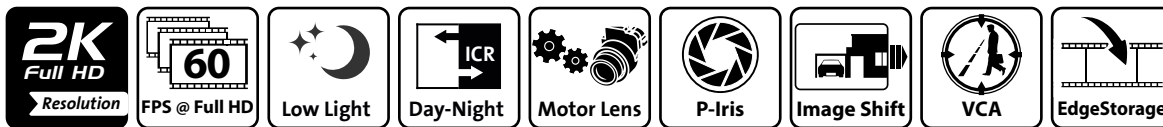


MDF5200HD-DN

Nightline

Full HD Module Camera, Separate Enclosures for Sensor and Encoder, 2 MP, 1080p/60, H.264, Day/Night (ICR), Ultra Low-Light, Motor-driven Varifocal Lens, One-Push Autofocus, P-Iris, PoE (Class 0)



The **MDF5200HD-DN** is a HD network camera built into a compact **sensor enclosure** and into a separate **encoder enclosure**. The combination of the most **advanced sensor and encoder technology** results in recordings with excellent contrast, brilliant clarity and **highest detail resolution and color fidelity**, even in low light conditions.

Excellent Low-Light characteristics

The **extremely high light sensitivity** of the sensor and the sophisticated **image processing** ensure crisp **color images** even in the dark. In night mode, the camera also provides outstanding results due to the **excellent infrared sensitivity**.

Automatic switching of presets

The camera is equipped with an **ambient light sensor** and a **removable IR cut filter**, and can automatically switch between **day and night mode**. In addition, **different day and night presets** for the exposure settings can be defined and adjusted.

Motor-driven varifocal lens with P-Iris

The camera has a **motor-driven megapixel varifocal lens** that is perfectly tuned to the image sensor. The adjustment of zoom, focus and iris is made conveniently using a web browser. The manual lens setting directly at the installation site of the camera is not required.

Digital Image Shift

The **Digital Image Shift** function allows a comfortable **fine adjustment of the captured image section** (horizontal and vertical at 16:9 resolutions, horizontal at 4:3 resolutions) via a web browser ensuring a quick and easy installation of the camera. Depending on the selected resolution, the used area on the image sensor can be moved and adapted to the local conditions. The manual fine alignment of the camera directly at the installation site is not necessary.

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 **SMAVIA 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 **SMAVIA Viewing Client** with the function **SmartFinder**.

EdgeStorage

The camera is equipped with a **RAM memory** that is used by the **EdgeStorage** function for storing the video stream in case of a network failure. When the network is restored, the **SmartBackfill** function ensures a fast transmission to the **SMAVIA recording system**. This stores the video stream with high speed and then continues the recording of the live stream seamlessly.

Mounting

Equipped with a 1/4" tripod socket located on the top and bottom side, the camera fits all standard brackets. Due to its **extremely compact design** and the **included mounting brackets**, the camera is also ideally suited for installations in automated **teller machines, gambling tables and display panels**. It can be conventionally supplied with an external power supply unit or conveniently with **Power over Ethernet**.

Further features

- 1/1.9" Full HD CMOS image sensor
- Extremely high light sensitivity 0.002 lux
- Memory expansion with microSDHC card
- Frame rate of 60 fps at 1080p or up to 120 fps at 720p
- Video compression H.264, MJPEG
- Simultaneous Dual-, Tri- or Quad Streaming
- Privacy Zone Masking
- Digital flip function
- Wide Dynamic Range (WDR)
- 3D Digital Noise Reduction (3D DNR)
- EdgeStorage for Emergency Recording with SmartBackfill
- Separated housings for sensor and encoder
- Versatile mounting brackets included

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Variants

005060.409



MDF5200HD-DN

Full HD module camera, separate enclosures for sensor and encoder, 2 MP, 1080p/60, SD (PAL/NTSC), H.264, Day/Night (ICR), Ultra Low-Light, motor-driven varifocal lens, One-Push AF, P-Iris, PoE (Class 0), F1.6 / 4.5 - 10 mm

005060.410



MDF5200HD-DN

Full HD module camera, separate enclosures for sensor and encoder, 2 MP, 1080p/60, SD (PAL/NTSC), H.264, Day/Night (ICR), Ultra Low-Light, motor-driven varifocal lens, One-Push AF, P-Iris, PoE (Class 0), F1.6 / 12 - 40 mm

Accessories

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	1/1.9" 2.3 megapixel Full HD CMOS image sensor
Number of sensor pixels	2MP
Signal processing	Pure Digital Signal Processing
Image capture	Progressive Scan
Light sensitivity	0,002lux (F1.6, AGC ON)
Dynamic range	94 dB
Signal to noise ration (SNR _{MAX})	> 50 dB

Lens	F1.6 / 4.5 – 10 mm	F1.6 / 12 – 40 mm
Type	Motor-driven varifocal lens	
Format	1/1.8"	
Mount	Board Lens	
Focal length	4.5 – 10 mm	12 – 40 mm
Iris range	F1.6 – Closed	
Iris control	P-Iris (motor-driven)	
Zoom control	Motor-driven	
Focus control	Motor-driven	
Minimum Object Distance	0.3 m	0.6 m
IR corrected	Yes	
Available angles of view ¹⁾ (H × V) at wide end	Approx. 87° × 50° at 1080p	Approx. 35° × 19° at 1080p
Available angles of view ¹⁾ (H × V) at tele end	Approx. 40° × 23° at 1080p	Approx. 11° × 6° at 1080p

Format and Encoding	
Video standard	SDTV (PAL/NTSC) HDTV (SMPTE 296M, SMPTE 274M)
Resolution in mode 1080p (16:9)	1920 × 1080 (1080p) @ 50/60 fps 1280 × 720 (720p) @ 50/60 fps 640 × 480 (480p) @ 50/60 fps 320 × 240 @ 50/60 fps
Resolution in mode 1080p (4:3)	1440 × 1080 @ 50/60 fps 1280 × 960 @ 50/60 fps
Resolution in mode 720p (16:9)	1280 × 720 (720p) @ 100/120 fps 640 × 480 (480p) @ 100/120 fps 320 × 240 @ 100/120 fps
Video compression	H.264, MJPEG
Frame rate	Up to 120 fps
Video bit rate	1 – 12 Mbit/s, CBR (constant bit rate), VBR (variable bit rate), with priority setting for image quality ²⁾
Video streaming	Simultaneous Dual-, Tri- or Quad-Streaming
Transfer format	Progressive (full image)
Audio compression	G.711
Audio bit rate	64 kbit/s
Live streaming transmission	Unicast, Multicast
Number of live streams / client	Up to 5 streams with up to 12 Mbit/s simultaneously

1) All specifications ±5%. Minor deviations with lenses may be a result of manufacturing tolerances and do not constitute a defect.
2) If the total available bit rate is not sufficient, not the image quality but the number of frames is adjusted.

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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) ³⁾ , On, Off
Automatic Electronic Shutter	1/1 – 1/8000 s
Slow Shutter Limit	1/1 – 1/1000 s
Lens control	Zoom control (Tele – Wide), Focus control (Far – Near, One-Push AF), Iris control (P-Iris) via web browser
Digital flip function	Horizontal, vertical or both axes
Digital Image Shift	Horizontal and vertical at 16:9 resolutions, horizontal at 4:3 resolutions
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 any number of protected areas (up to 100% of the entire image)
Alarm notification	Via DaVid protocol (Dallmeier Video Protocol) to PGuard advance Via E-Mail and FTP image upload in preparation
Alarm trigger	Application restart, EdgeStorage status
Video Content Analysis	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) Face Detection (detection of faces) ⁴⁾

Protocols	
Ethernet protocols	IPv4 (ARP, ICMP, IGMPv2/IGMPv3), UDP, TCP, LLDP, CDP(v1,v2), DSCP(QoS), DNS, DHCP, NTP, HTTP/HTTPS, RTSP/RTP/RTCP, SNMP(v1,v2c,v3)
Ethernet protocols in preparation	IPv6 (NDP, ICMPv6, MLDv1/MLDv2, SLAAC, RDNSS), UDPv6, TCPv6, DNSv6, DHCPv6, LDAP, IEEE 802.1X

Connections	
Video preview output	1x HDMI micro connector (type D), 1080p (1920 × 1080) @ 25/30 fps (16:9)
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	Approx. 6 W

3) Without color information, or rather in black-and-white mode, the image quality in low light conditions will be much clearer (e.g. less color noise).

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

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Mechanical Data	
Dimensions	Approx. Ø 50 × H 80 mm (sensor) Approx. W 59 × H 30 × D 93 mm (encoder)
Cable length (sensor-encoder)	Approx. 195 mm
Weight	Approx. 300 g
Color	Black anodized

Environmental Conditions	
Operating temperature	-20°C to +45°C (-4°F to 113°F)
Relative humidity	0% - 90% RH, non-condensing

Miscellaneous	
Ambient light sensor	Integrated
Local memory	50 MB RAM memory
Memory extension	microSDHC 32 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 ⁵⁾
ONVIF compliance	Profile S

Approvals/Certifications	
Type	CE, FCC, RCM, UL, DIN EN 50130-4 compliant

5) ActiveX is a trademark or registered trademark of Microsoft Corporation headquartered in Redmond, Washington, USA

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