IPS 10 000
SMAVIA Appliance for up to 100 Channels, 8× 3.5" HDD, 3 RU

SMAVIA
PRELOADED

Up To 100 Channels   **Storage System**   **SeMSy® III Integration**[1]   **Open Platform**

The **appliance IPS 10 000** combines the proven and extended VideoIP software **SMAVIA Recording Server** with a reliable and high-performance **server hardware**. Best matched components ensure high storage speed and thus allow the recording of **up to 100 HD video channels in real-time**. The integrated RAID 6 storage system already provides a high storage capacity and can be expanded by an external RAID 6 JBOD system. Thereby this appliance is the optimal recording system for large video installations in **stadiums, shopping malls, casinos or convention centres**.

Storage System
The **IPS 10 000** has **eight easily accessible HDD bays** on the front side. Equipped with eight of the optionally offered 6 TB server hard disk drives, already a **RAID 6 storage capacity of 36 TB** can be achieved for the recordings. In connection with the external RAID 6 system **SMAVIA Enterprise JBOD**, the capacity can be expanded by **additional 60 TB**.

SeMSy® III Integration[1]
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**.

SMAVIA Viewing Client
The software **SMAVIA Viewing Client** allows for the independent and convenient evaluation of the recordings over the network. It can be run on workstations with Windows 7/8/10 operating systems and is included in the **scope of delivery of the appliance with two access licenses**.

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 100 SD, HD or megapixel video channels
- High storage capacity due to integrated RAID 6 storage system
- Extended capacity with optional RAID 6 JBOD system[2]
- High recording speed due to concerted components
- Components optimized for **SMAVIA Recording Server**
- Brackets for 19" rack included in delivery
- Redundant power supply units optional[3]

Features SMAVIA Recording Server
- Recording of up to **100 HD channels** or **Panomera® Channels**
- **Licenses** for the recording of **32 channels** included
- **Two licenses** for the access with **SMAVIA Viewing Client** included
- License for **updating the SMAVIA software** for 24 months included
- License for **SEDOR® Camera Sabotage Protection** included
- License for **EdgeStorage & SmartBackfill** included
- License for **multicast recording** and **streaming** 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)
- Evaluation with **DMVC App** over the network (WAN/LAN)[4]

Appliance		
005753		**IPS 10000** SMAVIA appliance for the recording of up to 100 channels, licenses for 32 channels included, two licenses for the access with SMAVIA Viewing Client included, without HDDs

1) Function in preparation
2) The JBOD system has its own RAID system. A RAID array with the internal hard drives of the appliance is not supported.
3) PSU 1 and 2 included in scope of delivery (no redundant operation). PSU 3 for redundant operation optionally available (hardware 004064).
4) Optional license **PRemote-HD** (004762) required.

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	Integrated SMAVIA Recording Server Licenses
	DLC - 32 Recording Channels License for the use of 32 channels for the recording of HD cameras or Panomera® Channels
	DLC - 2 Client Accesses License for the simultaneous access of two SMAVIA Viewing Clients to SMAVIA Recording Server (floating license)
	DCP - Software Maintenance 24 Months License for the update of the SMAVIA software for 24 months
	DLC - SEDOR® Camera Sabotage Protection 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
	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 - RAID 6 License for the recording with RAID 6

	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)	
005754	**DLC - 1 Additional Recording Channel** License for the use of one additional channel for the recording of HD cameras or Panomera® Channels	
005755	**DLC - 3rd Party Package for 1 Recording Channel** License for the use of one existing channel for the recording (permanent, contact triggered or with motion detection[5]) of third-party network cameras	

	Optional SMAVIA Recording Server Licenses (General)	
003801	**DLC - PRemote-HD** License for the transmission of SD and HD video with low bandwidth, including a dedicated access license[6] 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 authorisation management. In conjunction with SeMSy® III, multicast streaming can also be used	
004685	**DLC - LAN Interface for Data Reception[7]** 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	
005974	**DCP - Software Maintenance 12 Months (IPS 10 000)** License for the update of the SMAVIA software for further 12 months	
005975	**DCP - 36 Months Bring-in Hardware Warranty and Software Maintenance (IPS 10 000)** Extension of the bring-in warranty period (without HDDs) to 36 months in total, incl. license for the update of the SMAVIA software	
005976	**DCP - 48 Months Bring-in Hardware Warranty and Software Maintenance (IPS 10 000)** Extension of the bring-in warranty period (without HDDs) to 48 months in total, incl. license for the update of the SMAVIA software	
005977	**DCP - 60 Months Bring-in Hardware Warranty and Software Maintenance (IPS 10 000)** Extension of the bring-in warranty period (without HDDs) to 60 months in total, incl. license for the update of the SMAVIA software	

5) Please note the white paper **SMAVIA & 3rd Party IP Cameras**.
6) The first PRemote client (master) is assigned active control over the PRemote stream; further PRemote clients (slaves) receive the stream passively.
7) 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		**Mounting of a HDD** Mounting of a HDD, incl. function, long-term-, and final test, acceptance and approval
000084		**HDD 2000 GB, SATA, 3.5"**[8]
004551		**HDD 4000 GB, SATA, 3.5"**[8]
005206		**HDD 6000 GB, SATA, 3.5"**[8]
004064		**DPM-150W** Power supply module 150 W, 115/230 V AC ±5%, 50/60 Hz

Option Network Contacts		
005142		**DLC - Ethernet I/O Interface for SMAVIA**[9] 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 Storage Extension		
005756		**DLC - JBOD Storage Extension** License for the use of the software interface for the connection of a JBOD storage extension
005006		**RAID Controller Board** RAID controller board for the connection of a JBOD storage extension, available ex factory only
005045		**BBU for RAID Controller Board**[10] Battery Backup Unit (BBU) for the power supply of the cache on the RAID Controller Board in case of short-term power outages
004959		**SMAVIA Enterprise JBOD - 12 SAS**[11] Storage extension, 2 RU rack-mount, for up to 12 SAS hard disks, RAID 6, 1× SAS cable SFF-8088, 2× PSUs, without hard disks

8) The appliance has to be equipped with at least 6 identical hard disk drives in order to ensure the required storage speed.
9) The current version supports the connection of the interfaces MOXA ioLogik E1210 (16 contacts) and MOXA ioLogik E1214 (6 contacts, 6 relays).
10) The Battery Backup Unit (BBU) has to be replaced after 18 months.
11) The Storage JBOD has to be equipped with at least 6 identical hard disk drives in order to ensure the required storage speed.

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Components

CPU	Multi-Core
RAM	16 GB
Flash module	8 GB (for operating system and application)
Hard disks	Up to 8× 3.5" HDD (optional)
Max. storage capacity	Currently up to 36 TB (RAID 6)
Fan	3× with automatic speed adaptation
Power supply unit 1	Integrated
Power supply unit 2	Integrated
Power supply unit 3	Optional (hardware 004064, required for redundant operation)

Interfaces

Video OUT	2× DisplayPort, only for configuration 1× DVI, only for configuration
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) 6× 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	4×, with galvanic isolation, only for switch / push button (dry contact), with 4 functions each
Relay OUT	4×, with galvanic isolation, max. 12 V DC / 24 V AC / 0,5 A, 150 mOhm, as NC or NO
SATA interface	RAID controller board for JBOD storage extension (optional)
PS/2	Mouse, keyboard

Electrical Data

Voltage supply	115/230 V AC ±5%, 50/60 Hz
Power consumption	Max. 230 W
Thermal output	Max. 785 BTU/h

Mechanical Data

Dimensions (W × H × D)	Approx. 483 × 133 × 533 mm (19.0 × 5.3 × 21.0 inches)
Weight	Approx. 20 kg (44 lbs) with 8 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[12], FCC, ACA, LGC Forensics, DIN EN 50130-4

12) Scheduled approval / certification

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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[13] DMVC App (optional, license for PRemote-HD 003801 required)
External configuration software	PService[14]
ONVIF compliance	Profile S[15]

Performance in connection with IPS 10 000	
Channels	Up to 100× IP channels (SD, HD, megapixel)
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[15]
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 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 400 Mbps
Bit rate per SD IP channel	Up to 4 Mbps
Bit rate per HD IP channel	Up to 16 Mbps
Bit rate per RTSP IP channel	Up to 6 Mbps

Recording[16]	3rd Party IP Camera	Dallmeier IP Camera
Transport protocol	RTP over UDP	TCP
Communications 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[16]	3rd Party IP Camera	Dallmeier IP Camera
Motion detection	integrated	integrated
SmartFinder	integrated	integrated
Appliance as video proxy	integrated	integrated
Appliance as multicast streamer	integrated	integrated
PRemote-HD	integrated	integrated
DMVC Server	integrated	integrated
PTZ control with SMAVIA Viewing Client	integrated	integrated
Audio recording	integrated[17]	integrated
Camera configuration	integrated	integrated
Locking the camera configuration	--	integrated
Recording of multicast video streams	--	integrated
EdgeStorage&SmartBackfill	--	integrated
Network scan (IP Finder)	--	integrated

13) Function in preparation
14) A monitor with a minimum resolution of 1200×800 pixels is required for the configuration with PService/NetConfig 3.
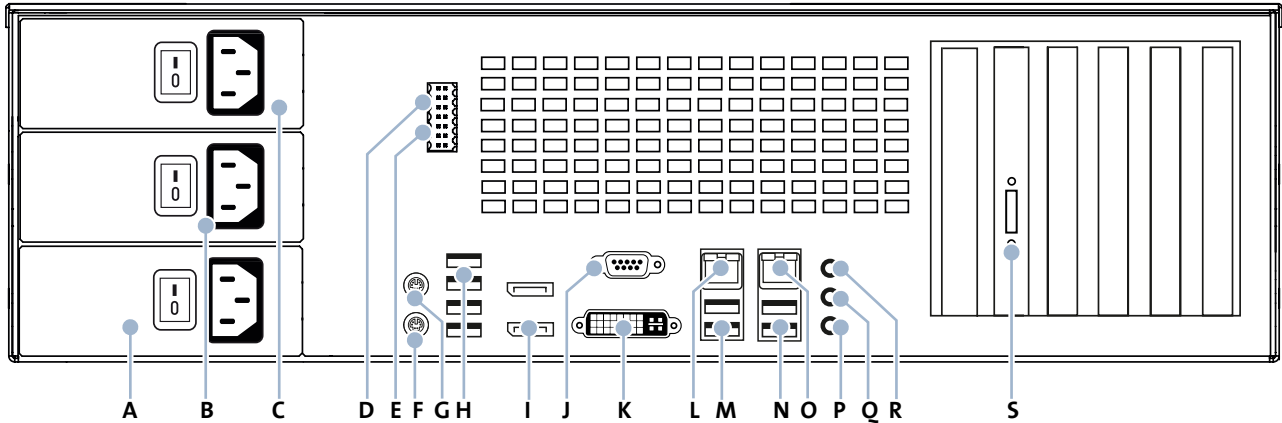15) Optional licenses required: **3rd Party Package** 004412 to 004418. Please note the white paper **SMAVIA & 3rd Party IP Cameras**.
16) Data refer to a fully equipped appliance. Optional licenses are required.
17) Depending on the camera. The audio stream has to be supplied in the G.711 format.

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A **Power Supply Unit 1**
IEC C14 socket, 115/230 V AC ±5%, 50/60 Hz

B **Power Supply Unit 2**
IEC C14 socket, 115/230 V AC ±5%, 50/60 Hz

C **Power Supply Unit 3**
IEC C14 socket, 115/230 V AC ±5%, 50/60 Hz (optional)

D **Relay OUT (1-4)**
Weidmüller socket, 8 pins, max. 12 V DC / 24 V AC / 0,5A, 150 mOhm

E **Contact IN (1-4)**
Weidmüller socket, 6 pins, only for switch / push button (dry contact)

F **Keyboard**
PS/2, purple

G **Mouse**
PS/2, green

H **USB Interface**
4× USB 2.0, type A

I **Video OUT Interface**
2× DisplayPort (configuration)

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

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

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

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

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

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

P **Microphone IN**
3.5 mm phone jack, red, 4.3 kOhm, 2.828 V_{pp}

Q **Audio OUT**
3.5 mm phone jack, green, 1 kOhm, 2.828 V_{pp}

R **AUX / Line IN**
3.5 mm phone jack, blue, 16 kOhm, 2.828 V_{pp}

S **SATA Interface**
RAID controller board for JBOD storage extension (optional)