

MDF5450HD-DN

Fisheye

Ultra High Definition Camera, Fisheye, 360° Panoramic View, 12 MP Sensor, 8 MP/30, H.265, AI/VCA, Day/Night, PoE, Compact Sensor Housing, Separate Encoder Housing



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The MDF5450HD-DN Fisheye is a network camera with fisheye lens specially designed for the image sensor. It offers a **vertical 90° field of view** and thus allows for the acquisition of a **complete half-space with a 360° panoramic view**.

Discreet installation

The MDF5450HD-DN Fisheye consists of an ultra-compact **sensor housing** designed for **discreet installation in suspended ceilings**. In combination with the **separate encoder housing**, it can be **installed even in confined spaces** and operated with an external power supply or with **PoE Class 0**.

8 megapixel resolution

The high resolution of the sensor in combination with state-of-the-art encoder technology and sophisticated image processing enable the **recording of a complete half-space** (half sphere) in excellent quality and with an **8 megapixel resolution** at a **frame rate of up to 25/30 fps**. This makes the camera ideal for applications where detailed **capturing of an entire room** is required, **without blind spots and in real time**.

H.265 Support

The cameras are equipped with encoder technology that supports encoding of the video stream according to the H.265 standard. This allows the **data rate to be reduced by up to 50%** compared to H.264 with the same resolution and image quality. In conjunction with the latest Dallmeier recording systems, a **significant reduction in network and storage utilization** can be achieved.

Dewarped display

The **dewarped display of the live image and recordings** of an MDF5450HD-DN is supported by every workstation in the **SeMSy® Video Management System** with a digital PTZ function. In smaller video security systems, the convenient evaluation with **Dallmeier Client Software** is the ideal option. In addition to a PTZ function, Dallmeier Client Software supports the **display of a dewarped 360° panoramic view** or **two 180° views of the half-space**.

Video Content Analysis

The integrated **Video Content Analysis (VCA)** detects **movements and objects** in the uncompressed image and analyzes them in real-time (depending on the analysis resolution) with highly developed analysis functions such as **Intrusion Detection** or **Line Crossing**. The detected **events** can be used to trigger the recording of a **Dallmeier recording system**. Together with the detected objects and the corresponding metadata, they are stored in a database. This allows the targeted search and evaluation of the recordings by **Dallmeier Client Software** with the **SmartFinder** function.

AI support

The camera is equipped with encoder technology that enables **Video Content Analysis supported by AI** (Artificial Intelligence) functions **based on neural networks** in the camera. This provides a **significantly more powerful object classification** which finally allows an even more targeted evaluation of the recordings.

EdgeStorage

The camera is equipped with a **RAM memory** that is used by the **EdgeStorage** function to store the video stream in case of a network failure (e.g. Spanning Tree, Bursts). When the network is restored, the **SmartBackfill** function ensures fast transmission to the **Dallmeier recording system**. This stores the video stream with high speed and then continues to record the live stream seamlessly.

Further features

- Horizontal field of view 360°
- Vertical field of view 90°
- Panoramic view 360°
- Ambient light sensor and removable IR cut filter
- Automatic switching of presets for day and night
- Video compression H.264, H.265, MJPEG
- Functions for data protection and data security (GDPR-compliant)
- Dewarped display with Dallmeier Client Software and SeMSy®
- Power supply over PoE (Class 0)
- Compact sensor housing with separate encoder housing

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Camera



007439

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Power Supply



004316

PoE Midspan 30 W

Midspan power supply unit, 1x Ethernet port, 10/100/1000Base-T, 802.3at, 802.3af, 30 W

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| Sensor | |
|-------------------------|-------------|
| Type | 1/1.7" CMOS |
| Number of sensor pixels | 12MP |
| Light sensitivity | < 0,05lux |
| Dynamic range | 92 dB |
| Signal to noise ration | > 50 dB |

| Lens | |
|--------------------------|------------|
| Type | Fisheye |
| Format | 1/1.7" |
| Mount | Board Lens |
| Focal length | 1.6 mm |
| Iris range | F2.8 |
| Minimum object distance | 0.5 mm |
| IR corrected | Yes |
| Horizontal field of view | 360° |
| Vertical field of view | 90° |
| Panoramic view | 360° |

| Format and Encoding | |
|------------------------------------|---|
| Video standard | SDTV (PAL/NTSC), HDTV (SMPTE 296M, SMPTE 274M) |
| Resolution (1:1) | 8 MP (2880 × 2880) @ 25/30fps, 6 MP (2448 × 2448) @ 25/30fps, 4 MP (1984 × 1984) @ 25/30fps |
| Video compression | H.264, H.265, MJPEG |
| Frame rate | Up to 30 fps |
| Video bit rate | 1 – 50Mbps, CBR (constant bit rate), VBR (variable bit rate), with priority setting for image quality ¹⁾ |
| Video streaming | Up to 3 streams with different settings simultaneously |
| Audio compression | G.711 |
| Audio bit rate | 64 kbps |
| Live streaming transmission method | Unicast, Multicast |
| Number of live streams / clients | Up to 5 streams with up to 16 Mbps simultaneously |

| Functions | |
|--------------------------------------|--|
| Day/Night switching | Ambient light sensing and removable IR cut filter (ICR), switching threshold level adjustable |
| Black-and-white mode | Automatic (at low light or in night mode), On, Off |
| Automatic Electronic Shutter | 1/1 – 1/8000 s |
| Slow Shutter Limit | 1/1 – 1/1000 s |
| Digital flip function | Horizontal, vertical or both axes |
| Digital Noise Reduction | 3D-DNR (adjustable by 10 levels) |
| Exposure presets | Universal, Indoor, Outdoor, Casino, Low-Light, User-Defined (with automatic day/night switching) |
| Exposure compensation | -2 EV (Exposure Value) to + 2 EV (adjustable by 200 levels) |
| Exposure metering | Average metering (light information from entire scene), center-weighted average metering, spot metering |
| Brightness adjustment | Automatic (ALC), Manual |
| Gain control | Automatic (AGC) with adjustable Gain Limit |
| White balance | Auto: ATW (Auto Tracking White Balance), One-Push AWB (Automatic White Balance) Fixed: 2800K, 4000K, 5000K, 6500K and 7500K |
| Privacy Zone Masking | Hiding/masking of up to 16 protected areas (up to 100% of the entire image) |
| Alarm notification | Via DaVid protocol to PGuard advance, via E-Mail and FTP image upload in preparation |
| Alarm trigger | Application restart, EdgeStorage status |
| Video Content Analysis ²⁾ | Intrusion Detection (detection of access to a defined area) Line Crossing (detection of a virtual line crossing) Tamper Detection (detection of manipulations on the camera) Object Classification (classification of objects with AI support) Face Detection (detection of faces) ³⁾ |

1) If the total available bit rate is not sufficient, not the image quality but the number of frames is adjusted.

2) Depending on the CPU load. Video content analysis is not available if more than 2 streams or bit rates > 16 Mbps are configured.

3) The function detects the presence of a face (Face Detection). The analysis of visible features and the link to person data (Face Recognition) are not supported.

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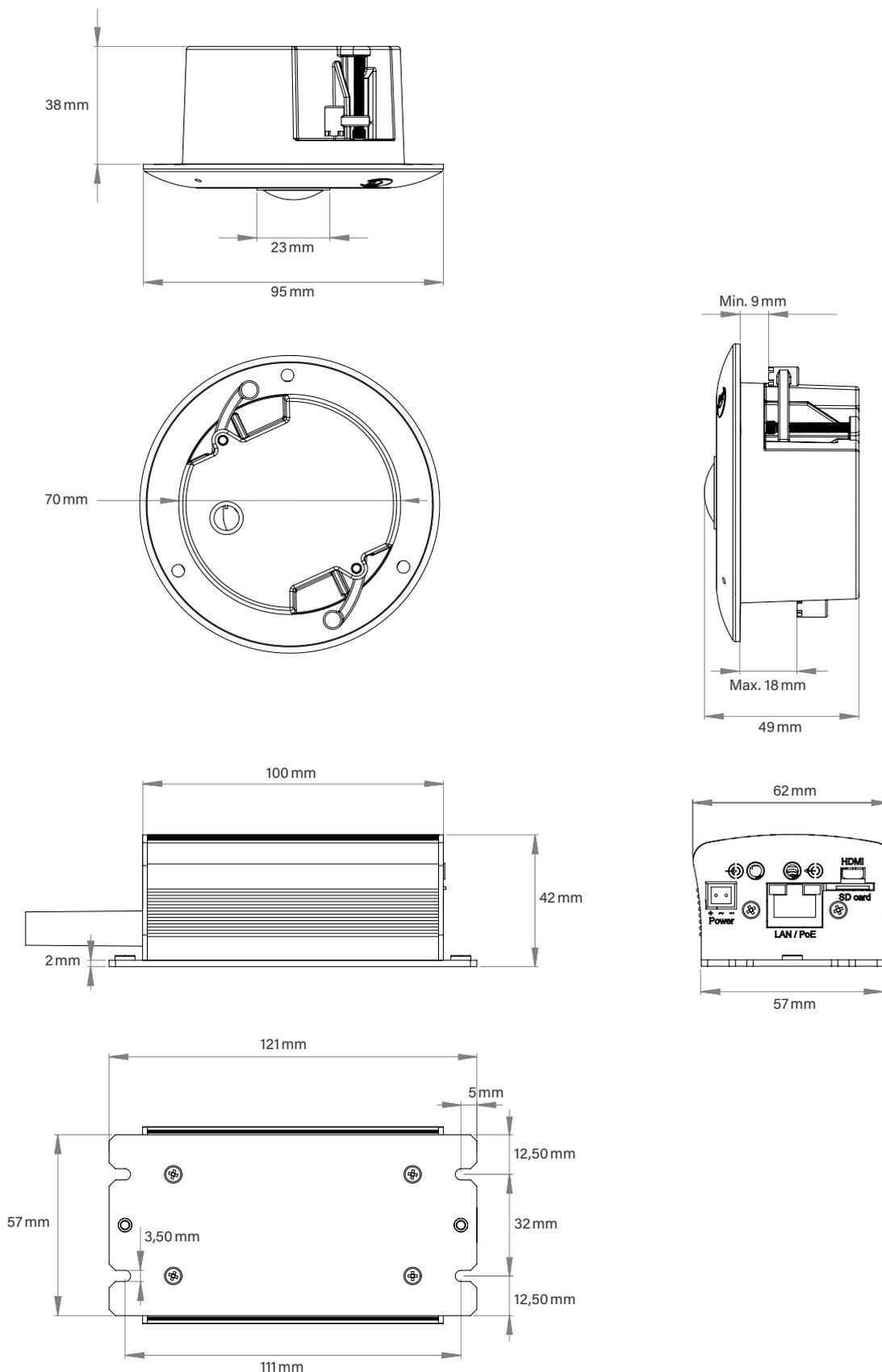
| Protocols | |
|-----------------------------------|--|
| Ethernet protocols | IPv4 (ARP, ICMP, IGMPv2/IGMPv3), UDP, TCP, LLDP, CDP (v1,v2), DSCP (QoS), DNS, DHCP, NTP, HTTP/HTTPS ⁴⁾ , RTSP/RTP/RTCP, SNMP (v1, v2c, v3) |
| Ethernet protocols in preparation | IPv6 (NDP, ICMPv6, MLDv1/MLDv2, SLAAC, RDNSS), UDPv6, TCPv6, DNSv6, DHCPv6, LDAP |
| Communication protocols | DaVid, DaVidS, ONVIF Profile S, SNMP (v1, v2c, v3) |
| Security | HTTPS ⁴⁾ encryption, SSL/TLS ⁴⁾ 1.2 (AES), network access control according to IEEE 802.1X ⁴⁾ |
| Connections | |
| Video preview output | 1x HDMI micro connector (type D), 1080p (1920 x 1080) @ 25/30 fps (16:9) ⁵⁾ |
| Audio Line IN | 1x 3.5 mm phone jack for stereo plug Input level: max. 2.83 V _{p-p} Input impedance: 29 kΩ |
| Audio Line OUT | 1x 3.5 mm phone jack for stereo plug Output level at 10 kΩ load: max. 3.11 V _{p-p} Output impedance: 320 Ω |
| Ethernet | 1x RJ45, 10BASE-T-/100BASE-TX PoE |
| Power IN | 1x Weidmüller male connector SL 3.50/02/90G (mating connector Weidmüller BL 3.50/02/180 SN) |
| Electrical Data | |
| Voltage supply | 24 V DC PoE (Class 0) |
| PoE standard | IEEE 802.3af |
| Power consumption | Max. 12 W (8 W typically) |
| Mechanical Data | |
| Dimensions | Approx. Ø 95 x H 49 mm (sensor housing) Approx. W 62 x H 42 x D 121 mm (encoder housing) |
| Cable length | Approx. 160 mm (between sensor housing and encoder housing) |
| Weight | Approx. 270 g (sensor housing) Approx. 400 g (encoder housing with cable) |
| Construction material | Aluminum |
| Color | Black with white housing ring |
| Environmental Conditions | |
| Operating temperature | -20°C to +50°C (-4°F to 122°F) |
| Relative humidity | 0% - 90% RH, non-condensing |
| Miscellaneous | |
| Ambient light sensor | Integrated |
| Local memory | 50 MB RAM memory |
| Memory extension | microSDXC 32/64 GB, Class 10, UHS-I (optional) |
| Configuration and live video | Via web browser (all major platforms) |
| Languages | German, English |
| Programming interface | Open platform for integration into 3rd party systems using API and ActiveX ⁶⁾ |
| ONVIF compliance | Profile S |
| GDPR compliance | Supported |
| Approvals/Certifications | |
| Type | CE, FCC, UL, DIN EN 50130-4 compliant |

4) This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (<http://www.openssl.org>) and cryptographic software written by Eric Young (ey@cryptsoft.com).
5) When using an HDMI cable longer than 50 cm, the use of a signal amplifier is recommended.

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See more.