MDF5200HD-DN

Nightline

Full HD Module Camera, Separate Enclosures for Sensor and Encoder, 2 MP, 1080p/30, H.264,
Day/Night (ICR), Ultra Low-Light, Motor-driven Varifocal Lens, One-Push Autofocus, P-Iris, PoE (Class 0)

2K Full HD Support | **30 fps** At Full Resolution | **Ultra Low Light** | **ICR** Day Night | **Motor-driven Lens** | **P-Iris** | **WDR** Wide Dynamic Range | Low Bandwidth | **Onvif S**

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
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.

Precise iris control
The new P-Iris control provides precise and **automatic setting of the optimum aperture**. Thus, the camera achieves a much **better depth of field** than with conventional DC auto iris lenses under almost any lighting conditions.[1]

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.

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
- Separated housings for sensor and encoder
- Versatile mounting brackets included
- Various lens types available (factory fitted)[2]
- Memory expansion with microSDXC card[1]
- Frame rate of 30 fps at full resolution (1080p/30)
- 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)
- Extensive exposure compensation functions
- Extensive image processing functions
- Alarm notification via DaVid Protocol, e-mail and FTP image upload[1]
- EdgeStorage for Emergency Recording with SmartBackfill

1) Function in preparation
2) The lenses are fitted and calibrated ex factory (board lens). Field replacement is not possible.

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Variants/Options

	Variants
005060.409	**MDF5200HD-DN** Full HD module camera, separate enclosures for sensor and encoder, 2 MP, 1080p/30, 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
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	Accessories	
001431		**EvC-1** High-Speed Ethernet data transmission via coaxial cable
004316		**PoE Midspan 30 W** Midspan power supply unit, 1× Ethernet port, 10/100/1000Base-T, 802.3at, 802.3af, 30 W

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Specifications

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

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)[4] via web browser
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 any number of protected areas (up to 100% of the entire image)
Alarm notification [4]	Via DaVid-Protokoll (Dallmeier Video Protocol) to PGuard advance, E-Mail, FTP image upload
Alarm trigger [4]	Contact IN status change, Contact OUT remote status change (via DaVid protocol), Application restart
Configuration and live video	Via web browser (all major platforms)
Languages	German, English

Format and Encoding	
Video standard	SDTV (PAL/NTSC) HDTV (SMPTE 296M, SMPTE 274M)
Resolution – video over IP	1920 × 1080 (1080p) @ 25/30 fps 1280 × 720 (720p) @ 25/30 fps 640 × 480 (480p) @ 25/30 fps 320 × 240 @ 25/30 fps
Aspect ratio – video over IP	16:9 (720p, 1080p) 4:3 (480p, 320 × 240))
Video compression	H.264, MJPEG
Frame rate	Up to 30 fps
Video bit rate	1 – 8 Mbit/s, CBR (constant bit rate), VBR (variable bit rate), each with priority setting for image quality[5]
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 method	Unicast, Multicast
Number of live streams	Up to 5 different streams with up to 8 Mbit/s simultaneously

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) Function in preparation
5) If the total available bit rate is not sufficient, not the image quality but the number of frames is adjusted.

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Specifications (Continuation)

Protocols	
Ethernet protocols	IPv4, TCP, UDP, HTTP, RTP, RTCP, IGMP V2/V3, ICMP, ICMP V6, RTSP, ARP, NTP,
Ethernet protocols in preparation	HTTPS, DHCP, SMTP, SOAP, LDAP, IPv6, FTP, 802.1x, DNS, DNS V6, DDNS (DynDNS.org, selfHOST.de, no-ip.com), UPnP (SSDP), DiffServ (QoS), LLDP
SNMP support in preparation	SNMP v1

Connections	
Ethernet	1× RJ45, 10BASE-T/100BASE-TX PoE
Power IN	1× Weidmüller male connector SL 3.50/02/90G (mating connector Weidmüller BL 3.50/02/180 SN)

Miscellaneous	
Ambient light sensor	Integrated
Local memory	50 MB RAM memory
Memory extension	microSDXC card (64 GB – 2 TB, UHS II)[6]
Programming interface	Open platform for integration into 3rd party systems using API and ActiveX[7]
ONVIF compliance	Profile S[6]

Electrical Data	
Voltage supply	12 V DC (±10 %) or via PoE (Class 0)
PoE standard	IEEE 802.3af
Power consumption	Approx. 6 W

Mechanical Data	
Dimensions	*See "Dimensions" on page 6.*
Cable length (sensor-encoder)	Approx. 195 mm (7.7'')
Weight	Approx. 300 g (0.7 lb)
Color	Black anodized

Environmental Conditions	
Operating temperature	−20°C to +50°C (−4°F to 122°F)
Relative humidity	0% – 90% RH, non-condensing

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

6) Function in preparation
7) ActiveX is a trademark or registered trademark of Microsoft Corporation headquartered in Redmond, Washington, USA

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Lens Types

Lens F1.6 / 4.5 – 10 mm	
Type	Motor-driven varifocal lens
Format	1/1.8"
Mount	Board Lens
Focal length	4.5 – 10 mm
Iris range	F1.6 – Closed
Iris control	P-Iris (motor-driven)
Zoom control	Motor-driven
Focus control	Motor-driven
MOD (Minimum Object Distance)	0.3 m
IR corrected	Yes
Available angles of view[8] (H × V) at wide end	Approx. 87° × 50° at 1080p
Available angles of view[8] (H × V) at tele end	Approx. 40° × 23° at 1080p

Telephoto Lens F1.6 / 12 – 40 mm	
Type	Motor-driven varifocal lens
Format	1/1.8"
Mount	Board Lens
Focal length	12 – 40 mm
Iris range	F1.6 – Closed
Iris control	P-Iris (motor-driven)
Zoom control	Motor-driven
Focus control	Motor-driven
MOD (Minimum Object Distance)	0.6 m
IR corrected	Yes
Available angles of view[8] (H × V) at wide end	Approx. 35° × 19° at 1080p
Available angles of view[8] (H × V) at tele end	Approx. 11° × 6° at 1080p

8) All specifications ±5%. Minor deviations with lenses may be a result of manufacturing tolerances and do not constitute a defect.
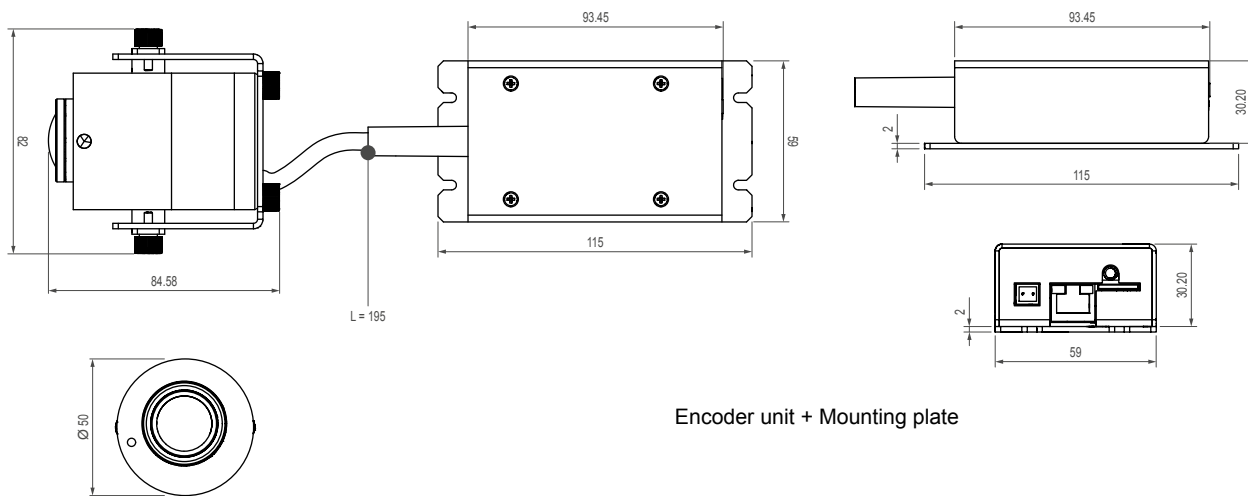
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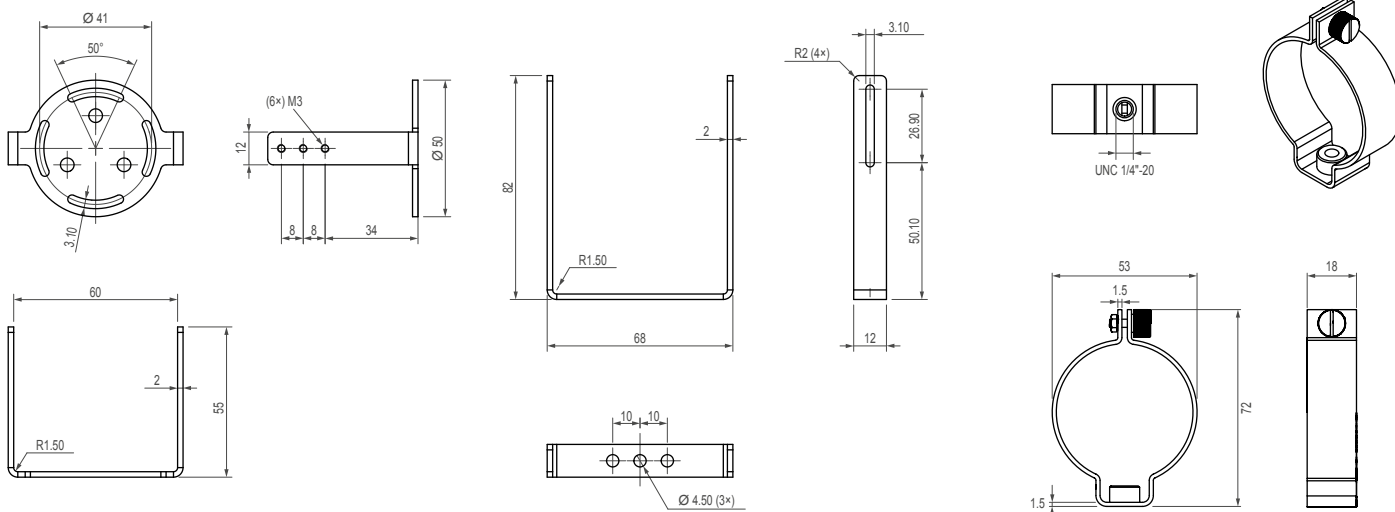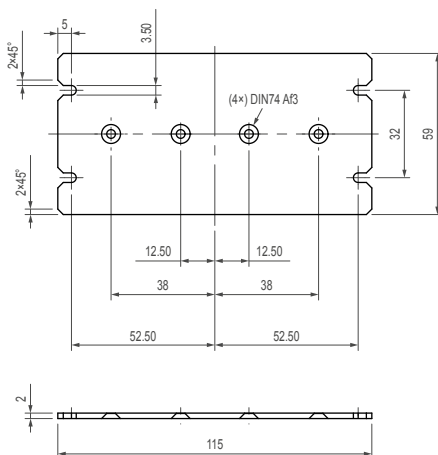
Dimensions

[mm]

Camera unit

Encoder unit + Mounting plate

Mounting bracket (2-parts)

Gripper clamp

Mounting plate

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