DDZ4020-YY/HS/HD DOMERA®

High-Speed IP Network PTZ Dome Camera, Full HD, 1080p/30, 20× Optical Zoom, Auto-focus, Wide Dynamic Range, Day/Night, PoE+

DOMERA® High-Definition

DOMERA® High-Definition HS is a modular Full HD high-speed PTZ dome camera system.

The high-resolution IP network PTZ dome camera DDZ4020-YY/HS/HD with 20× optical zoom, auto-focus, Wide Dynamic Range and Dallmeier Cam_inPIX® technology provides real-time Full High-Definition video and is available in three mounting variants (in-ceiling mount, surface mount, weather-proof).

Features

- 1/3" Full HD CMOS image sensor with Cam_inPIX® technology
- Pure Digital Signal Processing
- High-speed PTZ dome
- 20× optical zoom
- 12× digital zoom
- ICR[1] function for Day/Night switching
- Comprehensive set of image optimization functions like AWB, AGC, BLC and Slow Shutter
- Auto-focus with manual override
- Wide Dynamic Range (WDR)[2]
- Digital Noise Reduction (DNR)
- Resolution: SD (NTSC/PAL), HD (up to 1080p/30)
- Video compression: H.264, MJPEG
- Frame rate up to 60 fps[3]
- Simultaneous Dual-Streaming (video compression, resolutions, frame and bit rates of each stream independently adjustable)

- Privacy Zone Masking (hiding/masking of up to 8 protected areas)
- Motion detection[4] with selectable sensitivity
- Alarm notification via DaVid protocol, e-mail and FTP image upload
- Bidirectional audio (intercom)
- Local video memory[4] (USB/SDHC port)
- 64 MB RAM video buffer
- High-performance Pan/Tilt/Zoom mechanism
- 248 programmable preset positions, 16 programmable scans
- 8 programmable tours, 8 programmable pattern
- Voltage supply (PTZ camera) with PoE+ or 24/28 V AC
- Three available mounting variants (IP I/O interface integrated): in-ceiling mount (IM), surface mount (SM) or weather-proof (WM)
- Easy and quick installation
- IK10 and IP67 (weather-proof variant)
- ONVIF compliant
- DIN EN 50130-4 compliant

Variants	
000486.002717	**DDZ4020-IM/HS/HD DOMERA®** High-speed IP network PTZ dome camera, Full HD, 1080p/30, 20× optical zoom, WDR, in-ceiling mount variant
000487.002756	**DDZ4020-SM/HS/HD DOMERA®** High-speed IP network PTZ dome camera, Full HD, 1080p/30, 20× optical zoom, WDR, surface mount variant
000481.002717	**DDZ4020-WM/HS/HD DOMERA®** High-speed IP network PTZ dome camera, Full HD, 1080p/30, 20× optical zoom, WDR, weather-proof variant

Options	
000401	**Wall Mount Bracket Indoor** Black, for DOMERA® HD surface mount variant
001035	**Tinted Bubble** White cover ring, for DOMERA® SD/HD in-ceiling mount variant
001109	**Wall Mount Bracket Outdoor** White, for weather-proof housing
001111	**Pole Mount Bracket** Outdoor, white, for weather-proof housing
001112	**Corner Mount Bracket** Outdoor, white, for weather-proof housing
003847	**Junction Box DJB-115W** Outdoor, white, for weather-proof housing
001115	**Mounting Plate** Outdoor, white, for Wall Mount Bracket Outdoor (surface mounting), for Ceiling Mount Bracket (surface mounting), for Junction Box DJB-115W (corner and pole mounting)
001116	**Roof Mount Bracket**[5] Swan neck, outdoor, white, for weather-proof housing
001117	**Ceiling Mount Bracket** Outdoor, white, for weather-proof housing
001431	**EvC-1** High-Speed Ethernet data transmission via coaxial cable
002192	**VMC Joystick (with 200 cm USB cable)** Joystick module of the VMC-1 control panel as stand-alone device
004316	**PoE+ Power Supply 1-Port 30 W (Midspan)**

1) ICR = IR Cut Filter Removable
2) Provides enhanced colour reproduction and detail resolution even in scenes with a wide range of contrast and strong backlighting.
3) Depending on the set resolution.
4) Function is in preparation.
5) Not compatible with item number 003847

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Specifications

Sensor

Type	1/3" Full High-Definition CMOS image sensor with Cam_inPIX® technology
Effective pixels	Approx. 2 000 000 (2 Megapixels)
Signal processing	Pure Digital Signal Processing
Image capture	Progressive Scan
Minimum illumination	ICR[6] Off: 0.5 lux (F1.6, 50 IRE)
	ICR On: 0.095 lux (F1.6, 50 IRE)
Signal to noise ratio (SNR)	More than 50 dB

Lens

Type	F1.6 – F3.5 / f = 4.7 mm – 94.0 mm (20× optical zoom)
Aperture control	Autoiris
Horizontal angle of view	At 1080p: approx. 55.4° (wide end) to 2.9° (tele end)
	At 720p: approx. 37.6° (wide end) to 2.0° (tele end)
Minimum object distance	10 mm (wide end) to 800 mm (tele end)

Functions

Digital zoom	12× (240× with optical zoom)
Focus control	Auto-focus (AF sensitivity: Normal, Low), One-Push AF, Manual, Infinity mode (∞), AF near limit selectable
Wide Dynamic Range (WDR)	On / Off / Auto
Day/Night switching	ICR function (adjustable switching threshold level)
Black-and-white mode	Automatic (in Night mode), Manual (using Effects setting)
Electronic (slow) shutter	1/1 to 1/10000 s (22 steps), slow shutter limit selectable
Exposure control	Automatic (AE), Manual, Shutter Priority, Iris Priority, Bright
Exposure compensation	−10.5 dB to +10.5 dB (15 steps, 1.5 dB increments)
Gain control	Automatic (AGC) / Manual (−3 to +28 dB, 16 steps)
Digital Noise Reduction (DNR)	On (4 levels) / Off
White balance (WB)	Auto (AWB), ATW, Indoor, Outdoor, Outdoor Auto, Sodium Vapor Lamp (Fix/Auto), One-Push, Manual
Gamma correction	Standard, Gamma 1, S-Curve Low, S-Curve Mid, S-Curve High
Backlight compensation (BLC)	On / Off
Flip function	Yes
Privacy Zone Masking	Hiding/Masking of up to 8 protected areas (Polygon, Block, Video Off, Mosaik)[8]
Effects	B/W (black-and-white), Negative
Motion detection (VMD)[7]	With selectable sensitivity (5 levels)
Alarm notification	Via DaVid protocol (Dallmeier Video Protocol) to PGuard advance, e-mail, FTP image upload
Alarm trigger	Contact IN status change, Contact OUT remote status change (via DaVid protocol), video signal loss
Alarm actions	PTZ alarm action, Contact OUT status change
Configuration IP I/O interface	With web browser
Configuration/control PTZ dome camera	Via OSD[9] with SMAVIA Viewing Client
Languages	English, German, French, Spanish, Italian

PTZ Functions

Pan / Tilt	360° endless / 0° – 180°
Variable / Manual speed	Pan: max. 120°/s, Tilt: max. 120°/s (Turbo: max. 420°/s)
Preset speed	Pan: 420°/s, Tilt: 420°/s (±0,1°)
Programmable presets	248 positions with camera status (16-character title)
Programmable scans	16 scans (including diagonal scans), 1 Auto Pan (360° continuous panning)
Programmable tours	8
Programmable pattern	8 (total up to 480 seconds)
Alarm actions at Contact IN status change	Automatic execution of stored functions (presets, scans, tours or pattern), Contact OUT status change

Format and Encoding

Video standard	SDTV (PAL/NTSC), HDTV (SMPTE 296M, SMPTE 274M)
Resolution SD	4CIF (704 × 576), CIF (352 × 288), QCIF (176 × 144), 4SIF (704 × 480), SIF (352 × 240), QSIF (176 × 112), VGA (640 × 480), QVGA (320 × 240),
Resolution HD	1080p (1920 × 1080), HD H (1920 × 540), HD D (1440 × 720), 720p (1280 × 720)
Video compression	H.264, MJPEG
Audio compression	MPEG-1/2 Layer 2, G.711, G.722.1
Frame rate	Up to 60 fps at resolution SD and 720p. Up to 30 fps at 1080p, HD H, HD D
Video bit rate	0.25 – 8 Mbps, CBR (constant bit rate) or VBR (variable bit rate)
Audio bit rate	32 – 160 kbps (MPEG-1/2 Layer 2), 64 kbps (G.711), 16 kbps (G.722.1)
Video streaming	Simultaneous Dual-Streaming: Video compression, resolutions, frame and bit rates of each stream independently adjustable (maximum total frame rate of all streams 30 fps with maximum resolution)
Transfer format	Progressive (full image)
Live streaming transmission method	Unicast, Multicast

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6) ICR = IR Cut Filter Removable
7) Function is in preparation.

8) Repeated mask positioning in the image can differ slightly from the stored original position depending on the zoom factor or positioning speed.
9) OSD = On Screen Display

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Interfaces

Audio IN (stereo)	1× 3.5 mm phone jack (Line IN)
Audio OUT (stereo)	1× 3.5 mm phone jack
Contact IN	3×
Contact OUT	1×
Serial interface	1× RS485 (full duplex, half duplex)
Local video memory	USB/SDHC port integrated[10] (adapter for SDHC card separately available)
Ethernet	1× RJ45, 10BASE-T-/100BASE-TX-PoE

Protocols

Ethernet protocols	IPv4, TCP, UDP, ARP, ICMP, DHCP, NTP, HTTP, RTSP, IGMP V2, FTP, SMTP, RTP, RTCP
SNMP support	Yes
PTZ control protocols	Dallmeier DCCP, Pelco D

Miscellaneous

Video buffer	64 MB RAM ring storage (pre- and post alarm, network failure compensation)
Programming interface	Open platform for integration into third-party systems using API and ActiveX*
ONVIF compliance	Core Specifications 1.01 & 1.02

Electrical Data

Voltage supply	PTZ camera:	Power supply unit 1 with 24/28 V AC ±10% (50/60 Hz) or via PoE+[11]
	Fan/heater (weather-proof housing):	Power supply unit 2 with 24 V AC (50/60 Hz), max. 3A
PoE standard	IEEE 802.3at	
Power consumption	In-ceiling mount variant: max. 25 W	
	Surface mount variant: max. 25 W	
	Weather-proof variant: max. 25 W (max. 89 W with fan/heater)	

Mechanical Data

Dimensions	In-ceiling mount variant: approx. Ø 227 × H 248 mm (Ø 8.94 × H 9.76 inches)
	Surface mount variant: approx. Ø 166 × H 244 mm (Ø 6.54 × H 9.61 inches)
	Weather-proof variant: approx. Ø 258.5 × H 330 mm (Ø 10.18 × H 12.99 inches)
Weight	In-ceiling mount variant: approx. 2025 g (4.46 lb)
	Surface mount variant: approx. 1755 g (3.87 lb)
	Weather-proof variant: approx. 4425 g (9.76 lb)
Colour	In-ceiling mount variant: black housing, white cover ring
	Surface mount variant: black
	Weather-proof variant: white
Bubble	Clear
Vandal-resistant	Yes (weather-proof variant)
IK protection	IK10 protection against external mechanical impacts (up to 20 joules, weather-proof variant)
IP rating	IP67 (weather-proof variant)

Fan/heater (weather-proof housing)

Fan/heater	On: ≤ +5°C (±3°C), Off: ≥ +10°C (±3°C); On: ≤ 41°F (±5°F), Off: ≥ 50°F (±5°F)

Environmental Conditions

Operating temperature	In-ceiling mount variant (indoor): −10°C to +40°C (14°F to 104°F)
	Surface mount variant (indoor): −10°C to +40°C (14°F to 104°F)
	Weather-proof variant (outdoor): −40°C to +50°C (−40°F to 122°F)
	(minimum start-up temperature: −30°C/−22°F)
Relative humidity	0% − 90% RH, non-condensing

Approvals/Certifications

Type	CE, FCC, UL, ACA, UVV "Kassen" (DGUV Test), CB, DIN EN 50130-4 compliant

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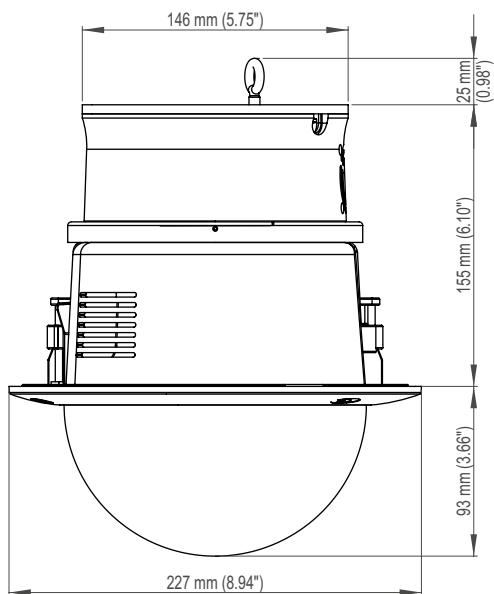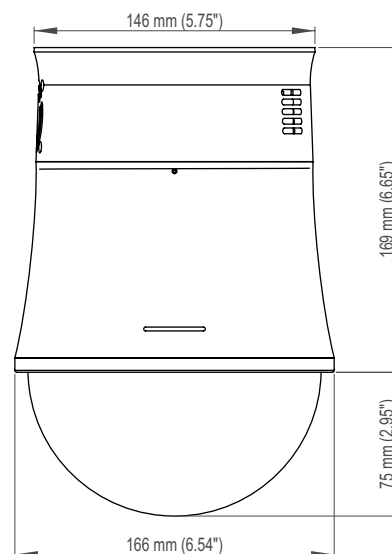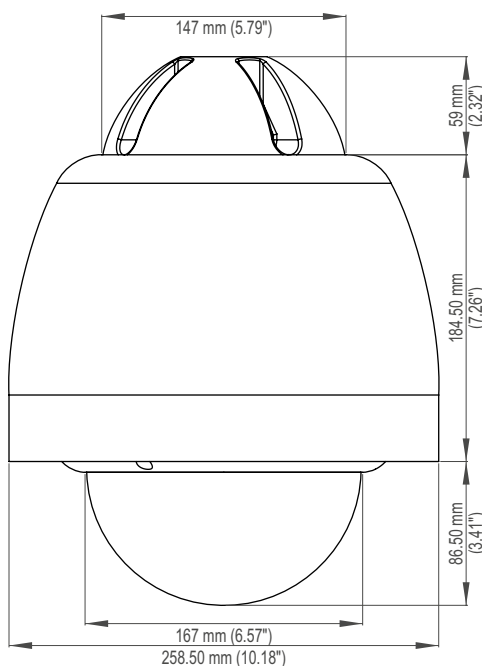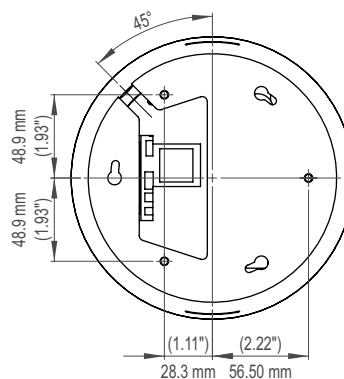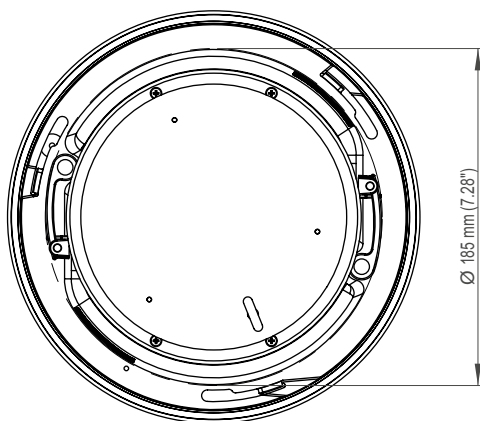
Dimensions

Fig. 1: In-ceiling mount variant

Fig. 2: Surface mount variant

Fig. 3: Weather-proof variant

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