Camera Series RDF5000DN

DOMERA®

High definition camera, 2/5 MP, H.265, day/night, VCA, WDR/HDR, PoE, varifocal lens, motorized 3-axis adjustment (RPoD), variable DOMERA® mounting concept

reddot winner 2022

ONVIF | S T

| **2MP** | **5MP** | **60 FPS @ Full HD** | **Domera® OS** | **VCA** | **RPoD** | **Adaptive IR** | **WDR/HDR** | **EdgeStorage** | **Privacy** | **Security** |
| RDF5120 | RDF5140 | | | | | | | | | |

The cameras of the RDF5000DN series offer an economical balance of highest resolution and light sensitivity. Their image sensor has very good light sensitivity and delivers detailed color images even in low light conditions. The combination of the most advanced encoder technology and the sophisticated image processing results in real-time recordings with high resolution at excellent contrast, brilliant clarity and highest color fidelity.

DOMERA®OS

The cameras are equipped with the hardened Linux operating system DOMERA® OS. In addition to a kernel with long-term support, it offers extensive security functions such as the deactivation of unused ports or the enforcement of strict passwords. In addition, DOMERA® OS supports secure network authentication (IEEE 802.1X) and encrypted data transmission (TLS 1.2/AES-256). All software components are subject to permanent monitoring, maintenance and updating, while the effectiveness of all measures is ensured by regular external penetration tests.

Video Content Analysis

The integrated Video Content Analysis (VCA) detects movements and objects in the uncompressed image and analyzes them in real-time (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 Dallmeier 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 with Dallmeier Client software.

Wide Dynamic Range

The camera offers a WDR function (also known as High Dynamic Range (HDR)) for optimal recording of scenes with very bright and dark areas. Each image is captured with two special settings that are combined in real time to create a balanced result. The resulting video stream offers much more detail in both light and dark areas and is visually very close to the human eye's perception.

Remote Positioning Dome

The camera is equipped with a motor-driven gimbal for precise lens alignment over the network (RPoD / PTRZ). Remote control is provided by the DOMERA® OS user interface and allows for simple installation and easy adjustment of the captured scene if requirements change. In addition, DOMERA® OS supports the adjustment of zoom, focus and iris of the P-Iris lens over the network. After installation and commissioning of the camera, no further measures are required on site.

Adaptive IR Illumination

The homogeneous illumination of the IR models is discreetly integrated under the permeable housing cover and can be manually or automatically adapted to the captured scene. Orientation and intensity of the illumination are dynamically determined by the position of the lens and the exposure control. In this way, disturbing side effects such as reflections from white walls next to the detection area can be avoided as far as possible. As a result, the camera delivers clear black and white images with excellent contrast even in seemingly complete darkness.

Further features

- Video compression H.264, H.265, MJPEG
- EdgeStorage and memory expansion with SD card
- Ambient light sensor and removable IR cut filter
- Automatic switching of presets for day and night
- Position sensor for automatic corridor mode integrated
- GDPR-compliant functions for data protection and security
- In-ceiling housing UL 2043 "plenum rated" compliant
- Compatible with ONVIF Profile S and Profile T
- Network protocol MQTT supported

Camera Series RDF5000DN

DOMERA®

High definition camera, 2/5 MP, H.265, day/night, VCA, WDR/HDR, PoE, varifocal lens,
motorized 3-axis adjustment (RPoD), variable DOMERA® mounting concept

Series 5120		
	008526.401	**RDF5120DN** High definition camera, 2 MP, H.265, day/night, VCA, WDR/HDR, PoE, DOMERA® RPoD in-ceiling housing, design cover black IR translucent[1], motor-driven varifocal lens F1.4 / 3 – 10 mm
	008526.402	**RDF5120DN** High definition camera, 2 MP, H.265, day/night, VCA, WDR/HDR, PoE, DOMERA® RPoD in-ceiling housing, design cover black IR translucent[1], motor-driven varifocal lens F1.8 / 12 – 40 mm
Series 5140		
	008527.401	**RDF5140DN** High definition camera, 5 MP, H.265, day/night, VCA, WDR/HDR, PoE, DOMERA® RPoD in-ceiling housing, design cover black IR translucent[1], motor-driven varifocal lens F1.4 / 3 – 10 mm
	008527.402	**RDF5140DN** High definition camera, 5 MP, H.265, day/night, VCA, WDR/HDR, PoE, DOMERA® RPoD in-ceiling housing, design cover black IR translucent[1], motor-driven varifocal lens F1.8 / 12 – 40 mm
Illumination (series RDF6000DN and RDF5000DN, SDF6800DN)		
	008406	**DOMERA® Dual Matrix LED Ring** Illumination for DOMERA® in-ceiling housing, five IR LEDs and five white light LEDs, event-controlled switching between IR and white light illumination, individual control of the intensity of individual LEDs or automatic adjustment to the captured scene, recommended for models with 4.5 - 9.7 mm or fisheye lens (only ex factory)
Housing cover		
	008408	**DOMERA® Housing Cover Aluminium LED Black** Aluminium housing cover for DOMERA® in-ceiling housing, can be combined with DOMERA® Surface Mount Adapter and DOMERA® Wall Bracket, black, with cut-outs for IR and white light LEDs[2]
	008529	**DOMERA® Housing Cover Aluminium Black** Aluminium housing cover for DOMERA® in-ceiling housing, can be combined with DOMERA® Surface Mount Adapter and DOMERA® Wall Bracket, black, cannot be combined with cameras with DOMERA® Dual Matrix LED Ring
	008410	**DOMERA® Housing Cover Aluminium White** Aluminium housing cover for DOMERA® in-ceiling housing, can be combined with DOMERA® Surface Mount Adapter and DOMERA® Wall Bracket, white, cannot be combined with cameras with DOMERA® Dual Matrix LED Ring
Adapter		
	008407	**DOMERA® Surface Mount Adapter** Adapter for surface mounting a DOMERA® in-ceiling housing, safety rope included, polycarbonate, white
	008209	**DOMERA® Wall Bracket** Multifunctional bracket for mounting a DOMERA® in-ceiling housing on a wall or pole, compatible with the Mountera® Vandalproof Pole Adapter and the Mountera® Box, safety rope included, aluminum, white

1) Installation without tool, IR transmission 70%, white light transmission 10%, reflection-free at tilt from 25° to 90°
2) Installation with tool, IR transmission 100%, white light transmission 100%, reflection-free at tilt from 0° to 90°

Camera Series RDF5000DN

High definition camera, 2/5 MP, H.265, day/night, VCA, WDR/HDR, PoE, varifocal lens,
motorized 3-axis adjustment (RPoD), variable DOMERA® mounting concept

Extensions		
	008421	**DOMERA® Breakout Cable** Breakout cable with 1× Audio IN[3], 1× Audio OUT[3], 2× Contact IN, 2× Contact OUT, 1× power supply
	008423	**DOMERA® Passive Heating Kit** Fan based heating by using the waste heat of the electronic components (approx. 6 W) to prevent fogging on the inside of the dome, manual remote control via DOMERA® OS user interface (ex factory only)

Power supply		
	004316	**PoE Midspan 30 W** Midspan power supply unit, 1× Ethernet port, 10/100/1000Base-T, 802.3at, 802.3af, 30 W

Included Support and License Interval

Camera Support and License Interval Basic
License for the use of the support services of the Support Level Basic for 60 months,
license for the update of Domera® OS with updates, upgrades and security updates[4] for 12 months,
unlimited license for the use of the VCA Motion Detection function,
bring-in warranty for 24 months

Optional Support and License Interval

008528 **Camera Support and License Interval Premium and Warranty (Total of 60 Months)**
License for the use of the support services of the Support Level Premium for 60 months,
license for the update of Domera® OS with updates, upgrades and security updates[4] for 60 months,
extension of bring-in warranty to a total of 60 months,
(ex factory only)

Optional Maintenance

008416 **Camera Software Maintenance (Plus 12 Months)**
License for the update of Domera® OS with updates, upgrades and security updates[4] for 12 months

Optional Warranty

008417 **Camera Hardware Warranty (Total of 60 Months)**
Extension of bring-in warranty to a total of 60 months

---

3)   The Audio I/O function is not supported by the RDF5000 series cameras.
4)   Security updates for relevant CVE vulnerabilities that become known will be provided (subject to technical feasibility) for the entire runtime of the software maintenance.

MADE IN GERMANY

Camera Series RDF5000DN

DOMERA®

High definition camera, 2/5 MP, H.265, day/night, VCA, WDR/HDR, PoE, varifocal lens,
motorized 3-axis adjustment (RPoD), variable DOMERA® mounting concept

Sensor	
Type	1/2.8" CMOS
Number of sensor pixels	5MP (2592 × 1944)
Light sensitivity	Models with IR illumination: 0 lux (IR LED ON) Models without IR illumination: < 0.03 lux (AGC ON)
High Dynamic Range	> 100 dB WDR
Signal to noise ration	> 50 dB

Lens	F1.4 / 3 – 10 mm	F1.8 / 12 – 40 mm
Type	Motor-driven varifocal lens	Motor-driven varifocal lens
Format / Mount	1/3" Board Lens	1/3" Board Lens
Focal length	3 – 10 mm	12 – 40 mm
Iris range	F1.4 – Closed	F1.8 – Closed
Iris control	P-Iris (motor-driven)	P-Iris (motor-driven)
Zoom / Focus control	Motor-driven	Motor-driven
Minimum object distance	0.5 m	2.5 m
IR corrected	Yes	Yes
Available angles of view[5] (H × V) at wide end	111,0° × 79,0° @ all 4:3 resolutions 111,0° × 59,2° @ all 16:9 resolutions	23,8° × 17,7° @ all 4:3 resolutions 23,8° × 13,2° @ all 16:9 resolutions
Available angles of view[5] (H × V) at tele end	31,9° × 23,9° @ all 4:3 resolutions 31,9° × 17,8° @ all 16:9 resolutions	8,3° × 6,2° @ all 4:3 resolutions 8,3° × 4,7° @ all 16:9 resolutions)

Format and Encoding	RDF5120DN	RDF5140DN
Video standard	SDTV (PAL/NTSC) HDTV (SMPTE 296M, SMPTE 274M)	
Resolution 4:3[6]	1,5 MP (1440 × 1080) @ 25/30 fps 1,2 MP (1280 × 960) @ 25/30 fps 640 × 480, 320 × 240 @ 50/60 fps	5 MP (2592 × 1944) @ 15 fps 3 MP (2016 × 1504) @ 25/30 fps 1,5 MP (1440 × 1080) @ 25/30 fps 1,2 MP (1280 × 960) @ 25/30 fps 640 × 480, 320 × 240 @ 50/60 fps
Resolution 16:9[6]	1080p (1920 × 1080) @ 50/60 fps 720p (1280 × 720) @ 50/60 fps 640 × 480, 640 × 368, 480 × 272, 320 × 240 @ 50/60 fps	4 MP (2592 × 1456) @ 25/30 fps 1080p (1920 × 1080) @ 50/60 fps 720p (1280 × 720) @ 50/60 fps 640 × 480, 640 × 368, 480 × 272, 320 × 240 @ 50/60 fps
Video compression	H.264, H.265, MJPEG	
Frame rate[6]	Up to 60 fps	
Video bit rate	1 – 12 Mbps, constant and variable bit rate with priority setting for image quality[7]	
Video streaming	Up to 3 streams with different settings simultaneously	
Live streaming transmission method	Unicast, Multicast	
Number of live streams / clients	Up to 4 streams with up to 12 Mbps simultaneously	

5) All specifications ±5%. Minor deviations with lenses may be a result of manufacturing tolerances and do not constitute a defect.
6) If the WDR/HDR function is activated, a frame rate of maximum 25 fps can be used at all resolutions.
7) If the total available bit rate is not sufficient, not the image quality but the number of frames is adjusted.

Camera Series RDF5000DN

DOMERA®

High definition camera, 2/5 MP, H.265, day/night, VCA, WDR/HDR, PoE, varifocal lens,
motorized 3-axis adjustment (RPoD), variable DOMERA® mounting concept

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 – 1/8000 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 image optimization	Wide Dynamic Range (WDR), also known as High Dynamic Range (HDR)
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 up to 16 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 (VCA)	VCA Motion Detection, VCA Tamper Detection, VCA Intrusion Detection, VCA Line Crossing
Video Content Analysis actions	Notification via DaVid/PGuard, switching of relays and LEDs, message via MQTT/HTTP

Protocols	
Ethernet protocols	IPv4 (ARP, ICMP, IGMPv2/IGMPv3), UDP, TCP, LLDP, CDP (v1,v2), DSCP (QoS), DNS, DHCP, NTP, HTTP/HTTPS[8], RTSP/RTP/RTCP, SNMP (v1, v2c, v3), MQTT
Ethernet protocols in preparation	IPv6 (NDP, ICMPv6, MLDv1/MLDv2, SLAAC, RDNSS), UDPv6, TCPv6, DNSv6, DHCPv6, LDAP
Communication protocols	DaVid, DaVidS, ONVIF Profile S, Profile T, SNMP (v1, v2c, v3)
Security	HTTPS[8] encryption, SSL/TLS[8] 1.2 (AES), network access control according to IEEE 802.1X[8]

Connections	
Ethernet	1× RJ45, 10BASE-T/100BASE-TX PoE
Contact I/O interface[9]	2× Contact IN / 2× Contact OUT
Power IN[9]	1× Connection terminal 2 poles

LED Illumination (optional)	
Type	Five semi-covert 850 nm IR LEDs Five white light LEDs
Intensity	Individually adjustable per LED
IR Range	Up to approx. 30 m
IR Beam angle	Up to approx. 90° per LED, adaptively controlled according to focal length
Day/Night switching threshold	Adjustable

Camera Series RDF5000DN

DOMERA®

High definition camera, 2/5 MP, H.265, day/night, VCA, WDR/HDR, PoE, varifocal lens,
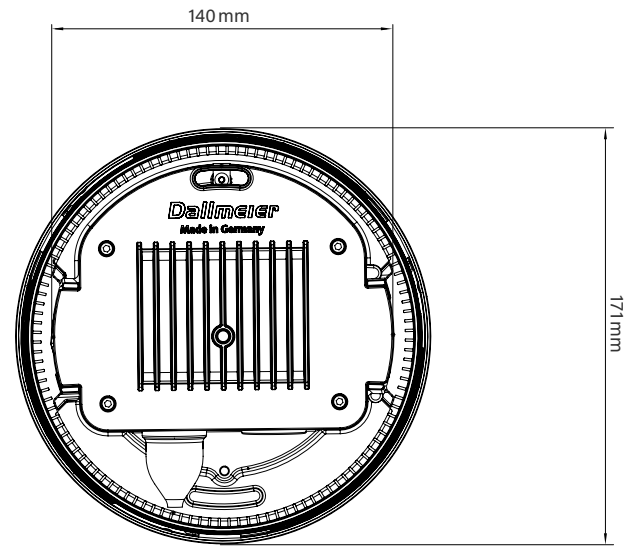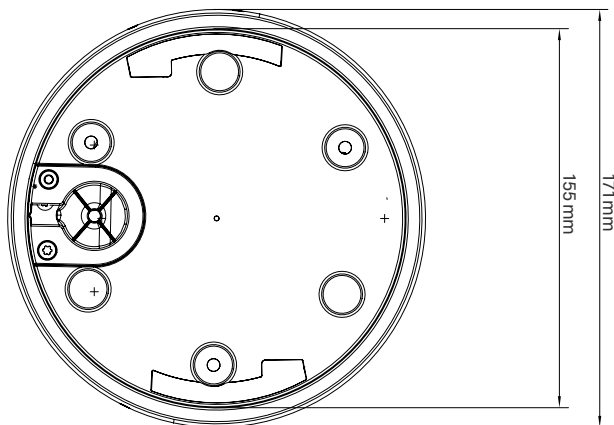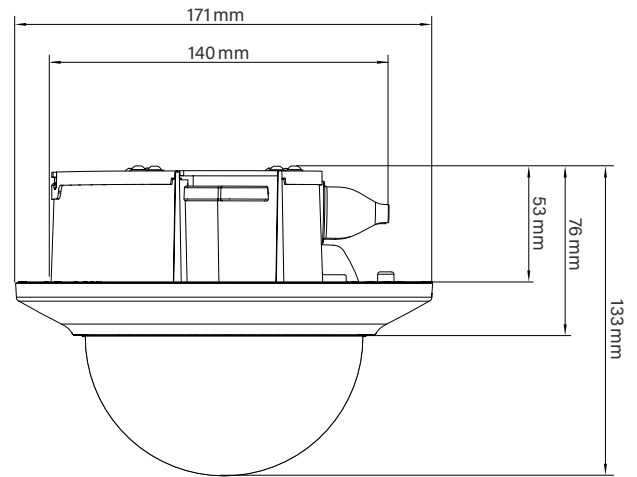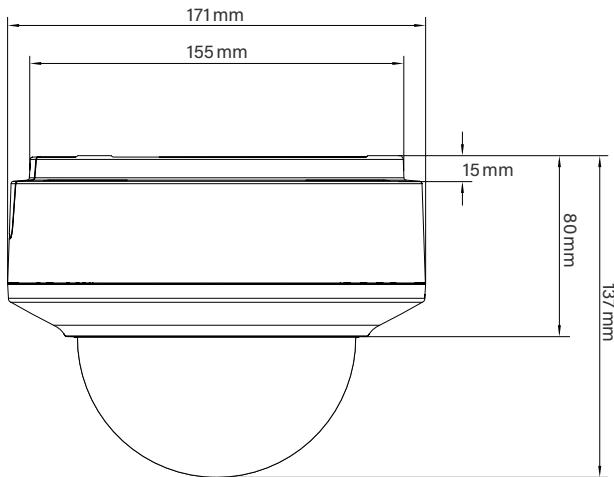motorized 3-axis adjustment (RPoD), variable DOMERA® mounting concept

Electrical Data	
Voltage supply	PoE (Class 0) 24 V DC - 48 V DC ±5% (with DOMERA® Breakout Cable)
PoE standard	IEEE 802.3af
Power consumption	Max. 6 W

Mechanical Data	
Dimensions	Approx. Ø 171 × H 133 mm (H 137 with surface mount adapter) Ø 6.7 × H 5.2 inches (H 5.4 with surface mount adapter)
Weight	Approx. 1.2 kg (1.4 kg with surface mount adapter) 2.6 lb (3.0 lb with surface mount adapter)
Adjustment	3-axes (Remote Positioning over network)
Bubble	Clear
Vandal-resistant	Yes
IK protection	IK10
IP rating	IP55 (in-Ceiling mount or in connection with DOMERA® Surface Mount Adapter) IP66 (in connection with DOMERA® Wall Bracket)
Color	In-ceiling housing black Housing cover black

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

Compatibility	
Recording	SMAVIA Recording Server V8.x.x SMAVIA Recording Server V9.x.x SeMSy® Recording Server V10.x.x
Evaluation	SMAVIA Viewing Client SeMSy® Workstation Software SeMSy® Compact

Miscellaneous	
Ambient light sensor	Integrated
Position sensor	Integrated
Microphone[10]	Integrated in DOMERA® Dual Matrix LED Ring
Local memory	50 MB RAM memory
Memory extension	microSDXC 32/64 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
ONVIF compliance	Profile S, Profile T
GDPR compliance	Supported

Approvals/Certifications	
Type	CE, FCC, RCM, UL, IEC/EN 62471 and UL2043 compliant

10) The Audio I/O function is not supported by the RDF5000 series cameras.

Camera Series RDF5000DN

DOMERA®

High definition camera, 2/5 MP, H.265, day/night, VCA, WDR/HDR, PoE, varifocal lens, motorized 3-axis adjustment (RPoD), variable DOMERA® mounting concept

171 mm
155 mm
15 mm
80 mm
137 mm

171 mm
140 mm
53 mm
76 mm
133 mm

155 mm
171 mm

140 mm
171 mm

See more.

Dallmeier

MADE IN GERMANY