

700 Series Hybrid/Network HD Recorder

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BOSCH
Invented for life



- ▶ Real-time HD and SD camera recording
- ▶ 32 channels for IP and analog cameras
- ▶ Automated IP assignment and management
- ▶ Up to 8 TB of internal storage
- ▶ Video synchronized to text sources

The Bosch 700 Series Hybrid and Network HD Recorders offer top-of-the-line performance and adaptability. Equipped with four front-replaceable hard drives and extensive integration features, the 700 Series is ideal for medium to large-scale systems. The 700 Series' superior image quality and compression gets the most out of CCTV images. Available in both IP-only and hybrid models, the 700 Series can handle even the most challenging CCTV applications without excessive demands on installers or operators.

Functions

High performance H.264

With recording of 1080p30 and 720p60 IP cameras, as well as SD and analog 4CIF cameras, 700 Series Recorders capture all the details. More detail typically means increased bandwidth, larger storage requirements, and increased costs – but not with the 700 Series. Bosch's advanced H.264 compression technology used in the 700 Series reduces bandwidth and storage needs by up to 30% or more compared to traditional MPEG-4 systems.

Viewing and playback

View live images of analog and IP SD cameras on the local monitor as full-screen or multi-screen displays. The extensive search options make it easy to find and playback the recorded images from these cameras locally.

The supplied Bosch Video Client software allows you to remotely display live and recorded video in 4CIF, SD and HD resolution.

Embedded design

The embedded design of the 700 Series Recorder offers a higher level of security against network attacks than traditional systems and has lower maintenance requirements. The security of recordings remains high while eliminating the need to install software patches and anti-virus updates. The integrated architecture, built-in installation wizards, and low-maintenance design make the 700 Series easy to set up and operate while delivering a lower total cost of ownership.

Hybrid Models

The world of CCTV is changing – IP is replacing the analog standard in many areas. Bosch's 700 Series Recorders have the flexibility to adapt to this changing environment.

The 700 Series Hybrid Recorder is the ideal choice for growing applications which use a mix of analog and IP cameras. It can record 8 or 16 analog cameras and an additional 8 or 16 IP channels.

Hybrid models with 8 or 16 IP channels have 36 Mbit/s of bandwidth available in total for video streams from IP cameras.

Network Models

The 700 Series Network Recorder is the perfect match for pure IP environments. Network recorder models have 72 Mbit/s of bandwidth available in total.

While typical IP solutions consist of many separate components – NVR Server, PC Client, external RAID storage array and software – the 700 Series Network Recorder is an all-in-one IP video management solution.

With support for a total of 32 H.264 cameras and a fully automated, onboard IP camera management system, 700 Series is easy to set up and maintain right out-of-the-box.

Power to integrate

Bosch's VideoSDK provides a complete toolbox of modules for playback, searching, viewing live images and more – simplifying integration with other surveillance systems. The VideoSDK even allows integration with specialized software tools such as fraud detection programs for retail applications. Control of 700 Series Recorders can be automated using CLI (Command Language Interface) commands. This allows the 700 Series to be interfaced with external software (over RS232 or IP), which is typically used to sense alarms or handle access control on an existing (embedded) computer system. Functions include front panel emulation, configuration, and viewing status information.

Text data

There is extensive support for recording text data from external sources (such as ATM machines, license plate readers, positioning systems or cash registers) together with the associated video.

Live text data can be viewed locally and remotely together with the video synchronized to it. Searching text data allows fast retrieval of the relevant video and provides legal evidence in the event of fraud.

Flexible and reliable storage

Access the four internal hard drives via the front without opening the unit, thus simplifying service and making it easy to add additional storage on-site when needed. Configure the disks as a RAID 4 array for extra reliability.

Expand storage further with an external Bosch iSCSI video storage array. This makes the 700 Series ideal for applications requiring continuous recording at the highest resolution, frame rate, and retention time.

Ease of use

Find key events in recorded video quickly by utilizing the unit's smart search to find changes only in selected areas. Compare past and present events by simultaneously viewing live images with playback scenes.

Export recordings by simply downloading them to a USB memory device, burning them to the optional built-in DVD recorder, or exporting them remotely via the Bosch Video Client or Control Center software. The 700 Series makes it easy to manage and transport images. Exports in Bosch format are watermarked to ensure the authenticity of the recordings. These can be played back on the recorder unit itself. ASF exports can be played on any PC with a suitable media player.

Intuitive user interface

The unit's intuitive interface with clear, menu-driven options is quick to learn and easy to use. Choose from a selection of control devices, including a mouse or CCTV keyboard. With the keyboard loop-through feature, up to sixteen 700 Series Recorders can be controlled from a single IntuiKey keyboard. Flexibility is also abundant with its extensive range of advanced functionality. Other convenient features include remote playback capability and dual VGA monitor support. Live viewing, playback, configuration, remote management – it is all simple and straightforward with the 700 Series.

Comprehensive interfaces

Flexible interface options make it easy to connect to a variety of external devices.

- Up to 16 analog video inputs and 16 IP camera inputs on hybrid models, or up to 32 IP camera inputs on IP-only models. Both SD and HD cameras are supported.
- Up to 16 audio inputs (DHR Models only) and two dual-mono audio outputs
- One or two monitor (DHR models only) outputs on VGA, CVBS, and Y/C outputs
- Up to 4 front-replaceable hard disks with optional RAID-4 support
- One or two Ethernet 10/100/1000 BaseT network connections
- Up to 16 alarm inputs and 5 relay outputs
- Biphase connection allows one cable to control Bosch PTZ cameras at a range of up to 1.5 km / 0.9 miles
- Bosch (OSRD protocol) and third-party (Pelco D and P protocols) PTZ control via RS422/RS485 connection
- Bosch IntuiKey support with loop-through function
- Bosch Video Manager support (including Keyboard Expander LTC2604/x0)
- USB connectors front and back – connect a mouse to control the user interface or archive video to a USB memory stick
- Optional built-in DVD recorder
- Text data interface directly from IP source or from a bridge device

Applications

The 700 Series Recorder is ideal for:

- Shopping centers and retail applications
- Banks and financial institutions
- City centers and public monitoring applications
- Crowd surveillance
- Casinos and hotel complexes

Certifications and approvals

Electromagnetic compatibility

USA	FCC Part 15, Class B
EU	EMC directive 2004/108/EC
Immunity	EN50130-4
Emission	EN55022 Class B
Mains Harmonics	EN61000-3-2
Voltage fluctuations	EN61000-3-3
Alarm standard	EN50130-5:1998
Railway applications	EN50121-4:2006

Safety

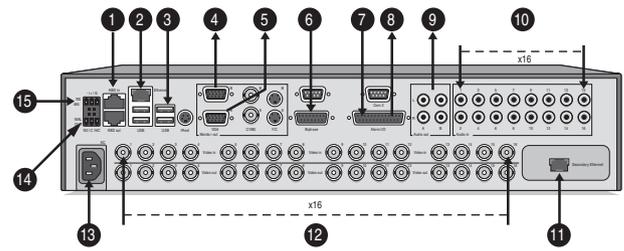
USA	UL60950-1
EU	EN60950-1
Can	CSA C22.2 No. 60950-1

Region	Certification
Europe	CE
USA	FCC

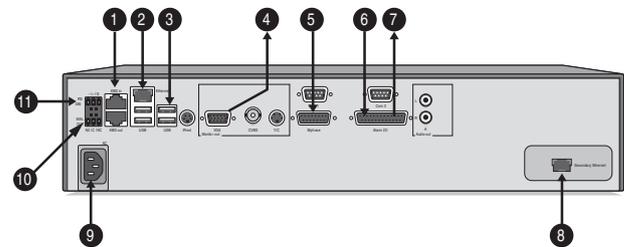
Installation/configuration notes

Recommended requirements for PC application

Operating system	Windows XP or 7 DirectX 9c
Processor	Intel Pentium DualCore, 3.0 GHz or comparable
RAM memory	2048 MB or more
Free disk space	10 GB
Graphics card	NVIDIA GeForce 8600 or higher
Network interface	10/100/1000 BaseT



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|--|---|
| 1 Keyboard input and looped-through output | 9 Audio outputs |
| 2 Ethernet | 10 Audio inputs |
| 3 USB ports | 11 Secondary Ethernet (2 GigE versions) |
| 4 B monitor connections (VGA, CVBS, Y/C) | 12 Camera loop through |
| 5 A monitor connections (VGA, CVBS, Y/C) | 13 Power input |
| 6 Biphas connection | 14 Malfunction alarm output |
| 7 Alarm inputs | 15 RS485 port |
| 8 Alarm outputs | |



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|--|--|
| 1 Keyboard input and looped-through output | 7 Alarm outputs |
| 2 Ethernet | 8 Secondary Ethernet (2 GigE versions) |
| 3 USB ports | 9 Power input |
| 4 Monitor connections (VGA, CVBS, Y/C) | 10 Malfunction alarm output |
| 5 Biphas connection | 11 RS485 port |
| 6 Alarm inputs | |

Parts included

Quantity	Component
1	Divar 700 Series HD Recorder
2	Power supply cords
1	USB mouse
1	CD-ROM containing the software and manuals
1	Quick installation guide

1	Installation and operation manual
1	Divar 700 Series Archive Player operation manual

Technical specifications

Electrical

Rated Voltage and Power

Power input	100 to 240 VAC; 50/60 Hz
Power consumption	Max. 2.5 to 1.0 A (250 Watt) 835 BTU/h Able to withstand power dips up to 100 MS, assuring continuous operation

Video

Video standard	PAL or NTSC auto-detection
Resolution	704x576 PAL, 704x480 NTSC
Compression	H.264
Inputs	8 or 16 composite video 0.5 to 2 Vpp, 75 ohm automatic termination
Outputs	8 or 16 composite video 1 Vpp, 75 ohm, sync 0.3 V ± 10%

Audio

Inputs	8 or 16 line in (DHR models only), mono RCA, 1 Vpp, 10 kohm
Output	2 line out, dual mono RCA, 1 Vpp, 10 kohm
Compression	MPEG-1 layer II
Sampling rate	24 kHz per channel

Monitors

MON-A	Live, playback, menus
	VGA: analog RGB 1280x1024, 60/75 Hz (NTSC/PAL)
	CVBS: 1 Vpp, 75 ohm, BNC
	Y/C
MON-B (Hybrid models only)	Live
	VGA: analog RGB 1024x768, 60/75 Hz (NTSC/PAL)
	CVBS: 1 Vpp, 75 ohm, BNC
	Y/C

Display Modes

Monitor A	Full, full sequence, quad, multi-screen (live and playback), event call-up (live)
Monitor B (Hybrid models only)	Full, full sequence, quad, multi-screen, event call-up (live)

Frame rate PAL/ NTSC	25/30 IPS per channel (real time)
Multi-screen mode 8 channels	1, 2x2, 3x3 (showing 8 channels)
Multi-screen mode 16 channels	1, 2x2, 3x3, 4x4
Zoom	1.5x, 2x, 3x, 5x
Display languages	English, Chinese (Simplified), Czech, Danish, Dutch, Finnish, French, German, Greek, Hungarian, Italian, Japanese, Norwegian, Polish, Portuguese, Russian, Spanish, Swedish, Turkish.

Alarm Handling

Inputs	Screw terminal, 8 or 16 inputs, configurable NO/NC,
	Max. input 40 VDC
Outputs	Screw terminal 4 relay outputs, configurable NO/NC, max. rated 30 VAC, 40 VDC, 0.5 A, continuous -10 VA
Remote notification	Via Control Center software
Malfunction relay	Temperature related failures, Voltage ratings, Disk failures

Connections

Ethernet	1 or 2 RJ45 modular jack, 8 pins shielded:
	10/100/1000 Base-T
Biphase	Screw terminal connector (5 outputs)
	Maximum 5 controllable cameras per Biphase output
	Impedance 128 ohm, max. overvoltage protection ±40 V, max. cable length 1.5 km (0.9 miles)

Note: LTC 8785 translator needed for fixed-speed receivers/drivers

PTZ control interface	RS485
Serial interface	RS232 output signals according to EIA/ TIA-232 F, max. input voltage ±25 V
	2xDB-9 male connector
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
	RJ11 modular jack 6 pins
USB	Five USB 2.0 ports
10/100/1000 Base- T network interfaces (max 2)	Connect with Bosch iSCSI Video Storage Arrays

Network

Bandwidth control	0.1-100 Mbps limiter
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Remote users	Maximum 7 simultaneously connected Control Center users
Protocol support	TCP/IP, DHCP, DNS, and SNTP
IP cameras	Up to 16 IP H.264 for DHR models (optional) Up to 32 IP H.264 cameras for DNR models (optional)
Supported IP H.264 devices	Dinion, FlexiDome, AutoDome Modular, EX series IP cameras, VIP X series encoders (running firmware 3.7 or later, and AutoDome Easy IP)

Storage

Internal HDD	500 GB, 1 or 2 TB per disk Up to 4 hard disks
Redundancy	RAID-4 (4 hard disks plus optional license required) Effective storage = Smallest disk x 3

Exporting

DVD	Built-in DVD+R/RW recorder (optional)
USB	Flash memory or external HDD (FAT32)
Network	Bosch Video Client or Control Center Software

Security

Password protection	Multi-level
Image authentication	All recordings and archives in native file format

Record Frame Rate

NTSC	Up to 30 IPS per channel at 352x240, 704x240 and 704x480
PAL	Up to 25 IPS per channel at 352x288, 704x288 and 704x576
IP Channels	Up to 25/30 IPS per channel at 4CIF, 720p60 and 1080p30

Recording

Overwrite modes	Continuous, overwrite after 1 to 99 days
Pre-alarm recording	Up to 120 s

Playback

Playback function	Fast forward/reverse, frame forward/reverse, freeze
Zoom	1.5x, 2x, 3x, 5x
Search mode	Date/time, Event (motion, input), Text, Smart Search

Mechanical

Dimensions (W x D x H) (excluding cabling)	446 x 443 x 88 mm (17.6 x 17.4 x 3.5 in)
Weight (incl. 4 hard disks)	Approx. 11 kg / 24 lbs
Rack mount kit (included)	For mounting one unit in an EIA 19" rack

Environmental

Operating temperature	+5 °C to +45 °C (+41 °F to +113 °F)
Storage temperature	-25 °C to +70 °C (-13 °F to +158 °F)
Relative humidity	Operating: <93 % non-condensing Storage: <95 % non-condensing

Model options

	Hybrid/ IP	AN. CH	IP CH st/max
DHR-730-08B XXX	Hybrid	8	0/8
DHR-732-08B XXX	Hybrid	8	0/8
DHR-751-16B XXX	Hybrid	16	0/16
DHR-753-16B XXX	Hybrid	16	0/16
DHR-754-16B XXX	Hybrid	16	0/16
DNR-732-08B XXX	IP only	0	8/16
DNR-753-16B XXX	IP only	0	16/32
DNR-754-16B XXX	IP only	0	16/32

	DIGI in/out	DVD	GigE
DHR-730-08B XXX	8/5		1
DHR-732-08B XXX	8/5	x	1
DHR-751-16B XXX	16/5		1
DHR-753-16B XXX	16/5	x	1
DHR-754-16B XXX	16/5	x	2
DNR-732-08B XXX	8/5	x	1
DNR-753-16B XXX	16/5	x	1
DNR-754-16B XXX	16/5	x	2

XXX	Model storage options:
000	0000 GByte HDD
050	0500 GByte HDD (1 drive)
200	2000 GByte HDD (1 drive)
400	4000 GByte HDD (4 drives)
800	8000 GByte HDD (4 drives)

Note: RAID operation requires a 4-drive system and a DXS-ESRAID-A e-license.

Ordering information**DHR-730-08B000 Digital Hybrid HD Recorder**

730 Series DHR, 1 GigE, 8 CH, 0 GB
Order number **DHR-730-08B000**

DHR-732-08B000 Digital Hybrid HD Recorder

730 Series DHR, DVD, 1 GigE, 8 CH, 0 GB
Order number **DHR-732-08B000**

DHR-730-08B050 Digital Hybrid HD Recorder

730 Series DHR, 1 GigE, 8 CH, 500 GB
Order number **DHR-730-08B050**

DHR-732-08B050 Digital Hybrid HD Recorder

730 Series DHR, DVD, 1 GigE, 8 CH, 500 GB
Order number **DHR-732-08B050**

DHR-730-08B200 Digital Hybrid HD Recorder

730 Series DHR, 1 GigE, 8 CH, 2 TB
Order number **DHR-730-08B200**

DHR-732-08B200 Digital Hybrid HD Recorder

730 Series DHR, DVD, 1 GigE, 8 CH, 2 TB
Order number **DHR-732-08B200**

DHR-730-08B400 Digital Hybrid HD Recorder

730 Series DHR, 1 GigE, 8 CH, 4 TB
Order number **DHR-730-08B400**

DHR-732-08B400 Digital Hybrid HD Recorder

730 Series DHR, DVD, 1 GigE, 8 CH, 4 TB
Order number **DHR-732-08B400**

DHR-730-08B800 Digital Hybrid HD Recorder

730 Series DHR, 1 GigE, 8 CH, 8 TB
Order number **DHR-730-08B800**

DHR-732-08B800 Digital Hybrid HD Recorder

730 Series DHR, DVD, 1 GigE, 8 CH, 8 TB
Order number **DHR-732-08B800**

DHR-751-16B000 Digital Hybrid HD Recorder

750 Series DHR, 1 GigE, 16 CH, 0 GB
Order number **DHR-751-16B000**

DHR-753-16B000 Digital Hybrid HD Recorder

750 Series DHR, DVD, 1 GigE, 16 CH, 0 GB
Order number **DHR-753-16B000**

DHR-754-16B000 Digital Hybrid HD Recorder

750 Series DHR, DVD, 2 GigE, 16 CH, 0 GB
Order number **DHR-754-16B000**

DHR-751-16B050 Digital Hybrid HD Recorder

750 Series DHR, 1 GigE, 16 CH, 500 GB
Order number **DHR-751-16B050**

DHR-753-16B050 Digital Hybrid HD Recorder

750 Series DHR, DVD, 1 GigE, 16 CH, 500 GB
Order number **DHR-753-16B050**

DHR-754-16B050 Digital Hybrid HD Recorder

750 Series DHR, DVD, 2 GigE, 16 CH, 500 GB
Order number **DHR-754-16B050**

DHR-751-16B200 Digital Hybrid HD Recorder

750 Series DHR, 1 GigE, 16 CH, 2 TB
Order number **DHR-751-16B200**

DHR-753-16B200 Digital Hybrid HD Recorder

750 Series DHR, DVD, 1 GigE, 16 CH, 2 TB
Order number **DHR-753-16B200**

DHR-754-16B200 Digital Hybrid HD Recorder

750 Series DHR, DVD, 2 GigE, 16 CH, 2 TB
Order number **DHR-754-16B200**

DHR-751-16B400 Digital Hybrid HD Recorder

750 Series DHR, 1 GigE, 16 CH, 4 TB
Order number **DHR-751-16B400**

DHR-753-16B400 Digital Hybrid HD Recorder

750 Series DHR, DVD, 1 GigE, 16 CH, 4 TB
Order number **DHR-753-16B400**

DHR-754-16B400 Digital Hybrid HD Recorder

750 Series DHR, DVD, 2 GigE, 16 CH, 4 TB
Order number **DHR-754-16B400**

DHR-751-16B800 Digital Hybrid HD Recorder

750 Series DHR, 1 GigE, 16 CH, 8 TB
Order number **DHR-751-16B800**

DHR-753-16B800 Digital Hybrid HD Recorder

750 Series DHR, DVD, 1 GigE, 16 CH, 8 TB
Order number **DHR-753-16B800**

DHR-754-16B800 Digital Hybrid HD Recorder

750 Series DHR, DVD, 2 GigE, 16 CH, 8 TB
Order number **DHR-754-16B800**

DNR-732-08B000 Digital Network HD Recorder

730 Series DNR, DVD, 1 GigE, 8 CH, 0 GB
Order number **DNR-732-08B000**

DNR-732-08B050 Digital Network HD Recorder

730 Series DNR, DVD, 1 GigE, 8 CH, 500 GB
Order number **DNR-732-08B050**

DNR-732-08B200 Digital Network HD Recorder

730 Series DNR, DVD, 1 GigE, 8 CH, 2 TB
Order number **DNR-732-08B200**

DNR-732-08B400 Digital Network HD Recorder

730 Series DNR, DVD, 1 GigE, 8 CH, 4 TB
Order number **DNR-732-08B400**

DNR-732-08B800 Digital Network HD Recorder

730 Series DNR, DVD, 1 GigE, 8 CH, 8 TB
Order number **DNR-732-08B800**

DNR-753-16B000 Digital Network HD Recorder

750 Series DNR, DVD, 1 GigE, 16 CH, 0 GB
Order number **DNR-753-16B000**

DNR-754-16B000 Digital Network HD Recorder
750 Series DNR, DVD, 2 GigE, 16 CH, 0 GB
Order number **DNR-754-16B000**

DNR-753-16B050 Digital Network HD Recorder
750 Series DNR, DVD, 1 GigE, 16 CH, 500 GB
Order number **DNR-753-16B050**

DNR-754-16B050 Digital Network HD Recorder
750 Series DNR, DVD, 2 GigE, 16 CH, 500 GB
Order number **DNR-754-16B050**

DNR-753-16B200 Digital Network HD Recorder
750 Series DNR, DVD, 1 GigE, 16 CH, 2 TB
Order number **DNR-753-16B200**

DNR-754-16B200 Digital Network HD Recorder
750 Series DNR, DVD, 2 GigE, 16 CH, 2 TB
Order number **DNR-754-16B200**

DNR-753-16B400 Digital Network HD Recorder
750 Series DNR, DVD, 1 GigE, 16 CH, 4 TB
Order number **DNR-753-16B400**

DNR-754-16B400 Digital Network HD Recorder
750 Series DNR, DVD, 2 GigE, 16 CH, 4 TB
Order number **DNR-754-16B400**

DNR-753-16B800 Digital Network HD Recorder
750 Series DNR, DVD, 1 GigE, 16 CH, 8 TB
Order number **DNR-753-16B800**

DNR-754-16B800 Digital Network HD Recorder
750 Series DNR, DVD, 2 GigE, 16 CH, 8 TB
Order number **DNR-754-16B800**

Accessories

DHR-XS050-A 700 Series Storage Expansion 500 GB
500 GB storage expansion kit
Order number **DHR-XS050-A**

DHR-XS100-A 700 Series Storage Expansion 1 TB
1 TB storage expansion kit
Order number **DHR-XS100-A**

DHR-XS200-A 700 Series Storage Expansion 2 TB
2 TB storage expansion kit
Order number **DHR-XS200-A**

REG-SENTRY-00-1EU REG Sentry Access Control
Access Control REG Sentry-00, No Camera, EU only
Order number **REG-SENTRY-00-1EU**

REG-SENTRY-X-1EU REG Sentry Access Control
Access Control REG Sentry-X, 16 mm PAL, EU only
Order number **REG-SENTRY-X-1EU**

Software Options

DXS-ESIP01-A 700 Series E-License 1 IP
700 Series e-license 1 IP
Order number **DXS-ESIP01-A**

DXS-ESIP04-A 700 Series E-License 4 IP
700 Series 4 IP e-license
Order number **DXS-ESIP04-A**

DXS-ESIP08-A 700 Series E-License 8 IP
700 Series 8 IP e-license
Order number **DXS-ESIP08-A**

DXS-ESRAID-A 700 Series E-License RAID
700 Series RAID e-license
Order number **DXS-ESRAID-A**

DXS-EText-A 700 Series E-License Text
700 Series Text e-license
Order number **DXS-EText-A**

DHR-SIP01A Divar XF License 1 IP
Order number **DHR-SIP01A**

DHR-SIP04A Divar XF License 4 IP
Order number **DHR-SIP04A**

DHR-SIP08A Divar XF License 8 IP
Order number **DHR-SIP08A**

DHR-SRAID Divar XF License RAID
Order number **DHR-SRAID**

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