DVS 1600 III

SEDOR® Appliance for the analysis of 16 and the recording of up to 24 video streams

SEDOR® is a high-performance and self-learning video analysis system which provides outstanding analytical results due to state-of-the-art image analysis algorithms and the constant adjustment of the system parameters to the current surrounding conditions (auto-adaptation). If used together with the different **analysis applications**, it can serve a variety of surveillance and counting purposes.

Stand-alone **Up to 24 Recording channels** **Up to 16 Analysis Channels** **Open Platform**

The **DVS 1600 III** is a high-performance **SEDOR® Video Analysis Appliance** for the **analysis of 16** and the **recording of up to 24** video streams.

Analysis Server

The dedicated analysis software **DVS Analysis Server** is installed ex factory and can be configured with a browser over Ethernet using the integrated **SEDOR® WebGUI**. Together with the optional licenses for the various **SEDOR® analysis applications**, up to 16 video streams can be used for video analysis according to demand.

Recording Server

The integrated server software **SMAVIA Recording Server** is suitable for the recording and playback of up to 24 video streams. The basic version with 8 recording channels can be expanded with up to 16 additional recording channels.

Viewing Client

The corresponding software **SMAVIA Viewing Client** allows for the independent and convenient evaluation of the recordings over Ethernet (LAN/WAN). It can run on systems with Windows operating system and is contained in the scope of delivery including an access license.

Open Platform

The pre-installed software **SMAVIA Recording Server** is designed as an open platform. Together with the according licenses, **third-party network cameras** can be recorded with **motion detection** and configured over the **ONVIF protocol**.

Features DVS Analysis Server

- Supports up to 16 analysis channels
- Licenses for analysis channels optional
- Supports Dallmeier IP cameras[1)]
- SEDOR® analysis application Art optional
- SEDOR® analysis application Intruder optional
- SEDOR® WebGUI integrated for analysis configuration via Ethernet
- SEDOR® camera sabotage protection optional
- Ethernet I/O interface optional

Features SMAVIA Recording Server

- Supports up to 24 recording channels
- Licenses for 8 recording channels included
- Basic license for the access with SMAVIA Viewing Client included
- License for updating the SMAVIA software for 12 months included
- License for EdgeStorage&SmartBackfill included
- License for Real-Time Recording included
- License for Multicast Recording included
- License for PRemote-HD and ViProxy optional
- Recording of third-party IP cameras with Motion Detection optional
- Configuration of third-party IP cameras via ONVIF protocol optional
- Evaluation with SMAVIA Viewing Client over the network

Appliance

006268		**DVS 1600 III** SEDOR® Appliance for the analysis of 16 and the recording of up to 24 video streams, license for 8× recording channels included, without licenses for analysis channels, without HDDs

1) Please note the white paper *DVS Analysis Server & Camera Settings*.

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2018-07-17
V1.0.4 / 8.21.9

DVS 1600 III

SEDOR® Appliance for the analysis of 16 and the recording of up to 24 video streams

Optional Licenses DVS Analysis Server

004247	**DLC - 1 Analysis Channel SEDOR® Art** License for the simultaneous use of the applications SEDOR® Art and SEDOR® Camera Sabotage Protection for one channel
004248	**DLC - 1 Analysis Channel SEDOR® Intruder** License for the simultaneous use of the applications SEDOR® Intruder and SEDOR® Camera Sabotage Protection for one channel
004210	**DLC - 1 Analysis Channel SEDOR® Camera Sabotage Protection** License for the detailed configuration, detection and reporting of covering, defocusing and twisting of the camera for one channel
000595	**DLC - SEDOR® Event Matrix** License for the use of the software interface for the connection of Ethernet I/O interfaces

Integrated Licenses SMAVIA Recording Server

DLC - 8 Recording Channel
License for the use of 8 channels for the recording of IP cameras or Panomera® Channels

DLC - 1 Basic Client Access
License for the access of a SMAVIA Viewing Client to SMAVIA Recording Server (basic license).
Free conversion of the basic license to a floating license on acquisition of additional access licenses.

DCP - Software Maintenance 12 Months
License for the update of the SMAVIA and SEDOR software for 12 months

DLC - EdgeStorage & SmartBackfill
License for the storage of video streams that have been buffered by Dallmeier IP cameras with EdgeStorage

DLC - SNMP
License for the integration into a central SNMP device management system

DLC - Multicast Streaming
License for the transmission of video streams via multicast in a SeMSy® III video management system

DLC - Multicast Recording
License for the recording of video streams of Dallmeier IP cameras using multicast transmission

DLC - Real-Time Recording
License for real-time recording for all channels (depending on the camera)

Optional SMAVIA Recording Server Licenses (Access)

003782	**DLC - 1 Additional Client Access** License for the simultaneous access of a further SMAVIA Viewing Client on SMAVIA Recording Server (floating license)
004068	**DLC - 5 Additional Client Access** License for the simultaneous access of five further SMAVIA Viewing Clients on SMAVIA Recording Server (floating license)
004069	**DLC - 10+ Additional Client Access (Unlimited)** License for the simultaneous access of an unlimited number of SMAVIA Viewing Clients on SMAVIA Recording Server, depending on system load and bandwidth (floating license)

Optional SMAVIA Recording Server Licenses (Channels)

003783	**DLC - 1 Additional Recording Channel** License for the use of one additional channel for the recording of IP cameras or Panomera® Channels
003784	**DLC - 2 Additional Recording Channel**
003785	**DLC - 4 Additional Recording Channel**
003786	**DLC - 8 Additional Recording Channel**
004079	**DLC - 12 Additional Recording Channel**
004080	**DLC - 16 Additional Recording Channel**

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DVS 1600 III

SEDOR® Appliance for the analysis of 16 and the recording of up to 24 video streams

	Optional SMAVIA Recording Server Licenses (Third-Party Channels)
004412	**DLC - 3rd Party Package for 1 Channel** License for the use of one existing HD channel for the recording (permanent or motion detection) of third-party IP cameras
004413	**DLC - 3rd Party Package for 2 Channels**
004414	**DLC - 3rd Party Package for 4 Channels**
004415	**DLC - 3rd Party Package for 8 Channels**
004416	**DLC - 3rd Party Package for 12 Channels**
004417	**DLC - 3rd Party Package for 16 Channels**
004418	**DLC - 3rd Party Package for 24 Channels**

	Optional SMAVIA Recording Server Licenses (General)
003800	**RAID 1**[2)] License for the recording with RAID 1, 2× HDDs of the same capacity required (ex factory only)
003801	**DLC - PRemote-HD**[3)] License for the transmission of SD and HD video with low bandwidth, including a dedicated access license and the function for bidirectional audio transmission (intercom) via LAN/WAN
003803	**DLC - ViProxy** License for the connection of a physically separate network for IP cameras, including authorization management. In conjunction with SeMSy® III, multicast streaming can also be used.

	Maintenance and Warranty
003793	**DCP - Software Maintenance 12 Months** License for the update of the SMAVIA software for further 12 months
003794	**DCP - 36 Months “Bring-in” Warranty** Extension of the “Bring-in” warranty period (without HDDs) to 36 months in total
003795	**DCP - 48 Months “Bring-in” Warranty** Extension of the “Bring-in” warranty period (without HDDs) to 48 months in total
003796	**DCP - 60 Months “Bring-in” Warranty** Extension of the “Bring-in” warranty period (without HDDs) to 60 months in total
003797	**DCP - 36 Months “Bring-in” Warranty and Software Maintenance** Extension of the “Bring-in” warranty period (without HDDs) to 36 months in total, incl. license for the update of the SMAVIA software
003798	**DCP - 48 Months “Bring-in” Warranty and Software Maintenance** Extension of the “Bring-in” warranty period (without HDDs) to 48 months in total, incl. license for the update of the SMAVIA software
003799	**DCP - 60 Months “Bring-in” Warranty and Software Maintenance** Extension of the “Bring-in” warranty period (without HDDs) to 60 months in total, incl. license for the update of the SMAVIA software

2) When using the RAID configuration, a connection to a UPS is necessary.
3) The first PRemote client (master) is assigned active control over the PRemote stream. Further PRemote clients (slaves) receive the stream passively.

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DVS 1600 III

SEDOR® Appliance for the analysis of 16 and the recording of up to 24 video streams

Options Hardware

000178		**Mounting of a HDD** Mounting of a HDD, incl. function, long-term-, and final test, acceptance and approval
006664		**HDD 2000 GB, SATA, 3.5"**
006158		**HDD 4000 GB, SATA, 3.5"**
006596		**HDD 6000 GB, SATA, 3.5"**
006632		**HDD 8000 GB, SATA, 3.5"**
004429		**DVD-RW Drive SATA (Teac)** Writer DVD-RW, SATA, slimline, tray load (ex factory)
003877		**DVD-RW Drive SATA (Teac) Retrofit Kit** Writer DVD-RW, SATA, slimline, tray load (retrofit kit)

Option Network Contacts

005142		**DLC - Ethernet I/O Interface for SMAVIA**[4)] License for the use of the software interface for the connection of Ethernet I/O interfaces
001739		**Remote Ethernet I/O Interface** Ethernet I/O Interface, 2× Ethernet, 6× contact, 6× relay (MOXA ioLogik E1214)

Option Bracket

000010		**19 Inch Bracket (DMS, DVS, PVS IV, PVS 7)** Bracket for installation of the device in a 19" rack

4) The current version supports the connection of the interfaces MOXA ioLogik E1210 (16 contacts) and MOXA ioLogik E1214 (6 contacts, 6 relays).

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DVS 1600 III

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Components	
CPU	Multi-Core
RAM	8 GB
Flash module	8 GB (for operating system and application)
Hard disks	Up to 2× 3.5" HDD (optional)
Max. storage capacity	Currently up to 16 TB (without RAID)
Fan	3× with automatic speed adaptation
Power supply unit	Integrated

Interfaces	
Video OUT (for configuration only)	2× DisplayPort 1× DVI
AUX / Line IN	1× 3.5 mm phone jack
Microphone IN	1× 3.5 mm phone jack (for intercom, license 003801 required)
Audio OUT	1× 3.5 mm phone jack (for intercom, license 003801 required)
USB	2× USB 3.0 (rear side) 5× USB 2.0 (rear side) 1× USB 2.0 (front side)
Ethernet 1	RJ45, 10/100/1000 Mbps
Ethernet 2	RJ45, 10/100/1000 Mbps (optional, license 003803)
Ethernet protocols	IPv4, TCP, UDP, ARP, ICMP, DHCP, NTP, HTTP
Contact IN	30×, with galvanic isolation, only for switch / push button (dry contact), with 4 functions each
Relay OUT	5×, with galvanic isolation, max. 12 V DC / 24 V AC / 0.5 A, 150 mOhm, as NC or NO
Serial	2× RS232
PS/2	Mouse, keyboard

Electrical Data	
Voltage supply	115/230 V AC ±5%, 50/60 Hz
Power consumption	Max. 145 W
Thermal output	Max. 495 BTU/h

Mechanical Data	
Dimensions (W × H × D)	Approx. 425 × 130 × 446 mm (16.7” × 5.1” × 17.6”) with feet Approx. 425 × 122 × 446 mm (16.7” × 4.8” × 17.6”) without feet
Weight	Approx. 12 kg (26 lbs) with 2 HDDs

Ambient Data	
Temperature	+5°C up to +40°C (41°F – 104°F)
Recommended temperature	+20°C up to +25°C (68°F – 77°F)
Humidity	5 – 70% RH, non-condensing
Atmospheric load	Dust-free

Approvals and Certifications	
Type	CE, UL, FCC, ACA, LGC Forensics, DIN EN 50130-4

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DVS 1600 III

SEDOR® Appliance for the analysis of 16 and the recording of up to 24 video streams

SEDOR® Analysis Server Software	
Operating system	Linux (proprietary, hardened)
Application	DVS Analysis Server Software
Application language	English, German (others on request)
External configuration software	SEDOR® WebGUI
Max. analysis channels	16× video streams
Supported cameras	Dallmeier IP cameras

SEDOR® Analysis Server Software - Licenses Applications	
SEDOR® Art	optional
SEDOR® Intruder	optional
SEDOR® Camera Sabotage Protection	optional

SEDOR® Analysis Server Software - Licenses Functions	
SEDOR® Event Matrix	optional

SMAVIA Recording Server Software	
Operating system	Linux (proprietary, hardened)
Application	SMAVIA Recording Server Software
Application language	English, German, French, Spanish, Italian (others on request)
External management software	SMAVIA Viewing Client, SeMSy® III Workstation Software DMVC App (optional, license for PRemote-HD 003801 required)
External configuration software	PService
ONVIF compliance	Profile S

SMAVIA Recording Server Software - Performance in connection with DVS 1600 III	
Max. recording channels	Up to 24× video streams (SD, HD, megapixel) Licenses for 8 recording channels integrated, expandable to up to 24 recording channels
Supported cameras	Dallmeier Panomera® multifocal sensor systems Dallmeier IP cameras over TCP/DaVid (Dallmeier Video Protocol) 3rd Party IP cameras with RTSP streaming over UDP/RTP or TCP[5)]
Track mode	Automatic
Video/Audio compression	H.264 / G.722.1
Resolutions SD-IP	QCIF (176 × 144), CIF (352 × 288), Half D1 (352 × 576), 2CIF (704 × 288), 4CIF (704 × 576), D1 (720 × 576)
Resolutions HD-IP	720p (1280 × 720), SXGA (1280 × 960), 2 MP (1600 × 1200) 1080i (1920 × 1080), 1080p (1920 × 1080)
Resolutions megapixel	3 MP (2048 × 1536), 4 MP (2336 × 1744), 5 MP (2592 × 1944), up to 12 MP
Frame rate per IP channel	Up to 25 / 30 fps, depending on the camera
Bit rate per IP channel	Up to 50 Mbps, depending on the camera
Max. total bit rate	Up to 144 Mbps

5) Optional licenses required: **3rd Party Package** 004412 to 004418. Please note the white paper **SMAVIA & 3rd Party IP Cameras**.

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DVS 1600 III

SEDOR® Appliance for the analysis of 16 and the recording of up to 24 video streams

Recording[6]	3rd Party IP Camera	Dallmeier IP Camera
Transport protocol	RTP over UDP	TCP
Communication protocol	RTSP	DaVid
Recording control with timer	integrated	integrated
Recording mode Constant	integrated	integrated
Recording mode Contact	integrated	integrated
Recording mode Motion	integrated	integrated
Recording mode Motion/Contact	integrated	integrated
Switching mode by timer	--	integrated

Functions[6]	3rd Party IP Camera	Dallmeier IP Camera
Motion detection	integrated	integrated
SmartFinder	integrated	integrated
Appliance as video proxy	integrated	integrated
Appliance as SeMSy® III multicast streamer	integrated	integrated
PRemote-HD	integrated	integrated
DMVC Server	integrated	integrated
PTZ control local	integrated	integrated
PTZ control with SMAVIA Viewing Client	integrated	integrated
Camera configuration	integrated	integrated
Locking the camera configuration	--	integrated
Audio recording	--	integrated
Recording of multicast video streams	--	integrated
EdgeStorage&SmartBackfill	--	integrated
Network scan (IP Finder)	--	integrated

6) Data refer to a fully equipped appliance. Optional licenses are required.

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2018-07-17
V1.0.4 / 8.21.9

DVS 1600 III

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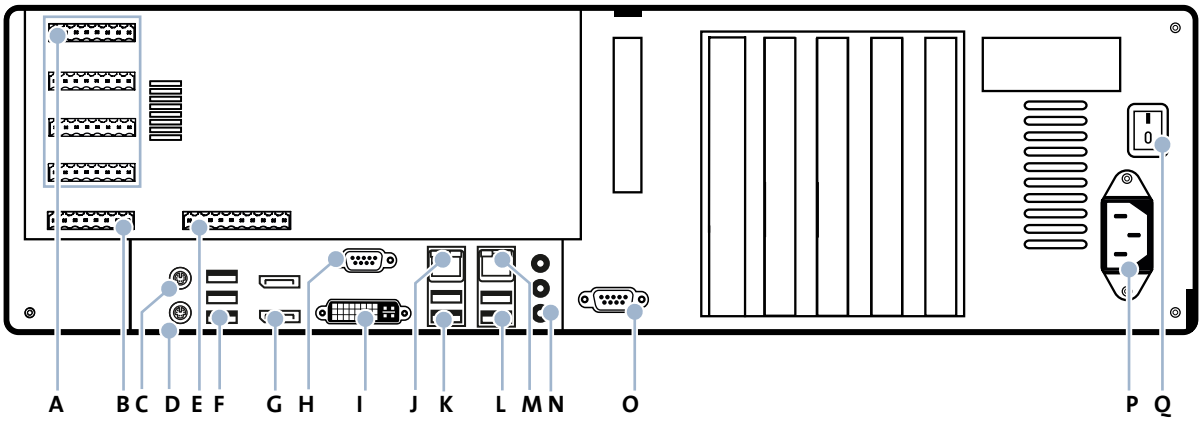


A **Contact IN Cameras (1-6/7-12/13-18/19-24)**
4× Weidmüller socket, 8 pins, only for switch / push button (dry contact)

B **Contact IN global (1-6)**
Weidmüller socket, 8 pins, only for switch / push button (dry contact)

C **Mouse**
PS/2, green

D **Keyboard**
PS/2, violet

E **Relay OUT (1-5)**
Weidmüller socket, 10 pins, max. 12 V DC / 24 V AC / 0,5A, 150 mOhm

F **USB Interface**
3× USB 2.0, type A

G **Video OUT Interface**
2× DisplayPort (for configuration only)

H **Serial Interface COM 1**
D-SUB, 9 pins, 1× RS232

I **Video OUT Interface**
DVI-D, Dual Link (24 + 5), 1920 × 1080 (for configuration only)

J **Ethernet Interface 2**
RJ45, 10/100/1000 Mbps (optional)

K **USB Interface**
2× USB 3.0, type A

L **USB Interface**
2× USB 2.0, type A

M **Ethernet Interface 1**
RJ45, 10/100/1000 Mbps

N **Microphone IN**
3.5 mm phone jack, red, 4.3 kOhm, 2,828 V_{pp}

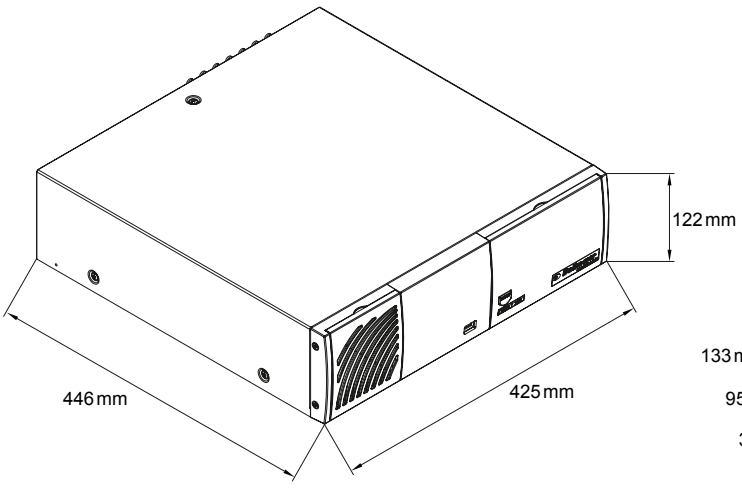
Audio OUT
3.5 mm phone jack, green, 1 kOhm, 2,828 V_{pp}

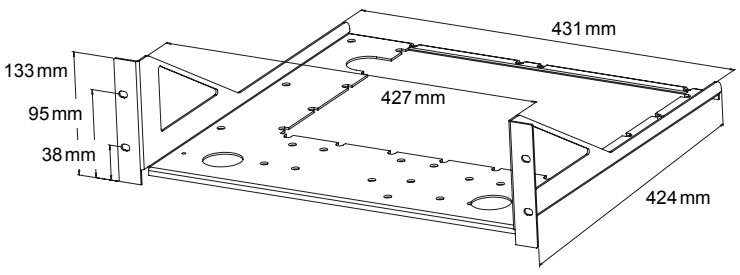
AUX / Line IN
3.5 mm phone jack, blue, 16 kOhm, 2,828 V_{pp}

O **Serial Interface COM 2**
D-SUB, 9 pins, 1× RS232

P **Mains Connection**
IEC C14 socket, 115/230 V AC ±10%, 50/60 Hz

Q **Mains Switch**





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