DIVAR AN 5000

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BOSCH
Invented for life

▶ 960H RT high-resolution on HDMI output

▶ Mobile device support (iOS, Android)

▶ Network function for remote viewing, playback, control and alarm notification

▶ Simultaneous monitoring, recording and playback

▶ Keyboard and e-SATA connections, plus video loop-through

The DIVAR AN 5000 is a family of 16-channel digital recorders that use the latest 960H high-resolution video technology and state-of-the-art compression techniques. These advanced technologies, coupled with efficient network data transmission, deliver the high security and reliability required for modern surveillance systems.
Simultaneous remote or local monitoring, recording, archive and playback are guided by simple menu selections and operator commands. The recorders are available with a number of storage capacities, and a built-in DVD burner can be specified.

System overview

The DIVAR takes advantage of the latest H.264 video and G.711 audio compression technology to dramatically reduce bandwidth and storage requirements while still delivering superb image and audio quality. Armed with the newest 960H video technology, DIVAR gives you the full benefits of the latest 960H high-resolution cameras. With the ability to capture more than 30% extra horizontal image resolution compared to D1/CIF recorders, the proof is in the pixels.

The DIVAR records multiple video and audio signals while simultaneously providing live multi-screen viewing and playback. Comprehensive search and playback functions provide quick recall and viewing of recorded video.
The DIVAR is not intended for use over a PoE switch.

Recording
The DIVAR is very easy to use. Simply connect the cameras, apply power and let the unit record automatically with no further intervention required. The H.264 compression function significantly reduces file size of recordings without sacrificing image quality. The DIVAR can record at up to 25 (PAL) / 30 (NTSC) images per second, per channel at 960H resolution.

Dome control
The DIVAR can control pan/tilt/zoom (PTZ) equipment via RS-485 / RS-232 serial communications. PTZ devices, including the AUTODOME from Bosch and a number of third party domes, are supported.

Alarms
All models have extensive alarm handling functions and telemetry control. Alarm functions include local inputs and relay outputs, plus motion detection in user-defined areas. If an alarm is detected, the DIVAR can:

• send an e-mail notification and/or FTP push
• display an on-screen message

- sound a buzzer and/or show a warning

Local control

The unit can be easily operated and programmed via the on-screen display menu system using:
- the supplied mouse
- the front panel control keys
- the supplied remote control
- a connected keyboard

Video inputs, audio inputs/output, and alarm inputs/outputs are located on the rear panel. Loop-through connections are also available for the video inputs.
A choice of monitor outputs provide full-screen, multi-screen and sequenced viewing:
- Three video connectors (BNC/VGA/HDMI) provide simultaneous output for monitor A for live display (with zoom) and playback (display can be frozen and zoomed)
- A single BNC connector provides output to monitor B (spot monitor) for live viewing

Network control

Use the PC software or built-in web application via a network for live viewing, playback, and configuration.

Watermark

The DIVAR includes an authenticity check for both local and remote archives, ensuring recording integrity. An Archive Player is provided for playback of secure video files and to check if video is authentic.

Smartphone App

A DIVAR Viewer App from Bosch for iOS and Android devices is available for live viewing and PTZ control. This means you can watch live video from cameras connected to the DVR from anywhere in the world. You can also control focus, pan, tilt and zoom on PTZ-enabled cameras.

Functions

The DIVAR has the following functions:
- 16 auto-terminating camera inputs with 960H resolution (loop-through supported)
- 4 audio inputs and 1 audio output
- 1 MIC input for talk input/output
- Simultaneous live viewing, recording, playback, archiving, and remote streaming
- Choice of CVBS/VGA/HDMI monitor A outputs
- 10/100/1000Base-T Ethernet port for local or wide area network connection
- RS-485 / RS-232 serial ports to control movable cameras (PTZ)
- IR remote control, front panel keyboard and USB mouse support for camera control
- Bosch Intui Keyboard support for control of Bosch movable cameras (no Monitor B control)
- A maximum 16 DIVAR AN 5000 units can be controlled by a single Bosch Intui Keyboard
- Selectable PAL/NTSC TV monitor output mode
- Secret (covert) recording channel that can be locked for unauthorized viewing
- Full-screen and multi-screen display capabilities in live and playback modes for monitors

- 16 switching (alarm) inputs and 6 alarm outputs
- Alarm and error notification (screen, audible, warning light, FTP, e-mail) and automatic record activation
- Motion detection and video loss detection
- DIVAR viewer App for live and PTZ control on Smartphone (iOS and Android)
- Authenticity check in archive player
- Supports Bosch and Pelco PTZ control protocols
- Manual and automatic recording (scheduled and alarm)
- Multiple search modes (time, channel, type, motion, smart motion within recorded images)
- Local archiving via USB, e-SATA and optional built-in DVD burner
- Local video storage via optional built-in HDDs
- E-SATA to support max. 4 external HDDs for recording
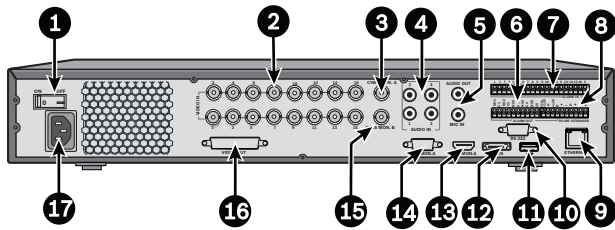
Certifications and approvals

Standards

EMC Directive	2004/108/EC
EMC Immunity	EN 50130-4:2011 *
EMC Emission	EN 55022:2010, +AC:2011. Class B conducted + radiated emission EN 61000-3-2:2006, +A1: 2009, +A2:2009 Mains harmonics EN 61000-3-3:2008. Voltage fluctuations
Environment	EN 50130-5 Class 1
Low voltage directive	2006/95/EC
Safety	EN 60950-1:2006, +A11:2009, +A1:2010, +A12:2011, +AC:2011 USA: UL 60950-1: 2nd edition 2011-12-19 CAN/CSA-C22.2 No.60950-1-07, 2nd edition 2011-12
FCC	CFR Title 47 Part 15:2009 class B
EMC Australia	C-Tick

* Clause 8 (mains supply voltage dips and short interruptions): to meet the requirements of this clause, auxiliary equipment (such as a UPS) must be used.

Region	Certification
Europe	CE
USA	UL
	FCC
Canada	CSA

Installation/configuration notes

Connections on back of DIVAR 5000

1	Power ON/OFF switch	10	RS232 connector for Dome control
2	Camera inputs	11	USB connector
3	CVBS output - Monitor A	12	e-SATA connector
4	Audio inputs	13	HDMI output - Monitor A
5	Audio output and MIC IN connector	14	VGA output - Monitor A
6	Alarm outputs	15	CVBS output - Monitor B
7	Alarm inputs	16	Video out (loop through)
8	RS485 and keyboard connectors	17	Power connector
9	RJ45 network connector		

Recommended PC requirements for Web support

Operating system	Windows XP, Windows Vista or Windows 7
Web browser	Safari, Firefox, Internet Explorer 9
Processor	Intel Core Duo 2.0 GHz or comparable
RAM memory	2048 MB
Free disk space	10 MB
Graphics card	NVIDIA GeForce 8600 or better
Video memory	256 MB
Network interface	10/100/1000-BaseT

Technical specifications

Rated voltage and power

Power input	100–240 VAC; 50-60 Hz; 55 W, 187 BTU/h
RTC battery on main board	Lithium CR2032, 3 VDC

Video

Video standard	PAL or NTSC (select via General Setup menu, or auto detect on channel 1) 960H resolution support
Playback	960H: 960x576 (PAL), 960x480 (NTSC) 4CIF: 704x576 (PAL), 704x480 (NTSC) 2CIF: 704x288 (PAL), 704x240 (NTSC)

	CIF: 352x288 (PAL), 352x240 (NTSC) QCIF: 176x144 (PAL), 176x120 (NTSC)
Compression	H.264
Inputs	16 composite video 1 Vpp, 75 ohm, CVBS (BNC)
Outputs	1 channel Mon. A: CVBS (BNC) 1 channel Mon. A: HDMI 1 channel Mon. A: VGA 1 channel Mon. B: CVBS (BNC) Support for simultaneous CVBS/VGA/HDMI output to Mon. A

Monitors

MON.A	Live, playback, menus
	VGA: analog RGB max. 1920x1080, 60 Hz
	HDMI: digital RGB max. 1920x1080, 165 MHz
	CVBS: 1 Vpp, 75 ohm, BNC (NTSC/PAL)
Resolution (MON.A)	CVBS (PAL): 704x576 CVBS (NTSC): 704x480 VGA: 1920x1080, 1280x1024, 1280x720, 1024x768 HDMI: 1920x1080, 1280x1024, 1280x720, 1024x768 960H camera: 960x576 (PAL), 960x480 (NTSC) 720H camera: 704x576 (PAL), 704x480 (NTSC)
MON.B	Live
	CVBS: 1 Vpp, 75 ohm, BNC
Resolution (MON.B)	CVBS (PAL): 704x576 CVBS (NTSC): 704x480

Audio

Inputs	4-ch RCA, 200 to 3000 mV, 10 kOhm (RCA)
Output	Mono RCA, 200 to 3000 mV, 5 kOhm (RCA)
MIC input	Mono talk input RCA, 200 to 3000 mV, 10 kOhm (RCA)
Compression	G.711A
Sample rate	8 kHz per channel
Bit rate	8-bit

Control

RS485	PTZ control port Output signals according to RS485, max. signal voltage -5 to +5 V

RS232	PTZ control port interface Output signals according to EIA/TIA-232-F, max input voltage ±10 V
Supported protocols	Pelco P and D (over RS-485) Bosch OSRD (over RS-485 or RS-232)

Alarms

Inputs	16 inputs configurable NO/NC, max. input voltage 5 VDC
Outputs	5 relay outputs, plus one controllable 12 VDC port
Relay	Max. rated, 30 VDC, 2 A continuous or 125 VAC, 1 A (activated)

Connectors

Video inputs	16 BNC
Video outputs (loop through)	1 x 25-pin D-type (connector cable supplied)
Monitor outputs	1 VGA D-SUB 1 HDMI 2 channel BNC (CVBS)
Alarm inputs	16 screw terminal inputs, cable diameter AWG26-16 (0.13–1.5 mm)
Alarm outputs	5 screw terminal outputs, cable diameter AWG26-16 (0.13–1.5 mm) 1 controllable 12 VDC screw terminal output
Audio inputs	4 RCA
Audio outputs	1 RCA
Audio bidirectional (MIC)	1 RCA for talk input or output
Ethernet	RJ45, 10/100/1000Base-T according to IEEE802.3
Intuikey keyboard (KBD Digital or KBD Universal)	Conforms to RS485, max. signal voltage ±12 V, power supply to keyboard 11 to 12.6 VDC at max. 400 mA
RS485	Screw terminal output
RS232	DB9 male, 9-pin D-connector
e-SATA	e-SATA connector for backup device
USB 2.0	One front and one rear USB connector for mouse or USB memory device
+12 VDC	External power input

Recording

Speed	Max. 30 IPS per channel (NTSC), configurable Max. 25 IPS per channel (PAL), configurable
Mode	Manual, motion detection, scheduled, alarm

Network control

View alarm	External, motion detection, system alarms and video loss
Audio	Bidirectional (audio input and output connected via device)
PC software	Bosch Video Client

Playback

Multi-channel	Simultaneous 1/4/9/16 channels
Mode	Frame-by-frame, slow play, fast play, reverse
Search	Time, channel, type, smart
Network	Bosch Video Client or Web Client software

Alarm Handling

Motion detection	Detection zones: 396 (PAL) / 330 (NTSC)
Video loss	External alarm and screen prompt

Storage

Internal	4 SATA HDD or 2 HDD + 1 DVD (R/RW) Max. capacity per HDD: 4 TB Max. supported speed per HDD: 6 Gb/s
External	e-SATA connection: Max. 4 HDD Max. capacity per HDD: 4 TB Max. supported speed per HDD: 6 Gb/s

Exporting

DVD (optional)	Built-in DVD+R/RW writer
USB	Flash memory or external HDD (FAT32)
e-SATA	Flash memory or external HDD (FAT32)
Network	Bosch Video Client or Web Client software

Mechanical

Dimensions (WxDxH)	440 x 420 x 70 mm (17.3 x 16.5 x 2.8 in) excluding cabling and feet (5 mm)
Rack mount kit (included)	For mounting one unit in an EIA 19" rack
Weight	5.5 kg (12.13 lb) approx. excluding HDD(s) and DVD writer

Environmental

Operating temperature (incl. HDD(s) and DVD writer)	+0°C to +40°C (+32°F to +104°F)
Storage temperature	-40°C to +70°C (-40°F to +158°F)
Operating humidity	<93% non-condensing
Storage humidity	<95% non-condensing

Ordering information

DIVAR AN 5000
960H/RT digital recorder for analog camera video management. HDMI/VGA/CVBS outputs; loop-through; e-SATA; IntuiKey keyboard support; audio; H.264; PTZ control; web interface; free viewing Apps; 16 channels; base unit
Order number **DVR-5000-16A000**

DIVAR AN 5000
960H/RT digital recorder for analog camera video management. HDMI/VGA/CVBS outputs; loop-through; e-SATA; IntuiKey keyboard support; audio; H.264; PTZ control; web interface; free viewing Apps; 16 channels; DVD
Order number **DVR-5000-16A001**

DIVAR AN 5000
960H/RT digital recorder for analog camera video management. HDMI/VGA/CVBS outputs; loop-through; e-SATA; IntuiKey keyboard support; audio; H.264; PTZ control; web interface; free viewing Apps; 16 channels; 1 TB HDD
Order number **DVR-5000-16A100**

DIVAR AN 5000
5000 960H/RT digital recorder for analog camera video management. HDMI/VGA/CVBS outputs; loop-through; e-SATA; IntuiKey keyboard support; audio; H.264; PTZ control; web interface; free viewing Apps; 16 channels; DVD; 1 TB HDD
Order number **DVR-5000-16A101**

DIVAR AN 5000
960H/RT digital recorder for analog camera video management. HDMI/VGA/CVBS outputs; loop-through; e-SATA; IntuiKey keyboard support; audio; H.264; PTZ control; web interface; free viewing Apps; 16 channels; 2 TB HDD
Order number **DVR-5000-16A200**

DIVAR AN 5000
960H/RT digital recorder for analog camera video management. HDMI/VGA/CVBS outputs; loop-through; e-SATA; IntuiKey keyboard support; audio; H.264; PTZ control; web interface; free viewing Apps; 16 channels; DVD; 2 TB HDD
Order number **DVR-5000-16A201**

DIVAR AN 5000
960H/RT digital recorder for analog camera video management. HDMI/VGA/CVBS outputs; loop-through; e-SATA; IntuiKey keyboard support; audio; H.264; PTZ control; web interface; free viewing Apps; 16 channels; DVD; 4 TB (2 x 2 TB) HDD
Order number **DVR-5000-16A401**

Accessories

DVR-XS-DVD DVD Writer Expansion kit
DVD writer expansion kit
Order number **DVR-XS-DVD**

DVR-XS050-A Storage Expansion Kit
Storage expansion kit. 500 GB
Order number **DVR-XS050-A**

DVR-XS100-A Storage Expansion Kit
Storage expansion kit. 1 TB
Order number **DVR-XS100-A**

DVR-XS200-A Storage Expansion Kit
Storage expansion kit. 2 TB
Order number **DVR-XS200-A**

DVR-XS300-A Storage Expansion Kit
Storage expansion kit. 3 TB
Order number **DVR-XS300-A**

DVR-XS400-A Storage Expansion Kit
Storage expansion kit. 4 TB
Order number **DVR-XS400-A**