



V Series

FD9399-EHTV

8MP Outdoor Dome Camera



Technical Specifications

System Information	
CPU	Multimedia SoC (System-on-Chip)
Flash	8 GB
RAM	2 GB
Camera Specifications	
Image Sensor	1/1.8" Progressive CMOS
Max. Resolution	3840x2160 (8MP)
Lens Type	Motorized, Vari-focal, Remote Focus
Focal Length	f = 4.3~9.8mm
Aperture	F1.6 ~ F2.6
Iris Type	P-iris
Field of View	110.4° ~ 45.1° (Horizontal) 57.9° ~ 25.4° (Vertical) 133.9° ~ 51.8°(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 40 meters with Smart IR, IR LED*4
Minimum Illumination	0.02 lux @ F1.6 (Color) <0.005 lux @ F1.6 (B/W) 0 lux with IR illumination on
Pan Range	350°
Tilt Range	80°
Rotation Range	350°
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, pixel calculator

Video	
Compression	H.265, H.264, MJPEG
Maximum Frame Rate	30 fps @ 3840x2160 (8MP)
Maximum Streams	3 video streams (Up to 8 configurable profiles)
Main Stream	30fps @3840x2160, 3328x1872, 3072x1728, 2688x1520, 2560x1440, 1920x1080, 1280x720, 640x360 (16:9)
2nd Stream	30fps @1920x1080, 1280x720, 640x360 (16:9)
3rd Stream	30 fps @ 1280x720, 640x360 (16:9)
S/N Ratio	54 dB
Dynamic Range	120 dB
Video Streaming	Adjustable resolution, quality and constant bit rate control, Smart Stream III
Image Settings	<p>General settings video title and time stamp overlay, video orientation (flip, mirror, rotation), day/night settings</p> <p>Illuminators illuminators, anti-overexposure, VCA-based Smart IR III</p> <p>Image settings white balance, image adjustment (brightness, contrast, saturation, sharpness, gamma curve), defog, 3DNR, EIS (built-in gyro sensor), scene mode (auto, deblur)</p> <p>Exposure BLC, HLC, exposure control (exposure level, iris adjustment, exposure time, gain control, iris mode), AE speed adjustment, WDR</p> <p>Focus zoom, focus</p> <p>Privacy mask pixel calculator Scheduled profile settings</p>

Audio	
Audio Capability	Two-way audio (Full duplex)* * Requires AO-015 cable
Compression	G.711, G.726, MPEG-2 AAC-LC
Interface	Built-in microphone External microphone Input* External line output* * Requires AO-015 cable
Effective Range	5 meters

Network	
Users	Live viewing for up to 10 clients
Security	Access list, CSRF protection, digest authentication, HTTPS , IEEE 802.1x, Password protection, secure boot, signed firmware, Trend Micro IoT Security (brute force attack event, cyberattack event, quarantine event), user access log, user account management, Built-in FIPS 140-2 Level 2 certified Trusted Platform Module (TPM)

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 (RJ-45) *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 www.onvif.org

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

Solution Integration	
VADP Package	Trend Micro (Default, 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 * Requires AO-015 cable
Event Action	Event notification via audio clip*, camera link, digital output*, email, HTTP, FTP/SFTP, NAS server, SD card File upload via email, HTTP, FTP/SFTP, NAS server, SD card *Requires AO-015 cable

General	
Connectors	RJ-45 cable connector for 10/100 Mbps Network/PoE connection Audio line input* Audio line output* Digital input: 1* Digital output *1 (DO+: 12V, 50mA; DO-: 30V, Open Drain, 1A)* * Requires AO-015 cable
LED Indicator	System power and status indicator
Power Input	IEEE 802.3af PoE Class 3

Power Consumption	Max. 12.4W/ 9.6W (IR on/off)
Dimensions	ø 134 x 116 mm
Weight	990 g
Certifications	<p>EMC CE (EN55032, EN55035 Class A), UKCA (BS EN 55032/BS EN 55035 Class A), FCC (FCC Part 15 Subpart B Class A), RCM (AS/NZS CISPR32 Class A), VCCI (VCCI-CISPR 32 Class A)</p> <p>IC (ICES-003 Issue 7, Class A) Safety UL (UL62368-1), CB (IEC/EN 62368-1, IEC/EN 62368-1, IEC/EN 62471)</p> <p>UKCA (BS EN IEC 62368-1) Environment NEMA (NEMA 250 Type 4X), IK10 (IEC 62262), IP66 (IEC 60529)</p> <p>IA BIS (IS 13252), BSMI (EMC: CNS 13438, Safety: CNS 14336-1)</p>
Operating Temperature	<p>Starting Temperature: -20°C ~ 50°C (-4°F ~ 122°F)</p> <p>Working Temperature: -35°C ~ 60°C (-31°F ~ 140°F) (IR off) -35°C ~ 50°C (-31°F ~ 122°F) (IR on)</p>
Humidity	98% RH (non-condensing)

System Requirements

Operating System	Microsoft Windows 10/8/7 Mac 10.12 (Chrome only)
Web Browser	Chrome 58.0 or above
Other Players	VLC: 1.1.11 or above

Included Accessories

Packing Contents	Quick installation guide, alignment sticker, screw pack, L-shaped wrench
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DORI (EN 62676-4 Standard)

Detection (25PPM/ 8PPF)	Wide: 88.1 m (289.2 ft) Tele: 197.6 m (648.2 ft)
Observation (63PPM/ 19PPF)	Wide: 35.0 m (114.9 ft) Tele: 77.9 m (255.7 ft)
Recognition (125PPM/ 38PPF)	Wide: 17.5 m (57.4 ft) Tele: 39.0 m (127.8 ft)
Identification (250PPM/ 76PPF)	Wide: 8.7 m (28.6 ft) Tele: 19.5 m (63.9 ft)