

# DMS 2400 II

SMAVIA Appliance for up to 24 IP Channels, 2x 3.5" HDD, 3RU



Up to 24 Channels

Stand-alone

SeMSy® III Integration

Open Platform

The **DMS 2400 II** is a high-performance appliance with a processing capacity for up to **24 IP video channels**. In conjunction with the dedicated software **SMAVIA Recording Server**, it is the ideal and cascable IP security solution e.g. for retail stores, gas stations or company premises.

### SMAVIA Viewing Client

The corresponding software **SMAVIA Viewing Client** allows for the independent and convenient evaluation of the recordings over Ethernet (LAN/WAN). It can be run on devices with a Windows 7/8/10 operating system and is included in the scope of delivery together with an access license.

### SeMSy® III Integration

The appliance is factory fitted with the license **SeMSy® Flat**. Thus, it is optimally equipped for the integration into the storage system of a **SeMSy® III video management system**. The appliance supports the complete SeMSy® III functional range including the convenient evaluation of the recordings on a **SeMSy® III Workstation**.

### DMVC Server

The integrated **DMVC Server Software** permits the access with the mobile app **Dallmeier Mobile Video Center**, that is available for iOS or Android operating systems. The display of live images and playback of recordings follow a special procedure which is **independent of the recording settings** of the appliance.

### 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 Hardware

- High performance server hardware with **Multi-Core CPU**
- **Flash module** for operating system and application
- Suitable for up to **24 SD, HD or megapixel video channels**
- **Upgrade for hybrid use** with up to 24 analogue channels optional
- High recording speed due to concerted components
- Easy-Change functionality for hard disk drives
- Components optimized for **SMAVIA Recording Server**
- Supports **one local playback** of one camera
- Supports **local live display** of several cameras in a multi-split

### Features SMAVIA Recording Server

- Recording of up to **24 HD channels** or **Panomera® Channels**
- Licenses for the recording of **8 Channels** included
- **Basic license** for the access of a **SMAVIA Viewing Client** included
- License for **updating the SMAVIA software** for 12 months included
- License for **SEDOR® Camera Sabotage Protection** included
- License for **EdgeStorage&SmartBackfill** included
- License for **multicast recording** included
- Recording of **third-party IP cameras** with **motion detection** optional
- Configuration of **third-party IP cameras** via **ONVIF protocol** optional
- Evaluation with **SMAVIA** or **SeMSy®** over the network (WAN/LAN)<sup>1)</sup>
- Evaluation with **DMVC App** over the network (WAN/LAN)<sup>1)</sup>

Appliance	
<b>005959</b>	<b>DMS 2400 II</b> SMAVIA appliance for the recording of up to 24 channels, licenses for 8 channels included, license for one SMAVIA Viewing Clients included, without HDDs

1) Optional license **PRemote-HD** (004762) required.

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## Included SMAVIA Recording Server Licenses

### DLC - 8 Recording Channel

License for the use of 8 channels for the recording of HD 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.

### DLC - Software Maintenance 12 Months

License for the update of the SMAVIA software for 12 months

### DLC - SEDOR® Camera Sabotage Protection

License for the detection and reporting of covering, defocusing and twisting of cameras

### 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 - SeMSy® Flat

License for the integration into a SeMSy® III video 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 IP channels (depending on the camera)

### DLC - LocalViewing

License for the use of the integrated video player for the local playback of one camera (analog, SD IP or HD IP) and the local live display of several cameras in a multi-split (analog, SD IP and HD IP)

## Optional SMAVIA Recording Server Licenses (Access)

003782	<b>DLC - 1 Additional Client Access</b> License for the simultaneous access of a further SMAVIA Viewing Client on SMAVIA Recording Server (floating license)
004068	<b>DLC - 5 Additional Client Access</b> License for the simultaneous access of five further SMAVIA Viewing Clients on SMAVIA Recording Server (floating license)
004069	<b>DLC - 10+ Additional Client Access (Unlimited)</b> 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 (HD Channels)

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

## Optional SMAVIA Recording Server Licenses (Third-Party Channels)

004412	<b>DLC - 3rd Party Package for 1 IP Channel</b> License for the use of one existing HD channel for the recording (permanent or motion detection) of third-party IP cameras
004413	<b>DLC - 3rd Party Package for 2 IP Channels</b>
004414	<b>DLC - 3rd Party Package for 4 IP Channels</b>
004415	<b>DLC - 3rd Party Package for 8 IP Channels</b>
004416	<b>DLC - 3rd Party Package for 12 IP Channels</b>
004417	<b>DLC - 3rd Party Package for 16 IP Channels</b>
004418	<b>DLC - 3rd Party Package for 24 IP Channels</b>

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Optional SMAVIA Recording Server Licenses (General)	
003800	<b>RAID 1<sup>2)</sup></b> License for the recording with RAID 1, 2x HDDs of the same capacity required (ex factory only)
003801	<b>DLC - PRemote-HD<sup>3)</sup></b> 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	<b>DLC - ViProxy</b> License for the connection of a physically separate network for IP cameras, including authorisation management. In conjunction with SeMSy® III, multicast streaming can also be used.
003806	<b>DLC - Audio Recording for all Analogue Channels<sup>4)</sup></b> License for the use of audio recordings for all analog channels (hardware 003815 and 003816 required)
004421	<b>DLC - BANK Package</b> License for the use of the DGVU Test-compliant recording module, ATM activity monitoring and reference image transmission via e-mail included
004685	<b>DLC - LAN Interface for Data Reception<sup>5)</sup></b> License for the reception of the data from third-party systems over the network interface; includes linking, storing and displaying the data with the video recordings

Maintenance and Warranty	
003793	<b>DCP - Software Maintenance 12 Months</b> License for the update of the SMAVIA software for further 12 months
003794	<b>DCP - 36 Months "Bring-in" Warranty</b> Extension of the "Bring-in" warranty period (without HDDs) to 36 months in total
003795	<b>DCP - 48 Months "Bring-in" Warranty</b> Extension of the "Bring-in" warranty period (without HDDs) to 48 months in total
003796	<b>DCP - 60 Months "Bring-in" Warranty</b> Extension of the "Bring-in" warranty period (without HDDs) to 60 months in total
003797	<b>DCP - 36 Months "Bring-in" Warranty and Software Maintenance</b> Extension of the "Bring-in" warranty period (without HDDs) to 36 months in total, incl. license for the update of the SMAVIA software
003798	<b>DCP - 48 Months "Bring-in" Warranty and Software Maintenance</b> Extension of the "Bring-in" warranty period (without HDDs) to 48 months in total, incl. license for the update of the SMAVIA software
003799	<b>DCP - 60 Months "Bring-in" Warranty and Software Maintenance</b> 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.  
 4) Audio playback with SMeAVIA Viewing Client over the network. Local audio playback with LocalViewing is not supported.  
 5) The current version supports the direct connection of AWEK POS systems and the connection of POS systems, access control systems and ATMs of other suppliers using the NORMA systems protocol converter NPC II.


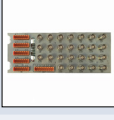

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## Options Hardware

000178		<b>Mounting of a HDD</b> Mounting of a HDD, incl. function, long-term-, and final test, acceptance and approval
006041		<b>HDD 2000 GB, SATA, 3.5"</b>
006158		<b>HDD 4000 GB, SATA, 3.5"</b>
005206		<b>HDD 6000 GB, SATA, 3.5"</b>
006112		<b>HDD 8000 GB, SATA, 3.5"</b>
004429		<b>DVD-RW Drive SATA (Teac)</b> Writer DVD-RW, SATA, slimline, tray load (ex factory)
003877		<b>DVD-RW Drive SATA (Teac) Retrofit Kit</b> Writer DVD-RW, SATA, slimline, tray load (retrofit kit)

## Options Hybrid Upgrade

003816		<b>Encoder Board for 8 Analogue Channels</b> Encoder board for 8 analogue video channels in hybrid operation, incl. Audio IN Adapter, without additional licenses
003815		<b>Mounting Kit for 24 Analogue Channels</b> Extension kit for 24 analog channels, 1× BNC Video IN Panel, 1× internal Coax cable set, 2× cable fittings, UTC-24 module (ex factory only)
004150		<b>CVBS OUT for DMS 2400</b> CVBS output for the connection of up to 2 analog monitors, 2× BNC

## Option Network Contacts

005142		<b>DLC - Ethernet I/O Interface for SMAVIA<sup>6)</sup></b> License for the use of the software interface for the connection of Ethernet I/O interfaces
001739		<b>Remote Ethernet I/O Interface</b> Ethernet I/O Interface, 2× Ethernet, 6× contact, 6× relay (MOXA ioLogik E1214)

6) 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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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 IN analog	24× CVBS/BNC, with loop-through (optional, Mounting Kit 003815)
Video OUT	2× DisplayPort 1× DVI 2× CVBS/BNC (optional, Board 004150)
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 (operation without encoder board for analog channels) Max. 170 W (operation with 3 encoder boards for 24 analog channels in total)
Thermal output	Max. 580 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, DGUV Test, DIN EN 50130-4

Software	
Operating system	Linux (proprietary, hardened)
Application	SMAVIA Recording Server
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

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Performance in connection with DMS 2400 II				
Channels	Up to 24x IP channels (SD, HD, megapixel) Licenses for 8 channels included, expandable to up to 24 channels			
Supported cameras	Dallmeier Panomera® multifocal sensor systems Dallmeier IP cameras over TCP/DaVid (Dallmeier video protocol) Third-party IP cameras with RTSP streaming over UDP/RTP or TCP <sup>7)</sup> Analog cameras <sup>8)</sup>			
Track mode	Automatic			
Video/Audio compression	H.264 / G.722.1			
Resolutions analog	QCIF (176 × 144), CIF (352 × 288), DCIF (528 × 384), 2CIF (704 × 288), 4CIF (704 × 576)			
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 analog channel	6,25 / 12,5 / 25 fps at CIF 6,25 / 12,5 fps at 4CIF 25 fps at 4CIF in combination with 2 analog channels			
	Encoder Board 1	Encoder Board 2 + channel licenses 9-16	Encoder Board 3 + channel licenses 17-24	
Usable analog channels	1, 3, 5, 7	9, 11, 13, 15	17, 19, 21, 23	
Usable additional IP channels	2, 4, 6, 8	10, 12, 14, 16	18, 20, 22, 24	
Frame rate per SD IP channel	6.25 / 12.5 fps / 25 fps			
Frame rate per HD IP channel	6.25 / 12.5 fps / 25 fps			
Frame rate per RTSP IP channel	Up to 25 fps			
Max. total bit rate	Up to 144 Mbps			
Bit rate per analog channel	Up to 2 Mbps			
Bit rate per SD IP channel	Up to 4 Mbps			
Bit rate per HD IP channel	Up to 50 Mbps, depending on the camera			
Bit rate per RTSP IP channel	Up to 6 Mbps			

Recording <sup>9)</sup>	3rd Party IP Camera	Dallmeier IP Camera	Analog Camera
Transport protocol	RTP over UDP	TCP	CVBS
Communications protocol	RTSP	DaVid	--
Recording control with timer	integrated	integrated	integrated
Recording mode Constant	integrated	integrated	integrated
Recording mode Contact	integrated	integrated	integrated
Recording mode Motion	integrated	integrated	integrated
Recording mode Motion/Contact	integrated	integrated	integrated
Switching mode by timer	--	integrated	integrated

Functions <sup>9)</sup>	3rd Party IP Camera	Dallmeier IP Camera	Analog Camera
Motion detection	integrated	integrated	integrated
SmartFinder	integrated	integrated	integrated
Appliance as video proxy	integrated	integrated	integrated
Appliance as SeMSy® III multicast streamer	integrated	integrated	integrated
PRemote-HD	integrated	integrated	integrated
DMVC Server	integrated	integrated	integrated
PTZ control loca	integrated	integrated	integrated
PTZ control with SMAVIA Viewing Client	integrated	integrated	integrated
Camera configuration	integrated	integrated	integrated
Locking the camera configuration	--	integrated	integrated
Audio recording	--	integrated	integrated
Recording of multicast video streams	--	integrated	--
EdgeStorage&SmartBackfill	--	integrated	--
Network scan (IP Finder)	--	integrated	--

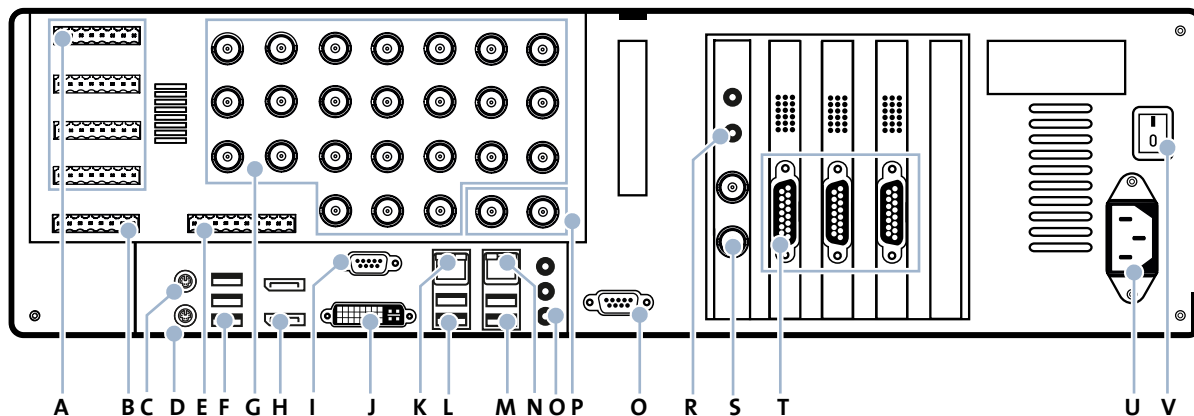
7) Optional licenses required: **3rd Party Package** 004412 to 004418. Please note the white paper **SMAVIA & 3rd Party IP Cameras**.

8) Optional components required: Mounting Kit (003815), Encoder Board 1 to 3 (003816), licenses for the channels 9 to 24

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

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- A Contact IN Cameras (1-6/7-12/13-18/19-24)**  
4x 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**  
3x USB 2.0, type A
- G Video IN (1-24)**  
BNC, 75 Ohm, 1V<sub>pp</sub>, with loop-through, CVBS (optional)
- H Video OUT Interface**  
2x DisplayPort
- I Serial Interface COM 1**  
D-SUB, 9 pins, 1x RS232
- J Video OUT Interface**  
DVI-D, Dual Link (24 + 5), 1920 x 1080
- K Ethernet Interface 2**  
RJ45, 10/100/1000 Mbps (optional)
- L USB Interface**  
2x USB 3.0, type A
- M USB Interface**  
2x USB 2.0, type A
- N Ethernet Interface 1**  
RJ45, 10/100/1000 Mbps
- O Microphone IN**  
3.5 mm phone jack, red, 4.3 kOhm, 2.828 V<sub>pp</sub>
- Audio OUT**  
3.5 mm phone jack, green, 1 kOhm, 2.828 V<sub>pp</sub>
- AUX / Line IN**  
3.5 mm phone jack, blue, 16 kOhm, 2.828 V<sub>pp</sub>
- P CVBS Interface**  
2x BNC, 75 Ohm, 1V<sub>pp</sub>, same signal as S2 (not active without S2)
- Q Serial Interface COM 2**  
D-SUB, 9 pins, 1x RS232
- R Not active**  
2x 3.5 mm phone jack
- S CVBS Interface**  
2x BNC, 75 Ohm, 1V<sub>pp</sub> (optional, for analog monitors)
- T Audio IN for analog cameras (1-8/9-16/17-24)**  
D-SUB, 15-pole, 1 kOhm, 2.828 V<sub>pp</sub> (for D-SUB/Cinch adapter cable)
- U Mains Connection**  
IEC C14 socket, 115/230 V AC ±10%, 50/60 Hz
- V Mains Switch**

