kg   |
| Certifications        | <p>EMC</p> <p>CE (EN 55032/EN 55035 Class B), FCC (FCC Part 15 Subpart B Class B), UKCA (BS EN 55032/BS EN 55035 Class B), RCM (AS/NZS CISPR 32 Class B), VCCI (VCCI-CISPR 32 Class B), IC (ICES-003 Issue 7)</p> <p>Safety</p> <p>UL (UL 62368-1), CB (IEC/EN 62368-1, IEC/EN 60950-22, IEC/EN 62471), LVD, (EN 62368-1), UKCA (BS EN IEC 62368-1)</p> <p>Environment</p> <p>IK10+ (IEC 62262), IP66/67 (IEC 60529), NEMA (NEMA 250 Type 4X), IEC 60068-2-11, IP6K9K (ISO 20653)</p> <p>IA</p> <p>BIS (IS 13252), BSMI (EMC: CNS 13438, Safety: CNS 14336-1)</p> |
| Operating Temperature | <p>Starting Temperature:</p> <p>-30°C ~ 60°C (-22°F ~ 140°F)</p> <p>Working Temperature:</p> <p>-40°C ~ 60°C (-40°F ~ 140°F) (IR off)</p> <p>-40°C ~ 50°C (-40°F ~ 122°F) (IR on)</p>   |
| Humidity              | 98% RH (non-condensing)   |

## System Requirements

|                  |   |
|------------------|---|
| Operating System | Microsoft Windows 10/8/7<br>Mac 10.12 (Chrome only) |
| Web Browser      | Chrome 58.0 or above<br>Internet Explorer 11        |
| Other Players    | VLC: 1.1.11 or above                                |

## Included Accessories

|                  |  |
|------------------|--|
| Packing Contents | Quick installation guide, product labels, alignment sticker, L-shaped wrench, screw pack, waterproof accessory pack, sunshield, conduit bracket, I/O cable |
|------------------|--|

## DORI (EN 62676-4 Standard)

|                         |  |
|-------------------------|--|
| Detection (25PPM/ 8PPF) | <p>Wide: 157.3 m (516.0 ft)</p> <p>Tele: 378.2 m (1240.6 ft)</p> |
|-------------------------|--|

|                                |   |
|--------------------------------|---|
| Observation (63PPM/ 19PPF)     | Wide: 62.7 m (205.6 ft)<br>Tele: 151.3 m (496.2 ft) |
| Recognition (125PPM/ 38PPF)    | Wide: 31.4 m (103.2 ft)<br>Tele: 75.9 m (249.1 ft)  |
| Identification (250PPM/ 76PPF) | Wide: 15.7 m (51.4 ft)<br>Tele: 37.9 m (124.3 ft)   |