

DVR1 Series

Digital Video Recorders



Security Systems

- Simple VCR Replacement
- Network Viewing of Live and Recorded Video
- Simultaneously Records and Archives
- CD-ROM and New! Disk Array Archiving Options
- Disk Array Features*:
 - Up to 8 Hard Disk Drives
 - 19-inch Rackable
 - LED Status Lights for Each Drive
 - Economical
 - Field Upgradable**
- Large Storage Capacity
- Compatible with Many Manufacturers' Multiplexers
- Fast Access to High Quality Video
- Audio Recording Version
- Complete IntuiKey Keyboard/MUX Integration

Formerly known
as Philips CSI

Inset photo shows the DVAA Series Disk Array Archiving Device (sold separately).

Before restoring archive data from the disk array, the DVR1 must stop recording.

*The DVR1's Remote Viewer software does not currently support the disk array. A future software upgrade will provide access to archive video via a network connection.

Bosch DVR1 Series recorders replace traditional analog time-lapse recorders in conventional CCTV systems, providing a cost-effective digital solution. These DVR1 recorders are compatible with a wide range of multiplexers. The simple installation, VCR-like functions, and common recording speeds ease the transition to digital and minimize the need for training.

The benefits of digital eliminate the conventional technology associated with VCRs and tapes. This provides fast, uninterrupted video access, available locally and via a network connection. The DVR1 is ideal for upgrading an existing CCTV system and for new installations.

The DVR1, Bosch System4 Multiplexers, and IntuiKey Keyboard are now a completely integrated solution. This allows access to the DVR1's recorded video with a few simple keystrokes. All playback features (fast forward, pause, etc.), menus, and search options are accessible via the security guard's preferred interface – the Keyboard.

These flexible DVR1 recorders are designed to suit many applications. Each unit provides two (2) quality settings (VHS and SVHS), three (3) recording modes (manual, event, scheduled), eleven (11) recording speeds, and three (3) overwrite modes (Continuous, Write Once, and Stop).

There are four models with various recording capacities, one of which provides audio recording. The DVR1 Series recorders provide large internal storage capabilities; however, if months, or even years of video storage are required, the DVAA Series Disk Array is available.

Selected events can be backed up locally to a CD-writer. Additionally, events may be stored as video clips on your PC's hard drive, using the Remote Viewer software. The Remote Viewer provides access to live, recorded, and backed up images, as well as snapshot creation and image enhancement.

Image quality will not deteriorate regardless of how many times the images are viewed or re-recorded. Of particular benefit, is fast access to recorded events, accomplished by simply specifying the camera, time, date, and alarm search filters. When using the viewer, an analysis tool

provides graphical display of all recorded video and alarms, making it even faster to find the desired video.

The DVR1 Series incorporates all of the benefits of digital recording and eliminates the maintenance worries and costs associated with analog VCRs.

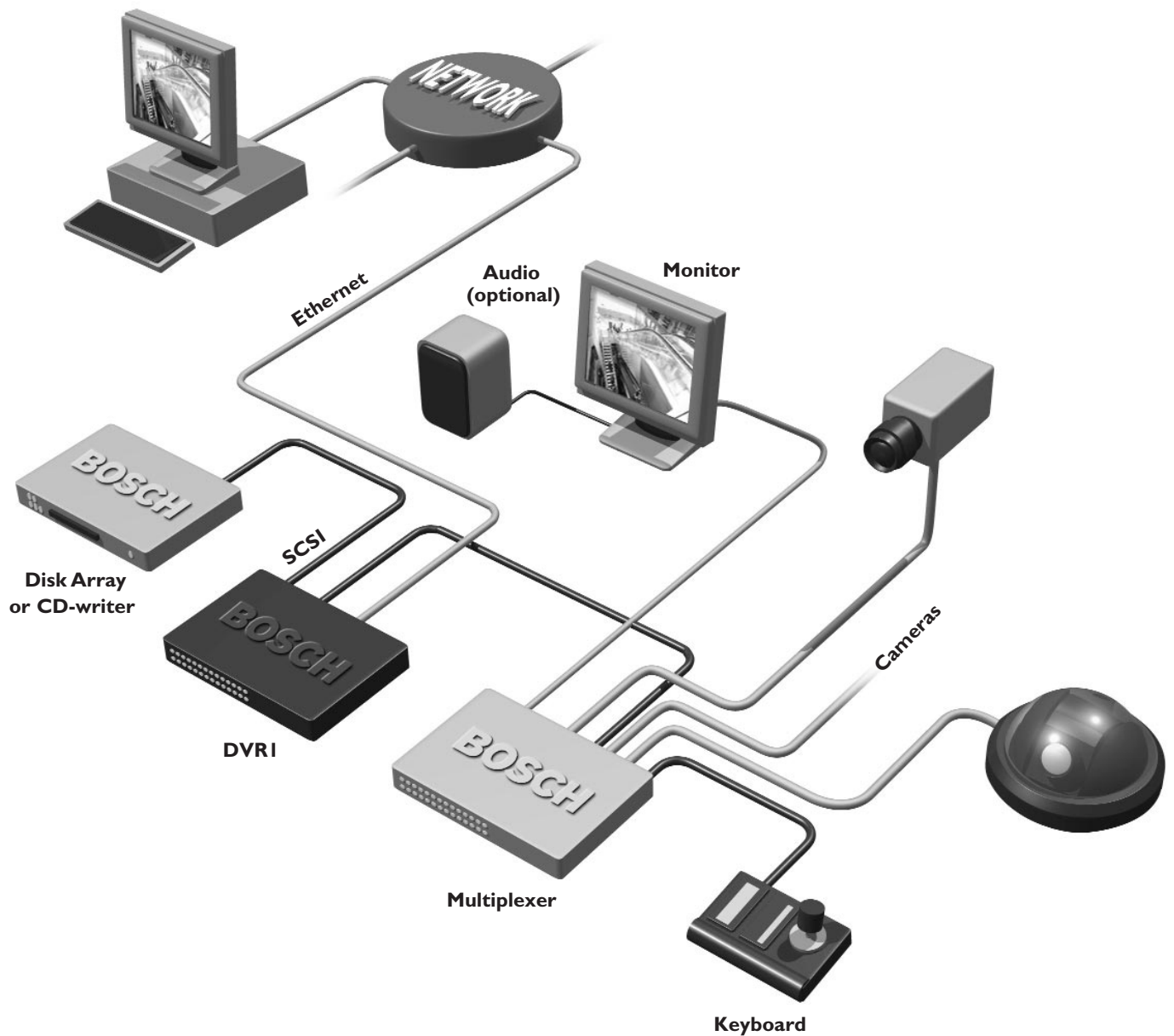


Figure 1 The IntuiKey Keyboard*, Bosch System4 Multiplexers** and DVR1 Integrated Solution

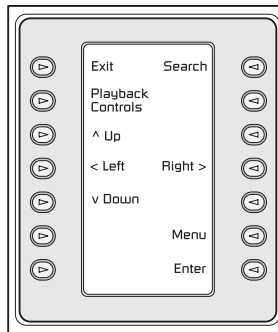
*IntuiKey Keyboard model numbers are KBD-DIGITAL, KBD-MUX and KBD-UNIVERSAL
 **System4 Multiplexer model numbers are LTC 2672/90 and LTC 2682/90

Electrical			
Model No.	Rated Voltage	Voltage Range	Power at Min. Voltage
DVR1EP08	12 VDC	120–230 VAC, 50/60 Hz	35 W nominal
DVR1EP16	12 VDC	120–230 VAC, 50/60 Hz	40 W nominal
DVR1EP32	12 VDC	120–230 VAC, 50/60 Hz	40 W nominal
DVR1EP32A	12 VDC	120–230 VAC, 50/60 Hz	55 W nominal
(with audio)			
*Power adapter is included: 12 VAC, 90 V–264 V AC/DC			
Sync System	PAL and NTSC automatically detected		
Digital Resolution	720 x 484 NTSC, 720 x 586 PAL		
Grayscale	256 levels		
Internal Hard Drive Capacity			
DVR1EP08	80 GB		
DVR1EP16	160 GB		
DVR1EP32	320 GB		
DVR1EP32A	320 GB		
Video			
Input	1.0 Vp-p composite, 75 Ω		
Output	1.0 Vp-p composite, 75 Ω		
Colors	YUV 4:2:2, 16.8 million colors		
Compression	Wavelet		
Audio (DVR1EP32A Model Only)			
Compression	G.711 (64 kilobits)		
Search Features	Camera, time/date and alarm search		
Recording Modes	Event, scheduled, manual		
Recording Speed			
NTSC	60, 30, 20, 10, 5, 3, 2, 1, 0.5, 0.2, 0.1 IPS and alarm only		
PAL	50, 25, 17, 10, 5, 3, 2, 1, 0.5, 0.2, 0.1 IPS and alarm only		
Connectors			
RS-232	DB-9, male		
I/O Port	DB-9, alarm input and output, record start in, alarm record reset, VEXT pulse out, error out, ground, video loss out, disk full output		
Video Inputs/Outputs	BNC, S-video (4-pin mini)		
Audio Inputs/Outputs	RCA jack		
SCSI-2	50-pin male		
Network	RJ-45, 10/100 Base-T compatible		
Remote Viewer Software Features			
	View live or recorded video		
	View archived video directly from disk array		
	Store video on PC's hard drive		
	Snapshots of live and recorded images		
	Review and search video while recording		
	Password Protection		

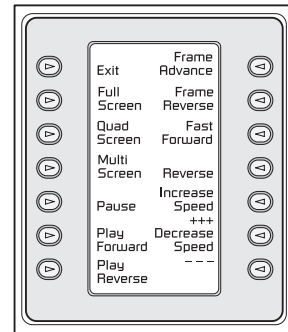
PC System Requirements (for Remote Viewer Software)	
	Windows® 98 SE/2000/ME, Windows NT® or Windows XP operating systems
	Pentium® 400MHz or faster
	6MB free hard disk or more
	Monitor (SVGA) 1024 x 768, 24-bit color
Mechanical	
Dimensions	444.5 W x 355.6 D x 44.45 H mm (17.5 W x 14 D x 1.75 H in)
Weight	DVR1EP08 11.46 lb (5.2 kg) DVR1EP16, DVR1EP32 and DVR1EP32A 13.8 lb (5.98 kg)
Temperature	Operating 0° to 40° C (32° to 104° F)
Relative Humidity	80%, noncondensing

Multiplexer Compatibility ¹	
Compatible with the Following Multiplexers	
	Bosch LTC 2600 Series, Bosch models VS7390, VS8394, VSS7390, or VSS8394, Kalatel®, Sanyo®, Dedicated Micros®, Robot®, Pelco®, ATV®

DVR1 Access via IntuiKey	
IntuiKey Keyboard Menu Screens	
The following IntuiKey keyboard menu screens provide direct keyboard access to all DVR1 features.	
DVR1 Controls Menu	Provides the Following Functionality: DVR1 Search menu All DVR1 menus Access to archive video
DVR1 Playback Controls Menu	Provides the Following Functionality: Multiscreen viewing options All playback features



DVR1 Controls



DVR1 Playback Controls

Accessories (Included)	
	Rack Kit
	9-pin Accessory Board

Bosch Approved Archiving Devices¹

CD-writer

Approved Model Plextor® PX-W4012TSE/SW*

*SCSI cable required: 50-pin high density male to 50-pin high density male

DVAA Series Disk Array

Models (See Storage Capacity Table below)

DVAA0412 Unit with four (4) 120 GB HDDs installed

DVAA0812 Unit with eight (8) 120 GB HDDs installed

Input Voltage 110–120 VAC (60 Hz), 200–240 VAC (50 Hz)

Power 110 VAC (60 Hz), 220 VAC (50 Hz)

Network One (1) RJ-45 connection of 10/100 megabit ethernet**

**Reserved for future upgrade

Weight 28 lb (12.7 kg)

Construction Steel, rack-mountable, 3U

Finish Charcoal gray

SCSI Ports 50-pin, high-density, SCSI-2; SCSI cable provided

Front Panel Indicators

Hard Drive Status Indicators

Present, Operating, Failure

Hard Drive Activity Indicator

Indicates Read and Write

LCD Display

Indicates Total Storage Capacity

¹For the latest Approved Archive Devices and Multiplexer Compatibility chart, visit the Digital Video Multiplexer/Recorders area of our Web site at www.boschsecuritysystems.com.

Disk Array Storage Capacity – Hours (Days)**

	DVRI RECORD SPEED – NTSC											
	60	30	20	10	5	3	2	1	0.5	0.2	0.1	
DVAA0412 (480 GB):												
VHS Quality	*	*	303 (13)	606 (25)	1212 (51)	2020 (84)	3030 (126)	6060 (253)	12121 (505)	30303 (1263)	60606 (2525)	
SVHS Quality	*	*	238 (10)	476 (20)	952 (40)	1587 (66)	2381 (99)	4761 (198)	9523 (397)	23809 (992)	47619 (1984)	
DVAA0812 (960 GB):												
VHS Quality	*	*	606 (25)	1212 (51)	2424 (101)	4040 (168)	6060 (253)	12121 (505)	24242 (1010)	60606 (2525)	121212 (5051)	
SVHS Quality	*	*	476 (20)	952 (40)	1904 (79)	3174 (132)	4762 (198)	9523 (397)	19047 (794)	47619 (1984)	95238 (3968)	

	DVRI RECORD SPEED – PAL											
	50	25	17	10	5	3	2	1	0.5	0.2	0.1	
DVAA0412 (480 GB):												
VHS Quality	*	*	301 (13)	512 (21)	1025 (43)	1709 (71)	2564 (107)	5128 (214)	10256 (427)	25641 (1068)	51282 (2137)	
SVHS Quality	*	*	237 (10)	404 (17)	808 (34)	1346 (56)	2020 (84)	4040 (168)	8080 (337)	20202 (842)	40404 (1684)	
DVAA0812 (960 GB):												
VHS Quality	*	*	603 (25)	1025 (43)	2051 (85.47)	3418 (142)	5128 (214)	10256 (427)	20512 (855)	51282 (2137)	102564 (4274)	
SVHS Quality	*	*	475 (20)	808 (34)	1616 (67)	2693 (112)	4040 (168)	8080 (337)	16161 (673)	40404 (1684)	80808 (3367)	

NOTE: The DVAA is a backup archive device. The above Storage Capacity Table represents the total storage between the DVR1 and DVAA.

* Signifies that archiving is not available at this speed.

**These are estimated recording times.

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