

# DF5200HD Camera Series

# Nightline

Models DF5200HD-DN, DDF5200HDV-DN IM and DDF5200HDV-DN SM



The cameras of the **DF5200HD series** have been developed with special attention to changing light conditions for **24-hour video surveillance**. 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.

## High speed streaming

The camera delivers a **HD video stream** at a frame rate of 30fps (1080p/30). In connection with the **optional HSS Board<sup>1)</sup>** the camera can be equipped for a frame rate of **up to 120 fps at full resolution (1080p/120)**. Ideal for all applications that require the capture of very fast movements in high resolution.

## 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.

The camera is available with an **integrated lens** in a **compact box housing** or in a **vandal-resistant dome housing**. It can be conventionally supplied with an external power supply unit or conveniently with **Power over Ethernet (PoE Class 0, IEEE 802.3af)**.

## Further Features

- 1/1.9" Full HD CMOS image sensor
- Extremely high light sensitivity 0.002 lux
- Various lens types available<sup>2)</sup>
- Memory expansion with microSDXC card<sup>4)</sup>
- Analog video preview output
- High Speed Encoder board included
- Gigabit Ethernet interface
- Audio line OUT and audio line IN
- RS485 interface<sup>3)</sup>
- Contact I/O interface<sup>3)</sup>
- 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<sup>4)</sup>
- EdgeStorage for Emergency Recording with SmartBackfill

1) High Speed Sensor Board: The sensor board will be fitted and calibrated ex factory. Field replacement is not possible. Available from Q1 2016.

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

3) For box housing only: In connection with the optional **Interface Board RS485 & Contact IN/OUT (004923)**.

4) Function in preparation

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## Variants/Options



### Box Variants

- 005056.409** DF5200HD-DN  
Full HD box camera, 2MP, 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
- 005056.410** DF5200HD-DN  
Full HD box camera, 2MP, 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 / 12–40mm



### In-Ceiling Variants


- 005082.409** DDF5200HDV-DN-IM  
Full HD dome camera, 2MP, 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), vandal-resistant (IK10), in-ceiling mount variant, F1.6 / 4,5–10 mm
- 005082.410** DDF5200HDV-DN-IM  
Full HD dome camera, 2MP, 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), vandal-resistant (IK10), in-ceiling mount variant, F1.6 / 12–40 mm



### Surface Variants

- 005083.409** DDF5200HDV-DN-SM  
Full HD dome camera, 2MP, 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), vandal-resistant (IK10), surface mount variant, F1.6 / 4,5–10 mm
- 005083.410** DDF5200HDV-DN-SM  
Full HD dome camera, 2MP, 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), vandal-resistant (IK10), surface mount variant, F1.6 / 12–40 mm

## Extensions

- 004923**  **Interface Board RS485 & Contact IN/OUT<sup>5)</sup>**  
1× serial interface RS485 (full duplex), 1× contact IN, 1× contact OUT; ex factory only

## Accessories

- 001044**  **Tinted Bubble**  
For in-ceiling and surface mount variant, 4,5"
- 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
- 003952**  **Wall Mount Bracket Indoor (HD Box)**  
Grey, 1/4" tripod screw, for HD box cameras
- 005017**  **Wall Mount Bracket (SM Housing)**  
Wall mount bracket with seals and internal cable routing, for vandal-resistant (IK10) surface-mount housing (152mm)

5) For box housing only: The interface is fitted and calibrated ex factory. Field replacement is not possible. Available from Q1 2016.

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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
Light sensitivity	0,002 lux (F1.6, AGC ON)
Dynamic range	94 dB
Signal to noise ration (SNR <sub>MAX</sub> )	> 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) <sup>6)</sup> , 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 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 <sup>7)</sup>	Via DaVid Protocol (Dallmeier Video Protocol) to PGuard advance, E-Mail, FTP image upload
Alarm trigger <sup>7)</sup>	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

6) 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).

7) Function in preparation

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## Specifications (Continuation)

Format and Encoding	
Video standard	SDTV (PAL/NTSC) HDTV (SMPTE 296M, SMPTE 274M)
Resolution – video over IP	Standard: 1920 × 1080 (1080p) @ 25/30 fps 1280 × 720 (720p) @ 25/30 fps 1280 × 720 (720p) @ 50/60 fps <sup>8)</sup> 640 × 480 (480p) @ 25/30 fps 320 × 240 @ 25/30 fps With HSS Board <sup>10)</sup> : 1920 × 1080 (1080p) @ 120 fps 1280 × 720 (720p) @ 120 fps 640 × 480 (480p) @ 120 fps 320 × 240 @ 120 fps
Aspect ratio – video over IP	16:9 (720p, 1080p) 4:3 (480p, 320 × 240)
SD resolution – analog video over BNC (preview output)	704 × 576 (4CIF PAL) 704 × 480 (4SIF NTSC)
Aspect ratio – analog video (preview output)	Scale Analog Output -> On: 16:9 Letterbox (if resolution at Encoder 3: 720p, 1080p) 4:3 (if resolution at Encoder 3: 4CIF/4SIF) Scale Analog Output -> Off: 4:3 (cropped from center sensor area)
Video compression	H.264, MJPEG
Frame rate	Up to 120 fps <sup>10)</sup>
Video bit rate	1 – 8 Mbit/s, CBR (constant bit rate), VBR (variable bit rate), each with priority setting for image quality <sup>9)</sup>
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

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	DF5200HD-DN	DDF5200HDV-DN IM	DDF5200HDV-DN SM
Video preview output	1× BNC (CVBS, 1.0 V <sub>p-p</sub> , 75 Ω)		
Audio Line IN	1× 3.5 mm phone jack for stereo plug Input level: max. 2.83 V <sub>p-p</sub> Input impedance: 29 kΩ		
Audio Line OUT	1× 3.5 mm phone jack for stereo plug Output level at 10 kΩ load: max. 3.11 V <sub>p-p</sub> Output impedance: 320 Ω		
Ethernet	1× RJ45, 10BASE-T/100BASE-TX PoE/1000BASE-T PoE		
Serial interface	1× RS485 (full duplex) <sup>11)</sup>	--	--
Contact I/O interface	1× Contact IN, 1× Contact OUT <sup>11)</sup>	--	--
Power IN	1× Weidmüller male connector SL 3.50/02/90G (mating connector Weidmüller BL 3.50/02/180 SN)		

8) Software update in preparation

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

10) High Speed Sensor Board: The sensor board is fitted and calibrated ex factory. Field replacement is not possible. Available from Q1 2016.

11) For box housing only: In connection with the optional **Interface Board RS485 & Contact IN/OUT** (004923).

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## Specifications (Continuation)

Miscellaneous	
Ambient light sensor	Integrated
Local memory	50 MB RAM memory
Memory extension	microSDXC card (64 GB – 2 TB, UHS II) <sup>13)</sup>
Programming interface	Open platform for integration into 3rd party systems using API and ActiveX <sup>12)</sup>
ONVIF compliance	Profile S <sup>13)</sup>

Electrical Data	
Voltage supply	24 V DC PoE (Class 0)
PoE standard	IEEE 802.3af
Power consumption	Approx. 6 W

Mechanical Data	DF5200HD-DN	DDF5200HDV-DN IM	DDF5200HDV-DN SM
Dimensions	Approx. W 71 × H 66 × L 176 mm W 2.8 × H 2.6 × L 6.9 inches	Approx. Ø 170 × H 135 mm Ø 6.7 × H 5.3 inches	Approx. Ø 152 × H 136 mm Ø 6.0 × H 5.3 inches
Weight	Approx. 300 g 0.7 lb	Approx. 1200 g 2.6 lb	Approx. 1100 g 2.6 lb
Color	Black/grey	White	White
Adjustment	--	3-axes	3-axes
Bubble	--	Clear (with black inner liner)	Clear (with black inner liner)
Vandal-resistant	--	Yes	Yes
IK protection	--	IK10 (up to 20 Joules)	IK10 (up to 20 Joules)
IP rating	--	--	IP67

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, UL, DIN EN 50130-4 compliant

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

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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 <sup>14)</sup> (H × V) at wide end	Approx. 87° × 50° at 1080p
Available angles of view <sup>14)</sup> (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 <sup>14)</sup> (H × V) at wide end	Approx. 35° × 19° at 1080p
Available angles of view <sup>14)</sup> (H × V) at tele end	Approx. 11° × 6° at 1080p

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

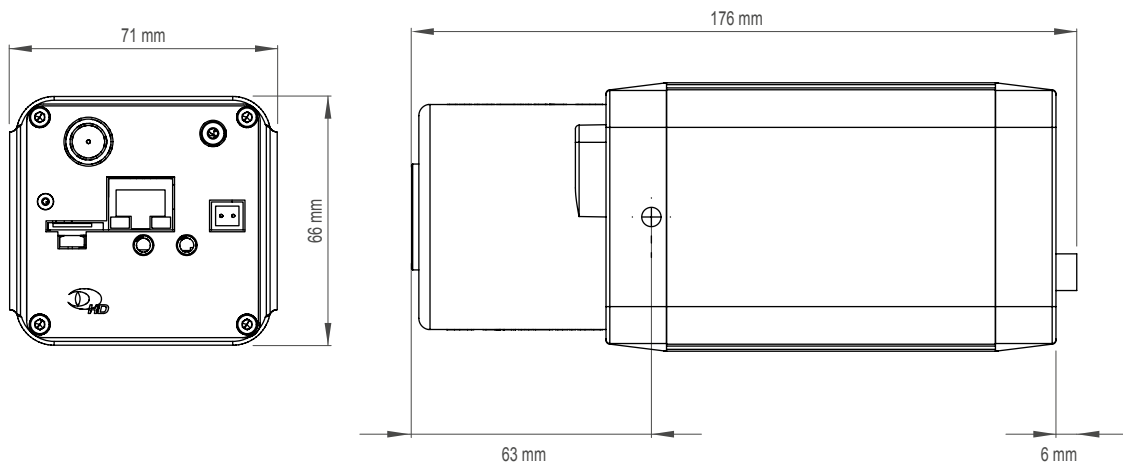
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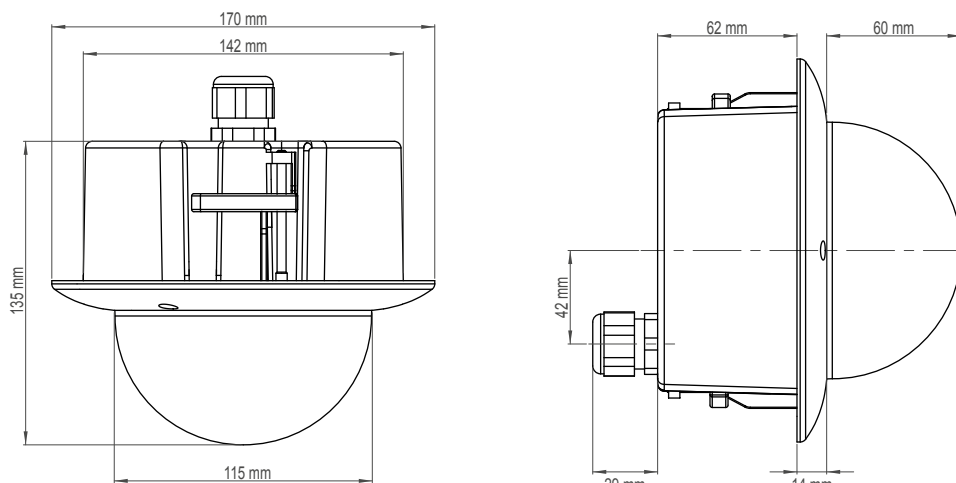
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## Dimensions

### DF5200HD-DN



### DDF5200HDV-DN IM



### DDF5200HDV-DN SM

