

Product Specification

16-Ch Hybrid Digital Video Recorder

HDVR-1600

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Change History:

Revision	Date	Author	Change List
Version 1.0	2009/04/27	Brian Chen	Initial release
Version 1.1	2009/08/17	Brian Chen	Add HDVR-M15/M30

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1. PRODUCT DESCRIPTION

The existing traditional CCTV surveillance system is gradually upgraded to packet switching TCP/IP network as the broadband communication becomes more and more popular. To efficiently build the surveillance system with the existing analog cameras and IP cameras, PLANET provides the best Hybrid DVR solution, HDVR-1600, which supports both analog cameras and IP cameras, and can act as a pure NVR to obtain the video signal from up to 8 IP cameras.

The HDVR-1600 is a professional security device providing video data recording, remote surveillance over a secured IP network and viewing / recording / playback at the same time in the full-time security application. The HDVR-1600 supports total recording frame rates to 60 fps (NTSC) at H.264 @ D1 format. **The users could install the extension card to expand it up to 120 (HDVR-M15) or 480 (HDVR-M30) fps at H.264 @ D1 format.** Moreover, the remote software – Central Management Software (CMS) is applied with the HDVR-1600 to offer distant accessibility for remote system control.

The HDVR-1600 also supports USB keyboard and mouse to bring users much easier operation. For various surveillance applications via RS-485 interface, the HDVR-1600 has integrated with the control keyboard feature to provide a convenient control interface. By the control keyboard installed, the surveillance administrator can control not only the HDVR-1600 but most types of PTZ cameras. With integrated alarm I/O, the HDVR-1600 can detect record and ring a siren. It can also do motion detection / schedule recording to complete surveillance plans. Furthermore, the HDVR-1600 supports hardware Watch-Dog function to monitor the DVR status and provides automatic restart function to prevent the system hangs when the system is detected unstable.

Securing the content stored on hard-disk of the digital video recorder systems and providing conditional access to stored content management, PLANET HDVR-1600 Hybrid Digital Video Recorder offers a perfect solution for both security professionals and business owners who require the unparalleled flexibility and reliability in IP surveillance fields.

2. PRODUCT FEATURES

- Multi-Codec for H.264 / MPEG-4 / MJPEG compression
- Mega-Pixel recording
- Multiple video output ports
- Supports up to 4 SATA devices
- POS Function: transaction monitoring
- NTP for time synchronization
- Easy configuration interface with USB Keyboard / Mouse
- Multi-Tasking: Recording, Display, Backup, Playback
- CMS manage up to 512 Channels
- Calendar, Time and Event search
- Support multiple languages

3. PRODUCT SPECIFICATIONS

3.1 Main Component

CPU: Power PC 333MHz
RAM: 128M

3.2 Functional Specifications

Product	HDVR-1600
General	
Video System	NTSC / PAL Switch Selectable
Video Compression	H.264 / MPEG-4 / M-JPEG
Video Input	16x BNC, 1.0Vp-p/75 ohm
Video Output	Main Monitor: HDMI x 1, VGA x1, S-Video x 1, BNC x 1, 1.0Vp-p/75 oh Call Monitor: BNC x 1, 1.0Vp-p/75 ohm Loop: BNC x 16, 1.0Vp-p/75 ohm
Audio Input	16 x Line-In
Audio Output	1x RCA
Alarm I/O	16 x Input 3 x Output
Ethernet Interface	2 x RJ-45, 10/100/1000 Mbps

USB Interface	4 x USB 2.0, Support Thumb Drive and DVD+RW	
Storage Interface	4 x SATA for HDD (Supports up to 1TB per HDD) and DVD+RW	
Build-in Storage Device	1x DVD+RW, 1x HDD Removable Rack	
Recording Resolution	NTSC: 720x480 PAL: 720x576	
Recording Frame Rate (NTSC/PAL)	HDVR-1600	H.264 @ D1: 60 / 50 fps MPEG-4 / M-JPEG @ D1 : 120 / 100 fps
	HDVR-M15	H.264 @ D1: 120 fps / 100 fps MPEG-4 / M-JPEG @ D1 : 240 / 200 fps
	HDVR-M30	H.264 @ D1: 480 fps / 400 fps (*1)
Recording Quality	8 Levels Presets, Adjustable	
Recording Mode	Schedule, Alarm, Motion Detection	
Display Division	1, 4, 9, 16	
OSD Control	Front panel buttons, IR remote controller, USB mouse/keyboard	
Multi-Language-OSD	English / Japanese / German / French / Italian / Spanish / Portuguese / Dutch / Norwegian / Swedish / Danish / Russian / Slovak / Hungarian / Bulgarian / Turkish / Traditional Chinese / Simplified Chinese / Finnish / Polish / Greece / Farsi	
Pre-alarm	1~30 sec	
Client Interface	Client software	
Camera PTZ Control	RS-485	
Backup Device	DVD-RW, USB DVD-RW, USB Flash Drive and Network	
Power Source	AC 100~240V, 50-60Hz	
Power Consumption	100W (Manual Select)	
Operating Temperature	0 ~ 40 Degree C	
Dimension (W x D x H)	430 x 413 x 90 mm	

*1: HDVR-M30 module doesn't support MPEG-4 and M-JPEG compressions

3.3 Physical Specifications

3.3.1 HDVR-1600

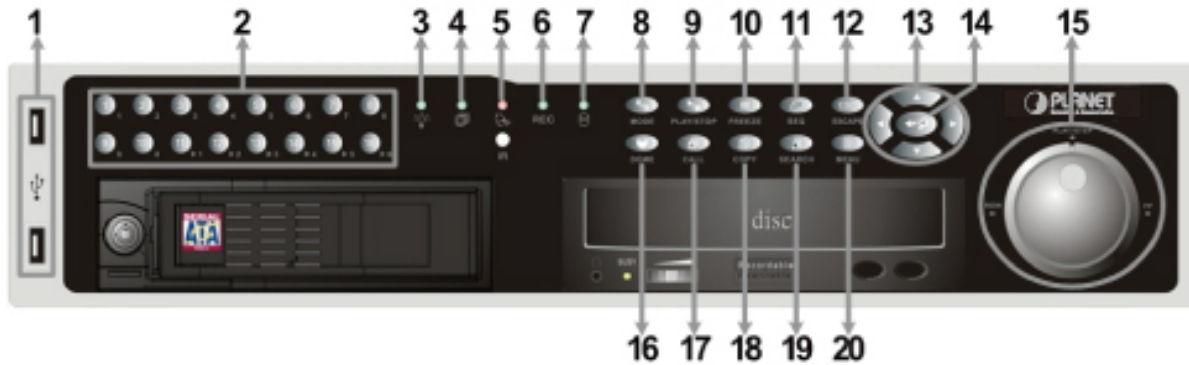
Dimensions:

440 x 413 x 90 mm (W x D x H)

Weight

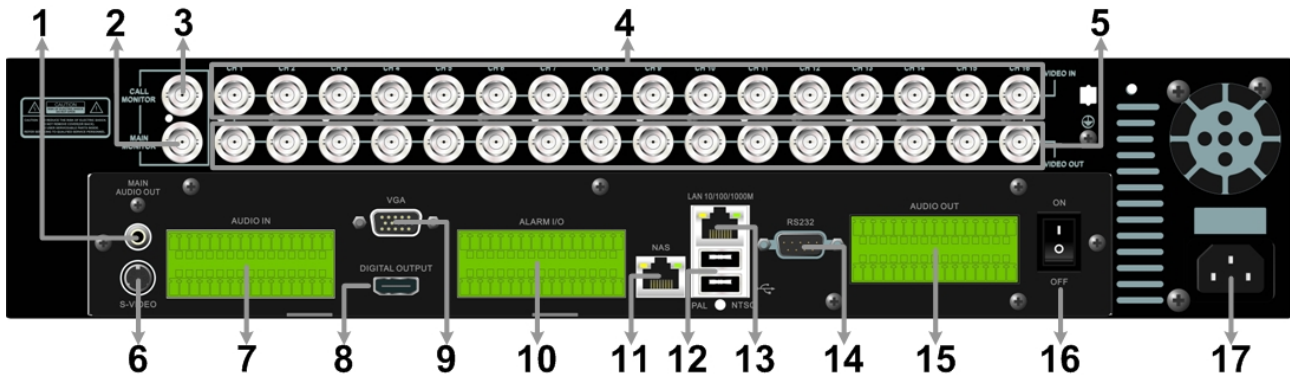
6 kg

Front panel



Item		Description
1	USB 2.0 Port	The USB 2.0 port allows users to connect an external USB device to the unit, such as a USB ThumbDrive® or a USB mouse.
2	Channels	<ol style="list-style-type: none"> 1. In Live and Playback modes, press any key to view the corresponding video in full-screen. 2. In input interface, 1~10 can be used for direct input of numbers 0~9. 3. In Dome Camera Control mode, 1 is for entering the Set/ Go preset menu; 2 is for hiding or displaying the dome setting parameters; 11~16 is for quick access of preset points 1~6.
3	Power LED	It lights up when power source is connected.
4	Network LED	It lights up when network is connected. In addition, it blinks when data is being transmitted via the network.
5	Alarm LED	It lights up when an alarm is triggered.
6	Record LED	It blinks when videos are being recorded.
7	HDD LED	It lights up when data is processed to or from the connected HDD(s).
8	MODE	Press this key to view in full-screen or multiple window modes.
9	PLAY/STOP	Press once to start the playback of recorded video. Press again to exit.
10	FREEZE	Press this key to freeze the current viewing screen.
11	SEQ	Press this key to start automatic sequence display of cameras.
12	ESC	Press this key to cancel or exit from certain control mode.
13	Direction Keys	<ol style="list-style-type: none"> 1. In Zoom mode, these keys function as normal direction keys. 2. In the OSD setup menu, the direction keys are used to move the cursor to previous or next fields. To change the value in the selected field, press UP / DOWN keys.
14	ENTER	<ol style="list-style-type: none"> 1. In OSD menu or selection interface, press these key to make the selection or save settings. 2. In live full-screen viewing mode, press this key to view a 2x zoom image; press it again to return.
15	Shuttle/ Jog	This is used to control playback operations.
16	DOME	Press this key to enter Dome Camera Control mode.
17	CALL	Press this key to control call monitor or 2nd main monitor.
18	COPY	This key is used for marking time in quick video export function.
19	SEARCH	Press this key to search recorded video by date/time or event.
20	MENU	Press this key to enter the OSD setup menu.

Rear panel



Item		Description
1	Main Monitor Audio Out	A RCA connector is provided to output audio associated with the main monitor.
2	Main Monitor (BNC)	A BNC connector is provided for connecting to a main monitor.
3	Call Monitor (BNC)	A BNC connector is provided for connecting to a call monitor.
4	Video In (BNC)	A group of BNC connectors is offered for video input streams from installed cameras. The number of connectors equals to the number of channels.
5	Video Out (BNC)	The same amount of BNC connectors underneath Video IN (BNC) is offered for looping out the video input.
6	Main Monitor (S-Video)	An S-Video connector is provided for connecting to a main monitor.
7	Audio In	The DVR provides audio in connectors (a terminal block) for each channel to connect its individual audio source device.
8	Main Monitor (Digital Output)	A digital output connector is provided for connection to a displaying device that transfers data digitally to show the best video quality.
9	Main Monitor (VGA)	A VGA output connector is offered for connecting to a VGA main monitor.
10	Alarm I/O & RS-485	The DVR provides alarm I/O and RS-485 ports that offer users the flexibility required to connect the unit to other devices.
11	NAS Device (*1)	The NAS connector allows users to connect to a Network-Attached Storage (NAS) device to expand HDD capacity of the DVR.
12	USB 2.0 Ports (x2)	Two USB 2.0 ports are located on the rear panel for users to connect external USB devices to the unit, such as ThumbDrive® or a USB mouse.
13	LAN 10/100/1000M (RJ-45)	The DVR is capable of networking and it allows the videos to be viewed over the LAN network or the Internet by using the Internet Explorer.
14	RS232	The DVR provides a RS232 communication port for sending and receiving signals.
15	Audio Out (Optional)	Optional Audio Out connectors can be installed for each channel to connect its individual audio output device.
16	Power Switch	Use this switch to power on / off the DVR.
17	Power Jack	Connect the power supply cord shipped with the DVR. Use of other power supply cords may cause overloading.

*1 : This feature will available in the future.

3.3.2 HDVR-M15 (option)

Dimensions:

150 x 69 x 23 mm (W x D x H)

Weight

0.11 kg

Front panel



3.3.3 HDVR-M30 (option)

Dimensions:

200 x 74 x 10 mm (W x D x H)

Weight

0.08 kg

Front panel



3.4 Environmental Specifications

Operating Temperature: 0 ~ 40 degree C
Operating Humidity: 5 ~ 95% (non-condensing)

3.5 Electrical Specifications

Input Voltage: 100~240V AC, 50/60Hz, Max. 100W

3.6 Regulatory Compliance

FCC
CE

3.7 Basic Packaging

1 x HDVR-1600
1 x Quick installation guide
1 x User's manual CD
1 x Power cord
4 x HDD Bracket
2 x SATA cable
2 x Key
1 x Remote Controller
1 x Mounting Kit

3.8 Packaging Information

3.8.1 HDVR-1600

Dimension: 590 x 460 x 210 mm (W x D x H)
Weight: 8.5 kg

3.8.2 HDVR-M15 [optional accessory]

Dimension: 223 x 128 x 58 mm (W x D x H)
Weight: 0.22 kg

3.8.3 HDVR-M30 [optional accessory]

Dimension: 223 x 128 x 58 mm (W x D x H)
Weight: 0.2 kg