DVR 630/650 Series

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Invented for life

- ▶ 8/16-Channel real-time recording with CIF resolution
- ▶ Flexible viewing with two monitor outputs
- ▶ Remote viewing, playback, control, and configuration
- ▶ Easy Pan/Tilt/Zoom camera control
- ▶ DVR viewer iPhone App

The Bosch Video Recorder 630/650 Series is an 8/16 channel digital recorder that uses the latest H.264 compression technology. With the supplied PC software and built-in web server, the 630/650 Series is a fully integrated, stand-alone video management solution that's ready to go, straight out of the box. Available with a variety of storage capacities, the 630/650 Series features a highly reliable embedded design that minimizes maintenance and reduces operational costs. The recorder is also available with a built-in DVD writer.

System overview

The 630/650 Series takes advantage of H.264 video compression technology to dramatically reduce the amount of storage and bandwidth needed while still producing a better image quality. The 630/650 Series 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.

Recording

Ease of use is a key feature of the 630/650 Series design. Simply connect the cameras, apply power, and the unit begins recording automatically. All recording takes place in the background with no operator intervention required.

The use of H.264 compression reduces the file size of recordings by as much as 30% compared to standard MPEG-4, without sacrificing image quality. The 630/650 Series can record at up to 25 (PAL) / 30 (NTSC) images per second, per channel at CIF resolution. Recording at 2CIF and 4CIF resolution is also possible by reducing the recording image rate settings. The recording rate and quality are individually configurable per channel for maximum flexibility. If required, alarm recordings (input and motion) and continuous recordings can be split over two partitions. An overwrite mode can then be selected separately for each partition.

Dome Control

The 630/650 Series can control pan/tilt/zoom (PTZ) equipment via RS-485 serial communications. PTZ devices, including the Bosch AutoDome 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 as well as motion detection in user-defined areas. In addition, the 630/650_Series can send an e-mail notification with a short video clip on alarm.

Local control and operation

The unit can be easily operated and programmed via the on-screen display menu system using the front panel control keys, the mouse, an IntuiKey Series keyboard or the supplied remote control. Two monitor outputs provide full-screen, quad, multi-screen and sequenced viewing.

Looping auto-terminating video inputs and outputs, audio inputs and output, and alarm inputs and outputs are located on the rear panel.

Two VGA connectors provide an output for monitor A (main monitor) and monitor B (spot monitor). Monitor A displays live and playback in full-screen, quad or multi-screen pictures that can be frozen and zoomed. Monitor B displays live full-screen, quad or multi-screen pictures.

Remote control and operation

Use the PC software or built-in web application via a network for live viewing, playback, and configuration. The PC application software can also be used with other Bosch products including the 400 Series and the 700 Series. Four users can control the 630/650 Series simultaneously.

The 630/650 Series includes an authenticity check for both local and remote playback, ensuring recording integrity. The 630/650 Series Archive Player is provided for playback of secure video files.

Mobile Devices

A Bosch DVR viewer App for Apple iOS devices is available for live viewing and PTZ control. This App lets you watch live video from cameras connected to the DVR from anywhere in the world. If a PTZ camera is connected, you can control focus, pan, tilt and zoom. Additionally, Real Time Streaming Protocol (RTSP) is supported in the 630/650 Series. This means that live video streamed from the unit over the internet can be displayed by suitably configured mobile devices.

Functions

The 630/650 Series has the following features:
- 8 or 16 looped-through, auto-terminating camera inputs
- 4 audio inputs and 2 audio outputs
- Simultaneous live viewing, recording, playback, and remote streaming
- 10/100Base-T Ethernet port for local or wide area network connection
- RS485 serial port for serial communication to control movable cameras

- IntuiKey Series keyboard support for Bosch dome control including loop-through to a maximum of 16 other 600 Series or 700 Series recorders
- VGA monitor outputs for main and spot monitors
- 16:9, 16:10 and 4:3 aspect ratio displays for main monitor
- 4:3 aspect ratio display for spot monitor
- Full-screen, quad and multi-screen display capabilities in live and playback modes for main monitor
- Spot monitor output with sequencing and full-screen, quad and multi-screen views
- Alarm picture pop-up on full-screen or sequence by multiple alarms simultaneously
- E-mail notification with 10-second video clip on alarm
- Playback one or more channels while showing live pictures of the other channels
- Motion detection
- Multiple search modes including smart search (search for motion within recorded images)
- 8 or 16 switching (alarm) inputs and 4 alarm outputs
- Video loss detection
- Audible alarm
- Bosch DVR viewer App for live and PTZ control on iPhone/iPad/iPod touch devices
- Live display support on mobile devices via RTSP
- Pan/tilt/zoom camera control via RS485
- Supports Bosch and Pelco protocols
- Local archiving via USB
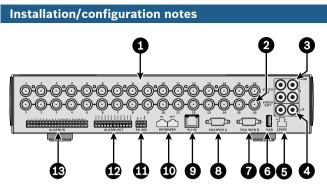- Local archiving via built-in DVD burner (specific models)

Certifications and approvals

Standards

	FCC Part 15, Class B
	EMC Directive 2004/108/EC
	Immunity: EN50130-4
	Emission: EN55022 Class B
	Harmonics: EN61000-3-2
	Voltage fluctuations: EN61000-3-3
	UL60950-1
	LV Directive 2006/95/EC, EN60950-1
	CAN/CSA—C22.2 no. 60950-1
	C-Tick

Region	Certification
Europe	CE
USA	UL
	FCC
Canada	CSA

Installation/configuration notes

Connections on back of DVR 630/650 (16-channel version)

1	Camera inputs	8	Monitor A VGA output
2	Camera outputs	9	RJ45 network connector
3	Audio inputs	10	RJ11 connectors for IntuiKey keyboard
4	Audio outputs	11	RS485 connector for Dome control
5	Power connector	12	Alarm outputs
6	USB connector	13	Alarm inputs
7	Monitor B VGA output		

Recommended PC requirements for Web support

Operating system	Windows XP, Windows Vista or Windows 7
Web browser	Internet Explorer 7, 8 or 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-BaseT

Technical specifications

Electrical

Rated Voltage and Power

External power adapter AC input	110–240 VAC; 50/60 Hz; 1.8 A
External power adapter DC output	12 VDC; 5 A
DVR Power input	12 VDC; 3.5 A; 145 BTU/h

Video Inputs

Inputs	Composite video 1 Vpp, 75 ohm, automatic termination; PAL / NTSC auto-detect
AGC	Automatic gain adjustment for each video input

Video outputs

Outputs	Monitor A: VGA RGB Monitor B: VGA RGB
Live Resolution (Mon.A)	800x600 (4:3), 1024x768 (4:3) 1280x1024 (5:4) 1366x768 (16:9) 1440x900 (16:10)
Digital Zoom	2 times
Streaming video	H.264 compression

Audio

Inputs	Mono RCA, 1.0 Vpp
Output	Mono RCA, 1.0 Vpp
Compression	ADPCM
Sample rate	16 kHz per channel
Bit rate	8-bit

Alarm Handling

Inputs	8 or 16 inputs configurable NO/NC, max. input voltage 15 VDC
Outputs	4 Relay outputs, configurable NO/NC, max. rated 30 VAC, 40 VDC 0.5 A continuous or 10 VA

Control

RS485	Output signals according to RS485, max. signal voltage -8 to +12 V
RS485 Support	Bosch domes, and Pelco P and D

Connectors

Video Inputs	8 or 16 looping BNC, auto termination
Monitor	2 VGA D-SUB
Alarm connectors	Screw terminal inputs, cable diameter AWG26-16 (0.13-1.5 mm)
Audio Inputs	4 RCA (CINCH)
Audio Output	2 RCA (CINCH)
Ethernet	RJ45, 10/100 BaseT according to IEEE802.3
RS485	Screw terminal output, cable diameter AWG28-16 (0.08-1.5 mm)
USB 2.0	One front and one rear USB connector for mouse or USB memory device

Storage

Hard Disks	Supports up to 2 SATA hard drives maximum 2TB each (Third party hard disks are supported from firmware version 2.0.6 onwards. A list of tested disks is available in the instruction manual.)*

*Bosch cannot be held liable for any loss or damages or system malfunction resulting from the use of non-Bosch drives in DVR recorders.

Video recording

Record Rate (IPS)	
NTSC	Max. 30 IPS per channel, configurable: 30, 15, 7.5, 5, 3, 1
PAL	Max. 25 IPS per channel, configurable: 25, 12.5, 6.25, 5, 2.5, 1
Recording Quality	Best, High, Normal, Low, Lowest

Average Recording Capacity (16 channels, 500 GB)	
CIF, Normal, 25/30 IPS	PAL: 138 hours, NTSC: 170 hours
CIF, Normal, 6.25/7.5 IPS	PAL: 350 hours, NTSC: 425 hours
2CIF, Normal, 12.5/15 IPS	PAL: 115 hours, NTSC: 144 hours
4CIF, Normal, 6.25/7.5 IPS	PAL: 93 hours, NTSC: 115 hours

Maximum recording rates per channel

Local 16 channels	
4CIF	PAL: 6 IPS, NTSC: 7.5 IPS
2CIF	PAL: 12.5 IPS, NTSC: 15 IPS
CIF	PAL: 25 IPS, NTSC: 30 IPS
Local 8 channels	
4CIF	PAL: 12.5 IPS, NTSC: 15 IPS
2CIF	PAL: 25 IPS, NTSC: 30 IPS
CIF	PAL: 25 IPS, NTSC: 30 IPS
Local 4 channels	
4CIF	PAL: 25 IPS, NTSC: 30 IPS
2CIF	PAL: 25 IPS, NTSC: 30 IPS
CIF	PAL: 25 IPS, NTSC: 30 IPS
Remote (network) 16 channels	
CIF	PAL: 6.75 IPS, NTSC: 7.5 IPS
Remote (network) 8 channels	
CIF	PAL: 12.5 IPS, NTSC: 15 IPS

Display Modes

Monitor A	Full, quad, multi-screen (live and playback), full sequence, alarm call-up (live)
Monitor B	Full, quad, multi-screen, full sequence, alarm call-up (live)

Recording Modes

Normal partition	Continuous recording (with or without overwriting)
Event partition	Input and motion recording (with or without overwriting)

Mechanical

Dimensions (WxDxH)	355 x 362 x 78 mm (13.9 x 14.2 x 3.1 in) excluding cabling
Weight	4.3 kg (9.46 lb) approx.

Environmental

Temperature	
- Operating	+0°C to +40°C (+32°F to +104°F)
- Storage	-40°C to +70°C (-40°F to +158°F)

Humidity	
- Operating	<93% non-condensing
- Storage	<95% non-condensing

Ordering information

DVR-630-08A 630 Series DVR
630 Series DVR, 8-channel, base unit
Order number **DVR-630-08A**

DVR-630-16A 630 Series DVR
630 Series DVR, 16-channel, base unit
Order number **DVR-630-16A**

DVR-650-08A 650 Series DVR
650 Series DVR, DVD, 8-channel, base unit
Order number **DVR-650-08A**

DVR-650-16A 650 Series DVR
650 Series DVR, DVD, 16-channel, base unit
Order number **DVR-650-16A**

DVR-630-08A050 630 Series DVR
630 Series DVR, 8-channel, 500 GB
Order number **DVR-630-08A050**

DVR-630-16A050 630 Series DVR
630 Series DVR, 16-channel, 500 GB
Order number **DVR-630-16A050**

DVR-650-08A050 650 Series DVR
650 Series DVR, 8-channel, DVD writer, 500 GB
Order number **DVR-650-08A050**

DVR-650-16A050 650 Series DVR
650 Series DVR, 16-channel, DVD writer, 500 GB
Order number **DVR-650-16A050**

DVR-630-08A100 630 Series DVR
630 Series DVR, 8-channel, 1 TB
Order number **DVR-630-08A100**

DVR-630-16A100 630 Series DVR
630 Series DVR, 16-channel, 1 TB
Order number **DVR-630-16A100**

DVR-650-08A100 650 Series DVR
650 Series DVR, 8-channel, DVD writer, 1 TB
Order number **DVR-650-08A100**

DVR-650-16A100 650 Series DVR
650 Series DVR, 16-channel, DVD writer, 1 TB
Order number **DVR-650-16A100**

DVR-630-08A200 630 Series DVR
630 Series DVR, 8-channel, 2 TB
Order number **DVR-630-08A200**

DVR-630-16A200 630 Series DVR
630 Series DVR, 16-channel, 2 TB
Order number **DVR-630-16A200**

DVR-650-08A200 650 Series DVR
650 Series DVR, 8-channel, DVD writer, 2 TB
Order number **DVR-650-08A200**

DVR-650-16A200 650 Series DVR
650 Series DVR, 16-channel, DVD writer, 2 TB
Order number **DVR-650-16A200**

Accessories

DVR-XS050-A Storage Expansion Kit
DVR 600 Series storage expansion 500 GB
Order number **DVR-XS050-A**

DVR-XS100-A Storage Expansion Kit
DVR 600 Series storage expansion 1 TB
Order number **DVR-XS100-A**

DVR-XS200-A Storage Expansion Kit
DVR 600 Series storage expansion 2 TB
Order number **DVR-XS200-A**

KBD-Digital Keyboard
IntuiKey Digital Keyboard for use with Divar Digital
Video Recorders, System4 Multiplexers, Bosch VMS,
and VIDOS
Order number **KBD-DIGITAL**