



Dallmeier
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DMS 240
In Memory of
Leonardo



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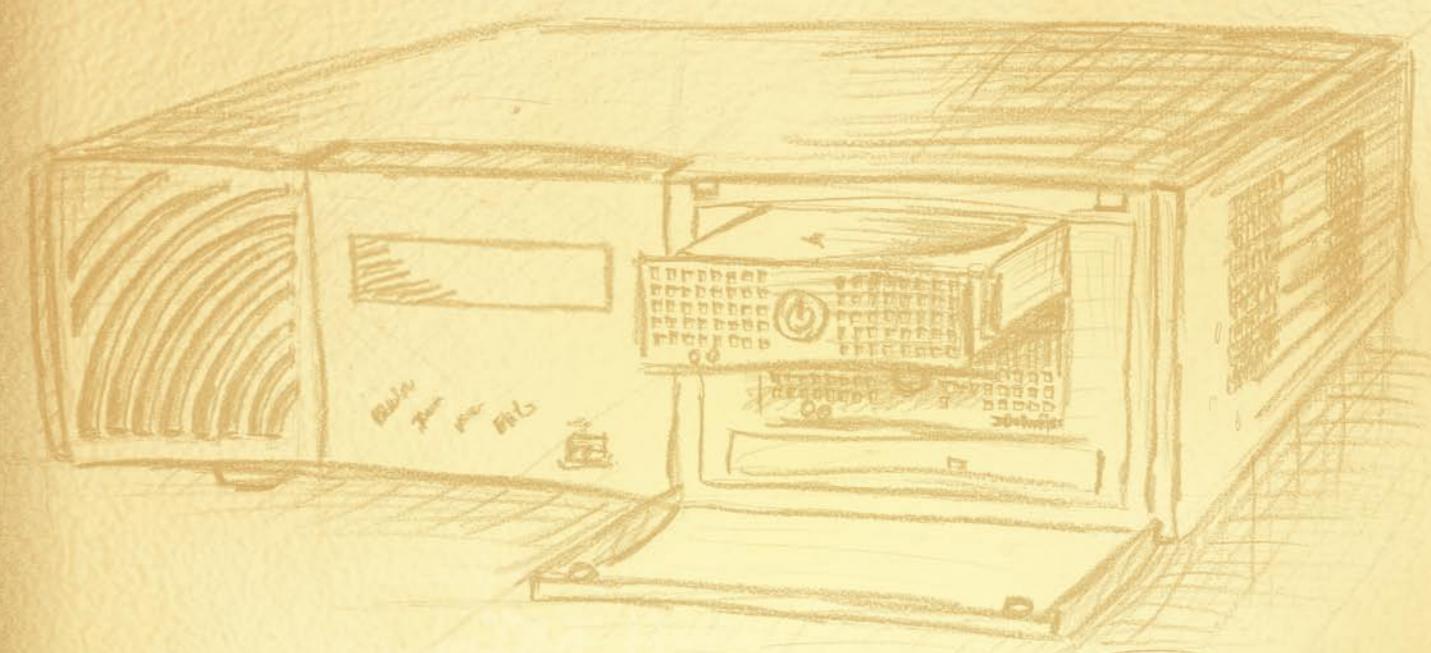
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In Memory of Leonardo

"On 15th April 1452, a Saturday, at 3 o'clock in the morning my grandson was born to my son Ser Piero. He has been called Leonardo. He was christened by Piero di Bartolomeo, the priest from Vinci."
Leonardo's grandfather Antonio

In 1452 these few words were the first reference to the birth of one of the millennium's geniuses. Some 20 years later Leonardo da Vinci began his unique period of creativity. As a painter, an architect, an engineer, an anatomy expert and as a scientific researcher he was way ahead of his time. His thinking and research seemed to know no limits. His artistic creations are some of the best which humankind has produced and his technical discoveries still have relevance today. Leonardo's achievements were only possible thanks to the unique and fortuitous conjunction of many characteristics: brilliant all-round artistic talent combined with incomparable visionary powers, a razor-sharp mind and an unprecedented scientific method which was characterised by extreme precision in every detail.

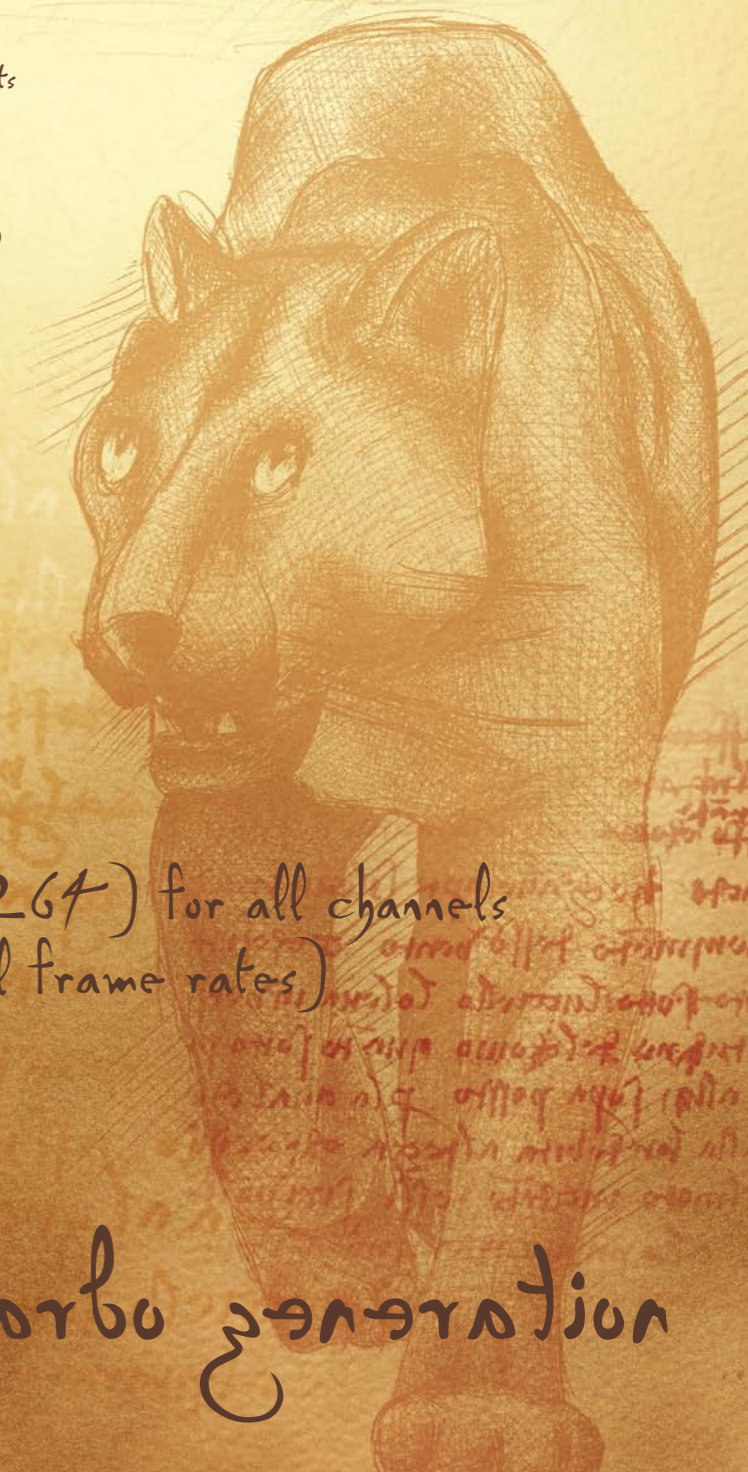


In the development of the DMS 240, the CCTV specialists at Dallmeier have sought inspiration from Leonardo da Vinci's pioneering, boundary-transcending inventions. As a result they produced – as a kind of homage to the universal genius – a high quality product with cutting-edge components and technical refinements which far exceed normal market standards and open up new dimensions for security systems. The DMS 240 offers you the technology of the future – here today.

DMS 240

New Generation Highlights:

- + real-time split
- + real-time recording (H.264) for all channels
- + audio for all channels (all frame rates)
- + virtual matrix function



Leonardo generation

1.1.21803398.....



DMS 240

Top security, stability and flexibility

OS LINUX:
Highest failsafe reliability thanks to operating system on flash.

DUAL STREAM:
Different bit rates and frame rates can be selected simultaneously for recording and transmission according to quality requirements.

The security hardware design for the DMS 240 is based on high-end developments and many years of experience. In contrast to the relatively low quality requirements of the IT industry, the new components were specially developed to meet the very high quality requirements of the security industry which demands proven stability and reliability and the guarantee of hardware availability for many years to come.

United States Patent
Dallmeier

(12) Patent No.: US 7,001,219 B2
(45) Date of Patent: Feb. 21, 2006

(54) REPLACEABLE DEVICE FOR AN ELECTRONIC MONITORING SYSTEM, ESPECIALLY A VIDEO MONITORING SYSTEM

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(51) Int. Cl. G08B 31/00

(52) U.S. Cl. 340/430.01

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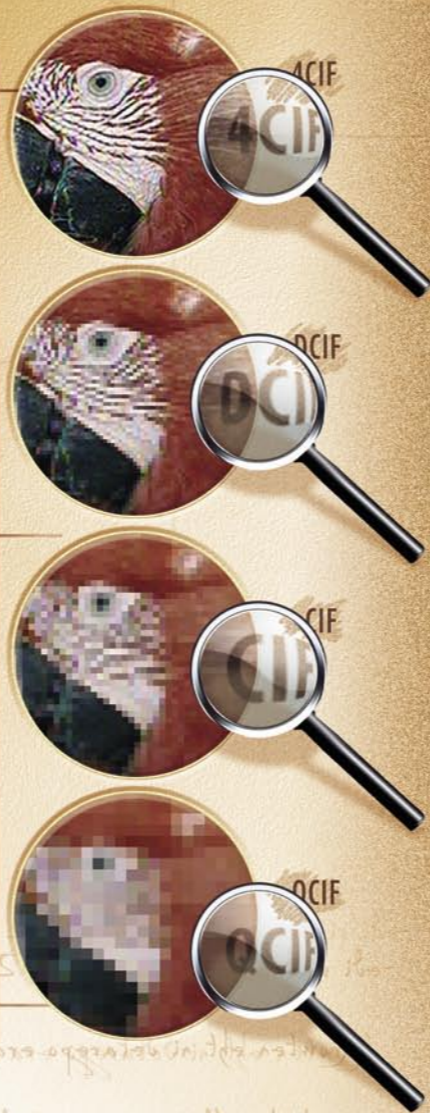
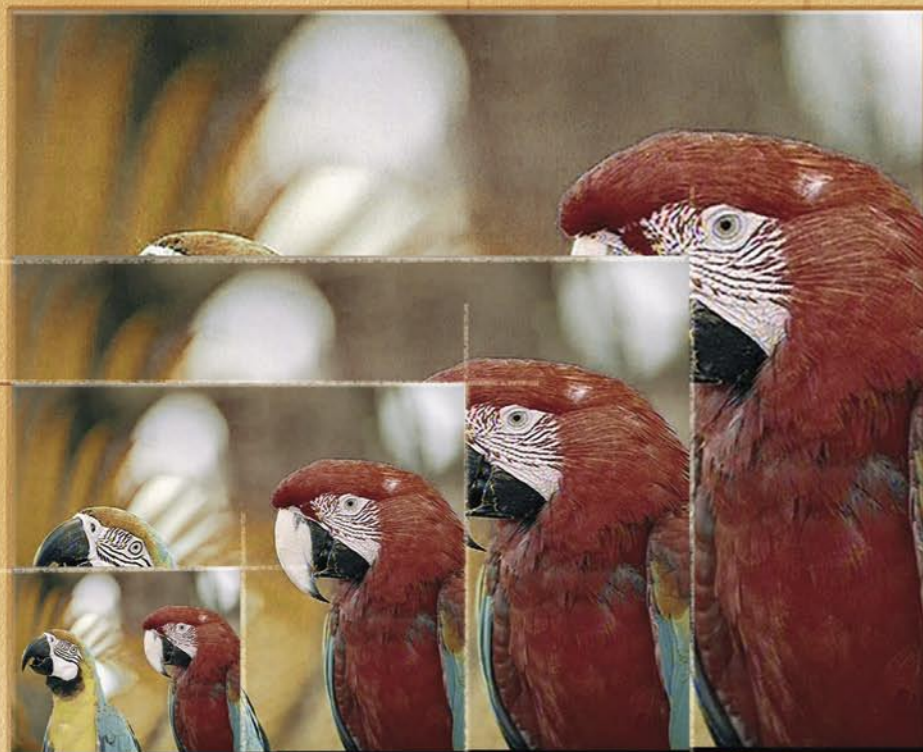
US-patented removable BNC connection panel for fast and easy maintenance

DVI video out 1/2
SATA out
12V output
audio channels 17-24
audio channels 9-16
audio channels 1-8

In Memory of Leonardo

The user benefits from many new functions which, besides the proven standard specification (VdS conformity, 24 camera inputs, 36 month warranty, Linux operating system, etc.), guarantee unique operational security and optimal user-friendliness.

Real Solutions



	QCIF	CIF	DCIF	4CIF
PAL	176 x 144	352 x 288	528 x 384	704 x 576
NTSC	176 x 120	352 x 240	528 x 320	704 x 480

Improved compression with H.264

Codec	Medium reduction of the bit rate	
	MPEG-4	MPEG-2
H.264	37%	64%

The table shows the huge reduction in the bit rate achieved by H.264 compared to MPEG-2 and MPEG-4 with the same or even better picture quality.

- BENEFITS:**
- Significant cost reduction
 - Lower demand on hard disk
 - Lower network load
 - Longer recording periods possible

H.264
As in many other sectors the requirements on standardised procedures for the compression of images have risen significantly. This is true for the quality of pictures as well as the flexibility of the compression procedure itself. With H.264 a new standard for video compression has been created, basically comparable with MPEG and fulfilling high requirements.

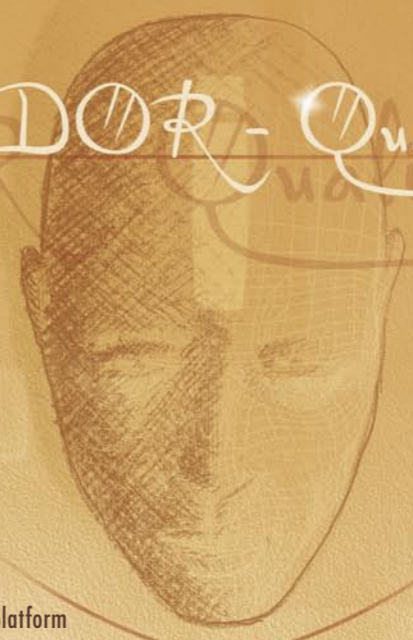
"H.264 provides a better signal-to-noise ratio at equal bit rate for TV resolution than JPEG2000, even when optional access to individual pictures is possible. Therefore H.264 can also be used efficiently in surveillance applications where each individual picture has to be recorded."*

*Dipl.-Ing. Carsten Reuter, University Hanover

SEDO® - Quality



- TECHNICAL CHARACTERISTICS**
- automatic detection of unusual situations
 - self-learning event recognition
 - registration and analysis of static objects
 - registration and analysis of moving objects
 - recognition of camera sabotage:
 - repositioning
 - covering
 - defocussing
 - can be integrated into any hardware or software platform



SEDO's special characteristic is its ability to learn independently to recognise and categorise events and situations as being normal or abnormal.

SEDO self-learning event detector
Intelligent monitoring using self-learning event detection improves the efficiency and security of your monitoring operation.

DSP (Digital Signal Processing)



Thanks to DSP technology the DMS 240 offers a secure investment platform which is ready for future updates of the codec procedure or any other further developments. This ensures that the recorder will always be upgradeable and remain at the forefront of technology.

Digital Signal Processing

The DMS 240 is a further development of the award-winning and certified platform of the DMS 180 III which guarantees conformity with VdS requirements and DIN EN 50130-4.

VdS certification
The VdS certification stands for product quality with regard to functionality and reliability. Therefore the coveted certification is only awarded after laboratory tests lasting for months.

DIN EN 50130-4
The stability of the recorder is fundamental for use in video surveillance for security applications.



Technical specifications / features:

- 24 camera inputs 8 / 16 / 24
- 24 audio inputs 8 / 16 / 24
- 3 monitor outputs (1x VGA 1024x768; 2x CVBS 704x576), control via VGA monitor
- Simultaneous real-time recording of video and audio for all camera inputs
- Various resolution types (4CIF / DCIF / 2CIF / CIF / QCIF) can be selected freely
- Simultaneous real-time split display of all cameras on a VGA (1x to 5x5) and CVBS monitor (1x to 4x4)
- Simultaneous real-time split mode (4/8 cameras in real time, up to 16 cameras with reduced picture rate)
- Replay of various channels in time split mode, currently max. 2x 500GB)
- Operating system on a flash drive
- 2 slide-in bays for HDDs (HDDs depending on current design, currently max. 2x 500GB)
- Excellent picture quality (CBR and VBR)
- H.264 compression (722 sample ratio 16 kHz, output 16 kbps)
- Audio compression PView / Browser / PRemote
- Network connection PView / Browser / PRemote
- Multi-user ability – network streaming (multicast/unicast)
- Dual stream: different bit and frame rates can be selected for recording and transmission
- PRemote: real-time split transmission of all channels (10kBit – 2MBit)
- PViewMobile ready: GSM/GPRS/UMTS
- Alarm messages can be sent to PGuard respectively by e-mail
- UTC control for Dallmeier cameras
- Possibility to record Dallmeier network cameras
- Voice Talk – 2 way audio (intercom)
- Private zone
- Application-specific software for industry, banks, petrol stations, etc.
- Triplex operation
- Intelligent motion detector – SEDOR based – can be switched per camera
- SEDOR camera sabotage recognition (covering, re-positioning, spraying, defocussing)
- SmartFinder incl. MySQL database
- PAL / NTSC switchable
- Integrated display for status and information messages
- Linux security operating system
- Extensive password management
- Extensive recording modes
- Easy installation – quick setup
- Practice-oriented handling
- Maintenance-free operation – AFWA (asymmetric remote maintenance analysis)



Specifications

Picture memory	Resolution	4CIF	PAL 704x576	NTSC 704x480
		DCIF	PAL 528x384	NTSC 528x320
		2CIF	PAL 704x288	NTSC 704x240
		CIF	PAL 352x288	NTSC 352x240
		QCIF	PAL 176x144	NTSC 176x120
Video norm	CCIR/PAL and EIA/NTSC			
Compression	H.264 (constant bit rate / variable bit rate)			
	Frame rate: 25 fps (PAL) 30 fps (NTSC) per camera			
	Bit rates: 4CIF (100 KBit - 2000KBit)			
	QCIF/CIF/2CIF/DCIF (100 KBit - 2000KBit)			

Memory groups Ring memory: 3.000
Memory: 3x freely configurable (ring, end, save with full storage)

Recording Controlled by contact, motion, permanent; can be set for each camera
Week timer, RS232, can be set for each camera

Recording speed depending on the picture quality

Best picture quality with 1 MBit per camera 25/30 fps with (CIF) 12,5/15 fps with (DCIF/2CIF) 6,25/7,5 fps with (4CIF)

Resolution	Bit rate	8 channels	16 channels	24 channels
CIF / QCIF	0,5 MBit	8 x 25/30 fps	16 x 25/30 fps	24 x 25/30 fps
	1 MBit	8 x 25/30 fps	16 x 25/30 fps	24 x 25/30 fps
	2 MBit	8 x 25/30 fps	16 x 25/30 fps	24 x 25/30 fps
2CIF	0,5 MBit	8 x 25/30 fps	16 x 25/30 fps	24 x 25/30 fps
	1 MBit	8 x 16/20 fps	16 x 16/20 fps	24 x 16/20 fps
	2 MBit	8 x 12,5/15 fps	16 x 12,5/15 fps	24 x 12,5/15 fps
DCIF	0,5 MBit	8 x 12,5/15 fps	16 x 12,5/15 fps	24 x 12,5/15 fps
	1 MBit	8 x 16/20 fps	16 x 16/20 fps	24 x 16/20 fps
	2 MBit	8 x 16/20 fps	16 x 16/20 fps	24 x 16/20 fps
4CIF	0,5 MBit	8 x 6,25/7,5 fps	16 x 6,25/7,5 fps	24 x 6,25/7,5 fps
	1 MBit	8 x 12,5/15 fps	16 x 12,5/15 fps	24 x 12,5/15 fps
	2 MBit	8 x 12,5/15 fps	16 x 12,5/15 fps	24 x 12,5/15 fps

Replay 1 split 25 fps PAL / 30 fps NTSC (real-time)
4 split 25 fps PAL / 30 fps NTSC per camera (real-time)
8 split 25 fps PAL / 30 fps NTSC per camera (real-time)
16 split 25 fps PAL / 30 fps NTSC per camera (real-time)
The higher the bit rate when recording, the lower the replay speed.

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