

DDF4220HDV

Picodome®

Hybrid High Definition Camera, 1.3 MP, 720p/30, H.264, Wide Dynamic Range, PoE, Compact Dome Housing



The DDF4220HDV Picodome® is a hybrid Wide Dynamic Range (WDR) dome camera. The camera provides **real-time HD video** (720p/30) in **H.264 format** and supports **resolutions up to 1.3 megapixels**.

Hybrid operation

In addition to **HD video over IP**, the DDF4220HDV Picodome® offers **simultaneous analog SD video output** (PAL/NTSC) over BNC (CVBS).

Wide Dynamic Range

The DDF4220HDV Picodome® is attractive for its **wide dynamic range** (WDR), enabling images with highest color fidelity and excellent detail reproduction even in scenes with a wide contrast range and strong backlighting. The excellent low-light performance also ensures clear and low-noise images even in low light conditions.

Digital Image Shift

The **Digital Image Shift** function enables convenient **fine alignment of the captured image section** (120 px vertical at 720p resolutions) via a **web browser**. Depending on the selected resolution, the used area on the image sensor can be moved and adapted to the local conditions.

Voltage supply

Depending on requirements, the camera can be operated conventionally with 12V DC or conveniently with Power over Ethernet (PoE Class 0, IEEE 802.3af), which enables fast, simple and cost-effective cabling and commissioning.

Variants

The vandal-resistant (IK10) DDF4220HDV Picodome® is available as an in-ceiling or surface mount version in an IP66 housing. Both housing variants are characterized by their ultra-compact design.

Additional features

- 1/3" 1.3 megapixels CMOS image sensor
- HD video over Ethernet
- HD video in real-time (720p/30)
- Analog SD video output via BNC
- Wide Dynamic Range (WDR)
- High low-light sensitivity
- Video compression H.264, MJPEG
- Frame rate up to 30 fps
- Manual White Balance (MWB)
- Automatic White Balance (ATW, One-Push AWB)
- Automatic Gain Control (AGC)
- Automatic Electronic Shutter (AES)
- Comprehensive image optimization functions
- Digital Noise Reduction (DNR)
- Privacy Zone Masking (Hiding of protected areas)
- Flip function (horizontal, vertical or both)
- Voltage supply with 12V DC or via PoE
- Low power consumption (2.9W typical)
- Mounting variants in-ceiling (IM) or surface mount (SM)
- Compact vandal-resistant (IK10) housing
- Surface mount variant with IP66
- PPL ball joint (Push, Point & Lock)
- DIN EN 50130-4 compliant
- ONVIF compliant

Hybrid High Definition Camera, 1.3 MP, 720p/30, H.264,
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In-Ceiling Variant

004419.407



DDF4220HDV-IM

Hybrid High Definition Camera, 1.3 MP, 720p/30, H.264,
Wide Dynamic Range, PoE, compact dome housing,
in-ceiling variant, F2.0 / 2.4 mm

Surface Variant

004420.407



DDF4220HDV-SM

Hybrid High Definition Camera, 1.3 MP, 720p/30, H.264,
Wide Dynamic Range, PoE, compact dome housing,
surface mount variant, F2.0 / 2.4 mm

Accessories

001678



Power Supply Unit (110 - 240 V AC -> 12 V DC)

Universal power supply, 110 - 240 V AC to 12 V DC, 850 mA,
plug adapter EU/UK/US/AUS (for HDV variants)

004316



PoE Midspan 30 W

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

License

004717

DLC - Casino Preset and Frame Rate 50/60 fps at 720p

License for the use of the Automatic Exposure (AE) preset Casino
and the frame rate of 50/60 fps at 720p

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Sensor	
Type	1/3" CMOS
Number of sensor pixels	1.3MP
Light sensitivity	0.3lux (F2.0, 50 IRE)
Dynamic range	> 115 dB
Signal to noise ration	43.9 dB

Lens	
Type	Monofocal lens
Format / Mount	1/3" Board Lens
Focal length	2.4 mm
Iris	F2.0
Iris control	Fixed iris
Zoom / Focus control	Fixed focus
Minimum object distance	0.3 m
Available angles of view ¹⁾ (H × V)	Approx. 106° × 80° (4CIF, SXGA-), Approx. 106° × 60° (720p)

Format and Encoding	
Video standard	SDTV (PAL/NTSC) HDTV (SMPTE 296M)
Resolution video over IP	SXGA- (1280 × 960), 720p (1280 × 720), 4CIF (PAL: 704 × 576, NTSC: 704 × 480), VGA (640 × 352 / 640 × 480)
Resolution SD video analog	4CIF (PAL: 704 × 576, NTSC: 704 × 480)
Aspect ratio video over IP	4:3 (4CIF, SXGA-), 16:9 (720p)
Aspect ratio SD video analog	Scale Analog Output -> On: 4:3 (if Encoder 1 resolution: 4CIF, SXGA-), 16:9 Letterbox (if Encoder 1 resolution: 720p) Scale Analog Output -> Off: 4:3 (cropped from center sensor area)
Video compression	H.264, MJPEG
Frame rate	See tables "Maximum Frame Rates"
Video bit rate	0.25–10 Mbps, CBR (constant bit rate), VBR (variable bit rate)
Video streaming	Up to 3 streams with different settings simultaneously, note the tables "Available Encoder Combinations"
Live streaming transmission method	Unicast, Multicast

Functions	
Hybrid Video	On, Off
WDR (Wide Dynamic Range) mode	Automatic, On, Off
Black-and-white mode	Automatic (at low light), On, Off
Automatic Electronic Shutter	1/4(3) – 1/10000 s
Slow Shutter Limit	1/4(3) – 1/30(25) s
Digital flip function	Horizontal, vertical or both axes
Digital Image Shift	120 px vertical at 720p resolutions
Digital Noise Reduction (DNR)	Yes
Exposure presets	Universal, Indoor, Fluorescent, Casino (optional)
Exposure metering	Average metering (light information from entire scene), center-weighted average metering, spot metering
Brightness adjustment	Automatic (ALC), manual
Gain control	Automatic (AGC)
White balance	MWB (manual): 2500 K – 6500 K, ATW (Auto Tracking White Balance), One-Push AWB (Automatic White Balance)
Privacy Zone Masking	Yes (max. 40% 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

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

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Protocols	
Ethernet protocols	IPv4, TCP, UDP, ARP, ICMP, DHCP, NTP, HTTP, RTSP, IGMP V2, FTP, SMTP, RTP, RTCP
SNMP support	Yes

Connections	
Video output	1x BNC (CVBS, 1.0 V _{p-p} , 75 Ω)
Ethernet	1x RJ45, 10BASE-T/100BASE-TX PoE
Power IN	1x Weidmüller male connector

Electrical Data	
Voltage supply	12 V DC ±10% PoE (Class 0)
PoE standard	IEEE 802.3af
Power consumption	2.9 W typical (max. 4.0 W)

Mechanical Data	In-ceiling Variant	Surface Variant
Dimensions	Approx. Ø 95 × H 72 mm (Ø 3.72 × H 2.82 inches)	Approx. Ø 93 × H 66 mm (Ø 3.64 × H 2.58 inches)
Weight	Approx. 450 g (0.99 lb)	Approx. 740 g (1.63 lb)
Adjustment	PPL ball joint (Push, Point & Lock for easy alignment)	
Bubble	Clear	
Vandal-resistant	Yes	
IK protection	IK10 (up to 20 joules)	
IP rating	--	IP66
Color	Black with white housing ring	White

Environmental Conditions	In-Ceiling Variant (Indoor)	Surface Variant (Indoor and Outdoor):
Operating temperature	-20°C to +40°C	-20°C to +50°C
Relative humidity	0% - 90% RH, non-condensing	

Miscellaneous	
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 ²⁾
ONVIF compliance	Core Specifications 1.01 & 1.02

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

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

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Available Encoder Combinations

Encoder 1 (H.264)	Encoder 2 (H.264, MJPEG)	Encoder 2 (H.264)
SXGA- / 30 fps	VGA (640 × 480) / 15 fps	--
720p / 60 fps (optional)	--	--
720p / 30 fps	VGA (640 × 352) / 30 fps	--
720p / 30 fps	VGA (640 × 352) / 15 fps	QCIF (192 × 128) / 15 fps, only if Encoder 2 = MJPEG
4CIF / 30 fps	4CIF / 30 fps	--

Encoder 1 (MJPEG)	Encoder 2 (H.264, MJPEG)	Encoder 2 (H.264)
SXGA- / 30 fps	--	--
720p / 60 fps (optional)	--	--
720p / 30 fps	--	--
4CIF / 30 fps	--	--

Maximum Frame Rates with Hybrid Video = OFF

Resolution	Encoder 1	Analog Output
SXGA-	25/30 fps	12.5/15 fps
720p	25/30 fps	25/30 fps
720p	50/60 fps (optional)	--
4CIF	25/30 fps	25/30 fps

Maximum Frame Rates with Hybrid Video = ON

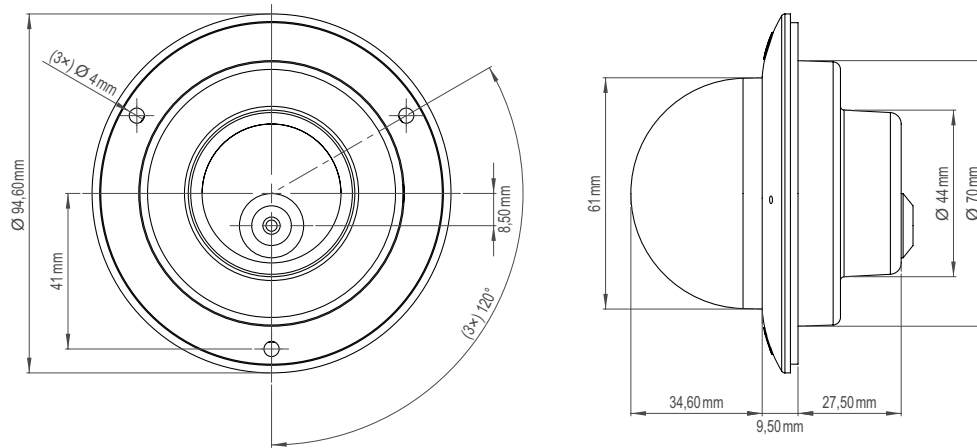
Resolution	Encoder 1	Analog Output
SXGA-	12.5/15 fps	25/30 fps
720p	25/30 fps	25/30 fps
720p	50/60 fps (optional)	--
4CIF	25/30 fps	25/30 fps

DDF4220HDV

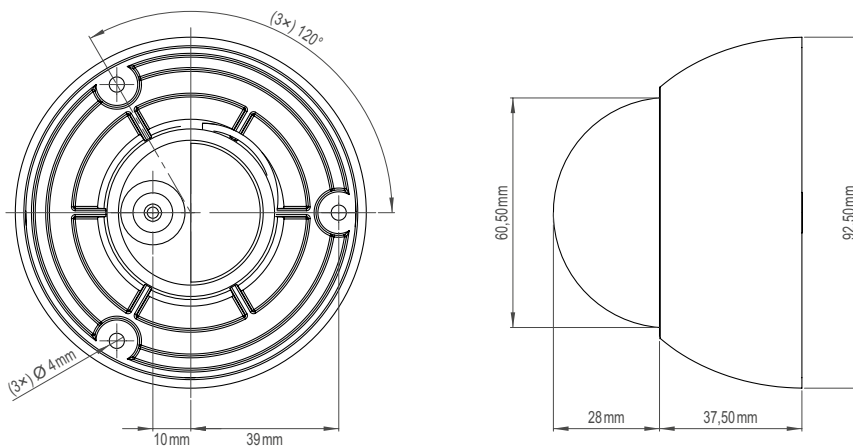
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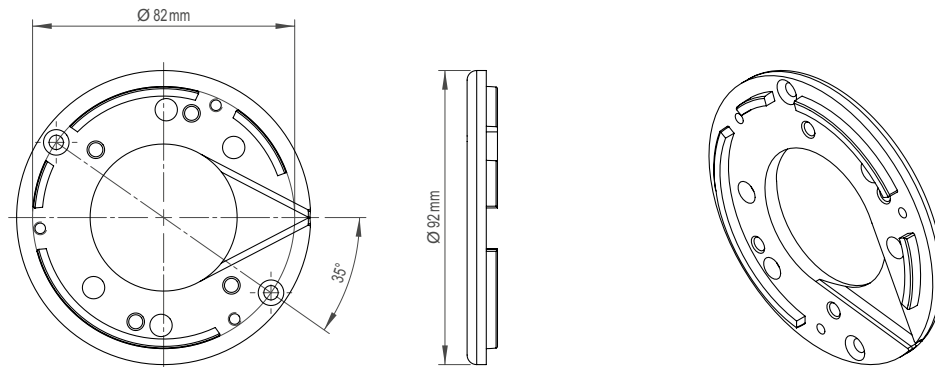
DDF4220HDV-IM



DDF4220HDV-SM



Mounting ring for DDF4220HDV-SM (compatible with flush-mounted sockets according to DIN 49073)



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See more.