



Introducing the EOS-DMS-15 with gyro stabilisation

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EOS-DMS15-6307W Multi-sensor Smart Camera

Overview

The EOS-DMS15-6307W camera is based on 6th-generation uncooled infrared technology. It is designed for 24/7 surveillance, intelligent analysis and active defence. It incorporates a thermal module, an HD camera, an intelligent analysis module, a laser rangefinder and a high-precision motorised turret.

It replaces the human eye with infrared and laser sensors, the human brain with intelligent algorithms and deep learning, and intervenes actively via audible and visual alert systems. It combines detection, analysis and automatic response, and goes beyond the traditional model of human or technical security.

Key Features

- 24/7 operation in all weather conditions: multi-mode detection with intelligent thermal imaging, high-definition visible camera and laser night vision. Enables rapid search and detailed observation day and night.
- Support for image scaling, laser rangefinder (LRF) and multi-sensor integration.
- Advanced intelligence: hot spot and fire detection, temperature detection; intrusion detection, vehicle, boat and person recognition; target tracking and filtering; AR intelligent information fusion.
- Active defence: loudspeaker + flashing lights to deter intruders.
- Vertical movement: -90° to $+90^{\circ}$, horizontal: continuous 360° rotation, full 720° spatial coverage.
- Speed: horizontal from $0.01^{\circ}/s$ to $100^{\circ}/s$; vertical from $0.01^{\circ}/s$ to $80^{\circ}/s$; precise positioning with adaptive focusing.
- Self-diagnosis and automatic recovery: full lifecycle management, fault testing, power-off memory, remote restart and updates.
- Lightweight design: ≤ 10 kg, easy to install and maintain.
- Robust construction: high-strength aluminium alloy, quasi-spherical turret technology, IP67, rain and dustproof.



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Technical Specifications

- Model: EOS-DMS15-6307W
- Detection: Vehicles: 6,500 m | Humans: 2,500 m | Fire (2x2 m): 3,000 m
- Recognition: Vehicles: 1,800 m | Humans: 800 m

Thermal Camera

- Detector: Uncooled VOx focal plane array, 6th generation
- Wavelength: 7.5 to 14 μm
- NETD: 40 mK (@25°C, F1.0)
- Lens: 25–75 mm zoom or 75 mm fixed
- Resolution: 640 \times 512
- Field of view: from 24° \times 18° to 8° \times 6°
- Digital zoom: x1 to x8 continuously
- False-colour palette: 16 options (warm black/warm white)
- Dead pixel correction, sun protection, automatic or manual uniformity correction

Smart Features

- Fire detection: threshold adjustable across 255 levels, detection of 1 to 16 targets, hotspot tracking.
- Intelligent analysis: intrusion detection, line crossing, zone entry/exit, motion detection, gatherings, objects left or removed, person/face/vehicle detection, filtering by type, temperature or zone.
- Automatic tracking: support for single-scene, multi-scene, pan or alarm-triggered tracking.
- Intelligent information fusion: up to 512 analysis elements, integration of field of view angles, zoom, orientation, etc.
- Image fusion: 18 dual-spectrum fusion modes, support for picture-in-picture overlay.
- Alarm management: capture and transmission in the event of an alert.

Enhanced Features

- Passive distance measurement or optional laser rangefinder.
- Integrated, customisable audible and visual alarm.
- Connection to fire-fighting equipment.
- Diagnostics: detection of power cuts, IP conflicts, unauthorised access, SD card errors, video masking, and sun protection.
- Lifecycle management: recording of health status, operating time, temperature, mechanical wear



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- 2-axis gyroscopic stabilisation for ships and boats (DMS15 only).
- Data retention in the event of a power cut.
- Remote maintenance: restart, testing, remote updates.
- Full web access with remote configuration.

Interface and Power Supply

- Communication: 1 RJ45 Ethernet port, 2 alarm inputs, 1 alarm output, 1 audio input, 1 RS485 interface.
- Supported protocols: HTTP, HTTPS, FTP, SMTP, DNS, NTP, RTSP, TCP/IP, UDP, DHCP, ONVIF, GB28181.
- Development interface: HP-SDK available.
- Power supply: DC 9–36V, 220V mains adapter or battery; power consumption $\leq 40W$.

Environmental Adaptation

- Operating temperature: -30°C to $+60^{\circ}\text{C}$
- Humidity: $\leq 95\%$
- Protection rating: IP67, weatherproof, dustproof and splash-proof
- Salt spray resistance: no deterioration after 96 hours of exposure
- Electromagnetic compatibility: 6 kV surge protection, 8 kV static discharge (contact) / 15 kV (air).

Application scenarios

- Fire prevention: forests, natural areas, power lines, chemical sites, oil and gas pipelines.
- Surveillance of sensitive areas: ports, reserves, airports, motorways, borders, military sites, urban areas, oil platforms.
- Mobile surveillance: vehicles, ships, tripods, temporary installations.



EOS-DMS15 thermal imaging camera for boats with gyroscopic stabilisation

Thermal imaging system	<ol style="list-style-type: none"> 1. Detector: 6th-generation uncooled Vox detector 2. Wavelength: 8 to 14 μm 3. NETD: 40 mK (@25 °C F1.0) 4. Image enhancement: SDE digital image enhancement technology, enhances image detail, supports 255 thermal image enhancement settings 5. Pseudo-colour polarity: 16 types of pseudo-colour images, hot black/hot white 6. Image settings: automatic gain control (AGC), brightness, contrast 7. Digital zoom: 1.0 to 8.0\times continuous zoom, supports Eagle Eye overview 8. Measurement ruler: supports distance measurement ruler 9. Dead pixel correction: support for dead pixel correction function 10. Image correction: support for manual correction, background correction, automatic correction time interval, adjustable gamma correction settings 11. Bright light protection: support for protection against damage caused by sunlight 12. Non-uniformity correction: automatic/manual <p>Resolution 640*512 8X digital zoom, 3X continuous zoom</p>
Thermal imaging Detection range	<p>Medium-sized vessels (20 \times 5 m) 12 km, cars (4.6 m \times 2.3 m) 5 km, people (1.8 m \times 0.5 m) 2.5 km</p> <p>The detection range for a 2 \times 2 metre fire source can reach 3 km</p>
Thermal imaging Recognition range	<p>Medium-sized vessel (20 \times 5 m) 4.7 km, car (4.6 m \times 2.3 m) 1.8 km, person (1.8 m \times 0.5 m) 0.9 km</p>
Daytime camera system	<ol style="list-style-type: none"> 1. Ultra-low-light Starlight 1/1.8 CMOS 4.1 megapixels 2688 \times 1520 Minimum illumination: 0.0005 lux (colour)/0.0001 lux (black and white) 6.6–264 mm lens 40x zoom Autofocus 1. Image processing: white balance, electronic shutter, image stacking, backlight compensation, glare suppression, 2D/3D digital noise reduction, electronic stabiliser, wide dynamic range. 2. Day and night illumination: wide visible light spectral window from 0.4 to 0.75 μm and near-infrared spectral window from 0.8 to 0.95 μm, dual independent day and night illumination window, improved signal-to-noise ratio of imaging light and stray light 3. Support for electronic and optical fog penetration.
Visible light camera detection	<p>Medium-sized vessels (20 \times 5 m) 15 km, cars (4.6 m \times 2.3 m) 5 km, people (1.8 m \times 0.5 m) 3.5 km</p>
Visible light camera reconnaissance	<p>Medium-sized vessel (20 \times 5 m) 7.5 km, car (4.6 m \times 2.3 m) 2.8 km, person (1.8 m \times 0.5 m) 1.8 km</p>
Laser Night vision	<ol style="list-style-type: none"> 1. Laser homogenisation: new GHT-III HD infrared light source, without scattered particles 2. Laser angle: switchable between 3° and 65° 3. Laser range: 300 m



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Video and audio	<ol style="list-style-type: none"> 1. Video encoding: H.265/H.264/MJPEG, multi-stream support 2. Video bitrate: 32 Kbps to 16 Mbps 3. Audio encoding: G.711A/ G.711U/G726 4. Image rotation: left and right / up and down / diagonal 5. OSD settings: support for OSD display settings for channel name, time, pan/tilt orientation, field of view, focal length and predefined bit name settings
Smart functions	<ol style="list-style-type: none"> 1. Fire detection alarm: 255-level threshold, target size, 1–16 targets configurable, automatic selection of the most significant target display, hotspot tracking 2. Intelligent analysis: supports intrusion detection, boundary crossing detection, zone entry/exit detection, motion detection, w 3. Automatic tracking: support 4. Intelligent information fusion: supported 5. Image fusion: supported 6. Alarm management: supports alarm capture and download
Enhanced features	<ol style="list-style-type: none"> 1. Distance measurement: support for passive distance measurement; optional support for laser distance measurement. 2. Support for audible and visual alarms: built-in internal tweeter + flashing light, support for customising the alarm sound. 3. Support for fire suppression devices linked to the alarm. 4. Camera diagnostic functions: support for disconnection alarm, support for IP conflict alarm, support for unauthorised access alarm 5. Total lifecycle management: health index recording function, support for operating time, number of shutter cycles, operating temperature, temperature limit, etc.; cumulative operating time of each zoom and pan motor, etc. 6. Support for disconnection renewal. 7. Power failure memory: ability to restore the position prior to the power failure, the preset point status, the cruise status, and the line scan status. 8. Remote maintenance: including fault querying, self-test, and remote restart function; online upgrade, remote upgrade. 9. Keyframe adjustment: support for keyframe interval adjustable across 100 levels. 10. Configuration file: supports configuration file import and export functions. 11. Web access: supports full configuration of web functions, remote online upgrades.
PTZ servo motor	<ol style="list-style-type: none"> 1. Rotation speed: horizontal: 0.01°/s to 80°/s; tilt: 0.01°/s to 60°/s, with support for focal speed adaptation. 2. Rotation angle: horizontal: continuous 360° rotation; tilt: -90° to +90°. 3. Structure material: quasi-spherical micro-rotation design, integrated 5-window multi-channel, high-strength cast aluminium alloy. 4. Window glass: high-efficiency infrared/visible optical glass, clean film coating.



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	<ol style="list-style-type: none"> 5. Surface coating: triple PTA anti-corrosion coating. 6. Wiper: supports intelligent automatic wiper 7. Defrosting: visible window defrosting 8. Cruise preset positions: 3,000 preset positions, supports 16 cruise routes, each of which can support 256 preset positions 9. Monitoring function: preset bit / pattern scan / cruise scan / vertical scan / image scan / panoramic scan / apple skin scan / horizontal line scan 10. Support for zoom with 3D grid selection 11. Orientation information: support for angle/return query and real-time positioning; support for return and positioning of the lens field of view 12. Zero point correction: support for remote zero point correction to north 13. Gyroscopic stabilisation: included 14. Drive mode: direct drive with high-torque rare-earth permanent magnet synchronous motor, high-speed start and stop 15. Positioning accuracy: better than 0.02° 16. Stability accuracy: better than ± 0.5 mrad (1σ, 15°/0.2 Hz oscillation) 17. Positioning time: less than 4 s
Electrical interface	<ol style="list-style-type: none"> 1. Communication and control: 1 RJ45 Ethernet port; 2 alarm inputs, 1 alarm output; 1 audio input, 1 RS485 interface. 2. Protocol: support for HTTP, HTTPS, FTP, SMTP, DNS, NTP, RTSP, RTCP, RTP, TCP, UDP, ICMP and DHCP network protocols; support for ONVIF and GB28181 protocols. 3. Development interface: supports HP-SDK secondary development
Enhanced function	<ol style="list-style-type: none"> 1. Anti-glare protection: supported, anti-sunburn function 2. Temperature compensation: thermal imaging-free design; imaging resolution is not affected by temperature 3. Scene mode: supports multiple configuration scenarios, suitable for all environmental applications 4. Auto-focus adjustment: supports precise remote adjustment of auto-focus parameters, suitable for various scenes 5. Day and night patrol: day and night patrol with different preset groups; day patrol with 1 to 40 preset positions; night patrol with 41 to 80 preset positions; automatic switching between day and night modes based on light conditions; suitable for various temporal and spatial scenarios 6. Lens servo: supports lens preset position, focal length feedback, and focus positioning function 7. Parameter settings: remote operation of the OSD menu 8. Remote maintenance: supports remote upgrading of the embedded software to facilitate after-sales maintenance



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Security control	<ol style="list-style-type: none">1. Supports unauthorised access alarm: the number of unauthorised access attempts and the lockout duration can be set.2. Support for three levels of user rights management: administrator, operator and standard user. Security mode: authorised username and password, support for IP address whitelists and blacklists, MAC address whitelists and blacklists. Lockout in the event of an incorrect user login
Power supply	<ol style="list-style-type: none">1. Operating voltage: 9–36 V DC, 220 V AC (external) or mains adapter2. Rated power consumption: ≤ 40 W3. Maximum power consumption: ≤ 60 W
Environmental conditions	<ol style="list-style-type: none">1. Operating temperature: -40 °C to 60 °C2. Operating humidity: $\leq 95\%$3. Protection rating: IP674. Salt spray resistance: no surface deterioration after 96 hours of continuous spraying at a pH between 6.5 and 7.25. Electromagnetic compatibility: 6 kV surge protection, 8 kV contact / 15 kV air antistatic
Weight and dimensions	<ol style="list-style-type: none">1. Weight: ≤ 13 kg; dimensions: 312 mm \times 200 mm \times 312 mm (L \times W \times H)2. Mounting: front / side / wall / suspended / vehicle / pro-rack tripod