

3K High Definition Camera, 6 MP, 1080p/60, 720p/120, H.264, Day/Night (ICR), WDR, Motor-driven Varifocal Lens, PoE, Dome Housing























The cameras of the Topline series have been designed for applications that require high resolution in real-time and simultaneously a good light sensitivity. The most advanced sensor and encoder technology and the sophisticated image processing provide recordings with a resolution of up to 3K High Definition at excellent contrast, brilliant clarity as well as highest detail resolution and color fidelity.

The DDF5300HDV-DN is available with an integrated lens in a vandal-resistant dome housing. It can be conventionally supplied with an external power supply unit or conveniently with Power over Ethernet.

Very good Low-Light characteristics

The very good light sensitivity of the sensor and the sophisticated image processing ensure crisp color images even in low lighting. In night mode, the camera also provides outstanding results due to the very good 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 can be defined and adjusted for the exposure settings.

Motor-driven varifocal lens with P-Iris

The camera has a motor-driven 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 4:3 resolutions, horizontal at 2560 × 1920 resolution) 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. 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 realtime (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 SMA-VIA 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 SmartFinder function.

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 SMAVIA recording system. This stores the video stream with high speed and then continues to record the live stream seamlessly.

Further features

- 1/1.8" 3K HD CMOS image sensor
- Very good light sensitivity 0.01lux
- Memory expansion with microSDHC card
- Frame rate of 60 fps at 1080p
- Analog video preview output
- Video compression H.264, MJPEG
- Privacy Zone Masking
- Digital flip function
- Wide Dynamic Range (WDR)
- 3D Digital Noise Reduction (3D-DNR)
- Voltage supply with PoE (Class 0)
- Dome housing with vandalism protection (IK10)
- In-ceiling or surface mount version



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In-Ceiling Variants

005170.409



DDF5300HDV-DN-IM

3K High Definition Camera, 6MP, 1080p/60, 720p/120, H.264, day/night (ICR), WDR, motor-driven varifocal lens, PoE, dome housing, in-ceiling mount variant, F1.6 / 4.5 - 10 mm

005170.410



DDF5300HDV-DN-IM

3K High Definition Camera, 6 MP, 1080p/60, 720p/120, H.264, day/night (ICR), WDR, motor-driven varifocal lens, PoE, dome housing, in-ceiling mount variant, F1.6 / 12 - 40 mm

Surface Variants

005171.409



DDF5300HDV-DN-SM

3K High Definition Camera, 6MP, 1080p/60, 720p/120, H.264, day/night (ICR), WDR, motor-driven varifocal lens, PoE, dome housing, surface mount variant, F1.6 / $4.5 - 10 \, \text{mm}$

005171.410



DDF5300HDV-DN-SM

3K High Definition Camera, 6MP, 1080p/60, 720p/120, H.264, day/night (ICR), WDR, motor-driven varifocal lens, PoE, dome housing, surface mount variant, F1.6 / 12 - 40 mm

Accessories

006050



Tinted Bubble 4.5"

For in-ceiling and surface mount variant, 4.5"

004316



PoE Midspan 30 W

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

005017



Wall Mount Bracket (SM Housing)

Wall mount bracket with seals and internal cable routing, for vandal-resistant (IK10) surface-mount housing (152 mm)



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Sensor	
Туре	1/1.8" CMOS
Number of sensor pixels	6MP
Light sensitivity	0.01lux (F1.6, AGC ON)
Dynamic range	92dB
Signal to noise ration	> 50 dB

Lens	F1.6 / 4.5 - 10 mm	F1.6 / 12 - 40 mm
Туре	Motor-driven varifocal lens	
Format / Mount	1/1.8" Board Lens	
Focal length	4.5 – 10 mm	12 – 40 mm
Iris range	F1.6 - Closed	
Iris control	P-Iris (motor-driven)	
Zoom / Focus control	Motor-driven	
Minimum object distance	0.3 m	0.6 m
IR corrected	Yes	
Available angles of $view^{1)}$ (H \times V) at wide end	88° × 48° in mode 3072 × 1728 72° × 58° in mode 2560 × 2048	34° × 19° in mode 3072 × 1728 28° × 23° in mode 2560 × 2048
Available angles of $view^{1)}$ (H \times V) at tele end	45° × 25° in mode 3072 × 1728 37° × 30° in mode 2560 × 2048	12° × 7° in mode 3072 × 1728 10° × 8° in mode 2560 × 2048

Format and Encoding	
Video standard	SDTV (PAL/NTSC) HDTV (SMPTE 296M, SMPTE 274M)
Resolution in mode 3072 × 1728 (16:9)	5 MP/3K (3072 × 1728) @ 25/30 fps 2 MP/1080p (1920 × 1080) @ 25/30 fps 720p (1280 × 720) @ 25/30 fps 480p (640 × 480, anamorphic) @ 25/30 fps
Resolution in mode 2560 × 2048 (4:3)	5 MP (2560 × 1920) @ 25/30 fps 4 MP (2336 × 1744) @ 25/30 fps 3 MP (2048 × 1536) @ 25/30 fps 1 MP (1280 × 960) @ 25/30 fps 480p (640 × 480) @ 25/30 fps
Resolution in mode 1080p (16:9)	2 MP/1080p (1920 × 1080) @ 50/60 fps 720p (1280 × 720) @ 50/60 fps 720p (1280 × 720) @ 120 fps ²⁾ 480p (640 × 480, anamorphic) @ 50/60 fps
Video compression	H.264, MJPEG
Frame rate	Up to 120 fps ²⁾
Video bit rate	1–50 Mbps, CBR (constant bit rate), VBR (variable bit rate), with priority setting for image quality ³⁾
Video streaming	Up to 4 streams with different settings simultaneously
Audio compression	G.711
Audio bit rate	64kbps
Live streaming transmission method	Unicast, Multicast
Number of live streams / clients	Up to 5 streams with up to 16 Mbps simultaneously

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



 $All \ specifications \ \pm 5\%. \ Minor \ deviations \ with \ lenses \ may \ be \ a \ result \ of \ manufacturing \ tolerances \ and \ do \ not \ constitute \ a \ defect.$



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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), On, Off
Automatic Electronic Shutter	1/1-1/8000s
Slow Shutter Limit	1/1-1/1000s
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 4:3 resolutions, horizontal at 2560 × 1920 resolution
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 to PGuard advance, via E-Mail and FTP image upload in preparation
Alarm trigger	Application restart, EdgeStorage status
Video Content Analysis ⁴⁾	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) ⁵⁾
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	1× BNC (CVBS, 1.0 $V_{p-p'}$, 75 Ω), 704 × 576 @50 Hz, 704 × 480 @60 Hz (4:3) 1× HDMI micro connector (type D), 1080p (1920 × 1080) @ 25/30 fps (16:9)
Audio Line IN	1× 3.5 mm phone jack for stereo plug Input level: max. 2.83 V $_{\rm pp}$ Input impedance: 29 k Ω
Audio Line OUT	1× 3.5 mm phone jack for stereo plug Output level at 10 kΩ load: max. 3.11 $V_{\rm p-p}$ Output impedance: 320 Ω
Ethernet	1× RJ45, 10BASE-T-/100BASE-TX PoE/1000BASE-TX PoE
Power IN	1× Weidmüller male connector SL 3.50/02/90G (mating connector Weidmüller BL 3.50/02/180 SN)

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

Video content analysis is not available if more than 2 streams or bit rates > 16 Mbps are configured.

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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Mechanical Data	DDF5300HDV-DN-IM	DDF5300HDV-DN-SM
Dimensions	Approx. Ø 170 \times H 135 mm Ø 6.7 \times H 5.3 inches	Approx. Ø 153 \times H 135 mm Ø 6.0 \times H 5.3 inches
Weight	Approx. 1200 g 2.6 lb	Approx. 1100 g 2.4 lb
Adjustment	3-axes	
Bubble	Clear (with black inner liner)	
Vandal-resistant	Yes	
IK protection	IK10 (up to 20 joules)	IK10 (up to 20 joules)
IP rating		IP67
Color	Black with white housing ring	White

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	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 ⁶⁾
ONVIF compliance	Profile S

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

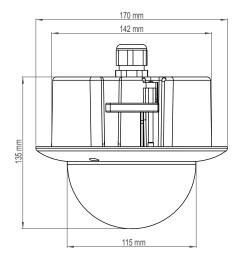
⁶⁾ ActiveX is a trademark or registered trademark of Microsoft Corporation headquartered in Redmond, Washington, USA

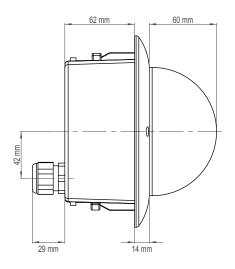




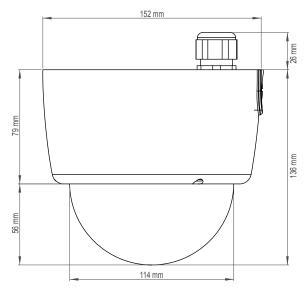
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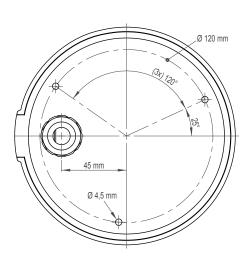
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