1 FEATURES AND SPECIFICATIONS

1.1 Overview

The standalone series DVR is an excellent digital monitor product designed for security field.

It adopts embedded Linux OS to maintain reliable operation. Popular H.264 compression algorithm and G.711 audio compression technology realize high quality, low bit stream. Unique frame by frame play function is suitable for detailed analysis. It has various functions such as record, playback, monitor at the same time and can guarantee audio video synchronization. This series product has advanced technology and strong network data transmission function.

This series device adopts embedded design to achieve high security and reliability. It can work in the local end, and at the same time, when connecting it to the professional surveillance software (PSS), it can connect to the security network to realize strong network and remote monitor function.

This series product can be widely used in various areas such as banking, telecommunication, electric power, interrogation, transportation, intelligent resident zone, factory, warehouse, resources, and water conservancy.

1.2 Features

This series product has the following features:

● **Real-time surveillance**
Support VGA port and HDMI port. Realize the surveillance through displayer. Support HDMI, VGA, and TV output at the same time.

● **Storage function**
Special data format to guarantee data security and can remove the risk of the vicious data modification. Support digital watermark.

● **Compression format**
Support multiple-channel audio and video. An independent hardware decodes the audio and video signal from each channel to maintain video and audio synchronization.

● **Backup function**
Support backup operation via USB port (such as U disk, portable HDD, burner)
Client-end user can download the file to local HDD to backup via network.

● **Record & playback function**

Support each channel real-time record independently, and at the same time it can support search, forward play, network monitor, record search, download and etc.

Support various playback modes: slow play, fast play, backward play and frame by frame play.

Support time title overlay so that you can view event accurate occurred time

Support customized zoom function during the preview.

● **Network operation**

Support network remote real-time monitor, remote record search and remote PTZ control.

● **Alarm activation function**

Several relay alarm outputs to realize alarm activation and on-site light control.

The alarm input port and output has the protection circuit to guarantee device safety.

● **Communication port**

RS485 port can realize alarm input and PTZ control.

RS232 port can connect to keyboard to realize central control, and can also connect to PC COM to upgrade system and realize maintenance, and matrix control.

Standard Ethernet port can realize network access function.

The dual-network port has the multiple-access, fault-tolerance, load-balance setup mode.

Use coaxial cable to realize camera setup and PTZ control function.

● **PTZ control**

Support PTZ decoder via RS485.

● **Intelligent operation**

Mouse operation function

In the menu, support copy and paste setup function

● **UPNP (Universal Plug and Play)**

Establish mapping connection between LAN and WAN via UPNP protocol.

● **Camera self-adaptive**

Camera PAL/NTSC and HD self-adaptive function.

Slight function differences may be found due to different series.

1.3 Specifications

1.3.1 Premium General 4-HDD 720P 1.5U Series

	Parameter	24-Channel Series	32-Channel Series
System	Main Processor	High-performance industrial embedded micro controller	
	OS	Embedded LINUX	

	System Resources	Multiplex operations: Multiple-channel record, multiple-channel playback and network operation simultaneously	
	Interface	User-friendly graphical user interface	
	Input Devices	USB mouse	
	Input Method	Arabic number, English character, donation and extension Chinese (optional)	
	Shortcut Function	Copy/paste operation, USB mouse right-key shortcut menu, double click USB mouse to switch screen.	
Compression Standard	Video Compression	H.264	
	Audio Compression	G711A, G711U, PCM	
Video monitor	Video Input	24-CH composite video input: (NTSC/PAL) BNC (1.0VBP- P, B75Ω)	32-CH composite video input: (NTSC/PAL) BNC (1.0VBP- P, B75Ω)
	IP Channel	- The default setup is 0. System supports add IP channel function. - After you disabled one analog channel, you can add one IP channel. System max supports 32 IP channels. - The connection bandwidth is 160Mbps when there are some IP channels. - The connection bandwidth is 250Mbps when there are all IP channels.	- The default setup is 0. - After you disabled one analog channel, you can add one IP channel. System max supports 32 IP channels. - The connection bandwidth is 160Mbps when there are some IP channels. - The connection bandwidth is 250Mbps when there are all IP channels.
	Video Output	1-ch PAL/NTSC, BNC (1.0VP- P, 75Ω) composite video signal output. 1-ch VGA output. 2-ch HDMI output. HDMI port1 has the same video source as the VGA and TV. HDMI port2 is the HD aux output of the analog channel. 1-ch video matrix output. Support TV/VGA/HDMI1/HDMI2 video output at the same time.	
	Video Standard	720P/25, 720P/30, 720P/50, 720P/60	
	Record Speed	Real-time Mode: PAL 1f/s to 25f/s per channel and NTSC 1f/s to 30f/s per channel	
	Video Partition	1/4/8/9/16/25 windows(Optional)	1/4/8/9/16/25/36 windows
	Monitor Touring	Support monitor tour functions such as alarm, motion detection, and schedule auto control.	
	Resolution (PAL/NTSC)	Real-time monitor： 720P 1280*720	

		Playback： 1/16-ch: 720P 1280×720, 960H 960 × 576/960 × 480, D1 704×576/704×480, HD1 352×576/352×480, 2CIF 704×288/704×240, CIF 352×288/ 352×240, QCIF 176×144/176×120
		Support dual streams: extra stream resolution D1 704×576/704×480, CIF 352×288/ 352×240, QCIF 176×144/176×120
	Image Quality	6-level image quality (Adjustable)
	Privacy mask	Support one privacy mask of user-defined size in full screen. Support max 4 zones.
	Image Information	Channel information, time information and privacy mask zone.
	TV Adjust	Adjust TV output zone suitable to anamorphic video.
	Channel Lock	Cover secret channel with blue screen though system is encoding normally. Screen-lock function to prevent unauthorized user seeing secret video.
	Channel Information	Channel name, recording status, screen lock status, video loss status and motion detection status are shown on the bottom left of display screen.
	Color Configuration	Hue, brightness, contrast, saturation and gain setup for each channel.
Audio	Audio Input	4-ch 200-2000mv 10KΩ(BNC)
	Audio Output	1-ch audio output 200-3000mv 5KΩ(BNC)
	Bidirectional Audio	1-channel MIC IN/1-channel MIC OUT. 200-3000mv 5KΩ(BNC)
Hard disk	Hard Disk	4 built-in SATA port. Support 4 HDDs.
	One HDD Capacity	Max 4T
	Hard Disk Occupation	Audio：PCM 28.8MByte/h Video：56-900MByte/h
Record and playback	Recording Mode	Manual recording, motion detection recording, schedule recording and alarm recording Priority: Manual recording> alarm recording>motion detection recording>schedule recording.
	Storage Mode	Support channel record quota setup
	Recording Length	1 to 60 minutes single record duration (Default setup is 60 minutes)
	Playback Repeat Way	When hard disk is full, system can overwrite previous video file.

	Record Search	Various search engines such as time, type and channel.
	Playback Mode	Various fast play, slow play speeds, manual frame by frame playback and reverse play mode.
	Various File Switch Ways	Can switch to previous or next file or any file in current play list. Can switch to file on other channel of the same time. (If there is a file) Support file continuous play, when file is end system auto plays the next file in the current channel
	Playback Way	Support mark playback
	Multi-channel Playback	Support 1/4/8/16-channel modes
	Window Zoom	Switch between self-adaptive screen/full screen when playback
	Partial Enlargement	When in one-window full-screen playback mode, you can select any zone to activate partial enlargement function.
Backup function	Backup Mode	HDD backup
		Support peripheral USB backup device. (Flash disk, portable disk, USB burner and etc.)
		Support external eSATA device backup
		Support network download and backup
Network Function	Network control	View monitor channel remotely.
		DVR configuration through client-end and web browser
		Upgrade via client or browser to realize remote maintenance.
		View alarm information such as external alarm, motion detection and video loss via client.
		Support network PTZ lens control
		File download backup and playback
		Multiple devices share information via corresponding software such as professional surveillance software (PSS)
		Duplex transparent COM
		Network alarm input and output
		Zero-channel encoding
		Bidirectional audio.
Motion Detection and Alarm	Motion Detection	Zone setup: support 396((PAL 22×18, NTSC 22×15)) detection zones. Various sensitivity levels. Alarm can activate record or external alarm or screen message prompt.
	Video Loss	Alarm can activate external alarm or screen message prompt.
	External Alarm	Support record activation function or activate external alarm or screen message in specified period.
	Manual Alarm Control	Enable or disable alarm input channel Support analog alarm signal to specific alarm output channel.
	Alarm Input	16-ch alarm input（NO/NC）

	Alarm Output	6-channel relay output. （Including one controllable DC 12V output）
	Alarm Relay	30VDC　2A，125VAC　1A（activation alarm）
Interface	USB Interface	3 USB 2.0 ports.
	Network connection	1 RJ45 10M/100M/1000M self-adaptable Ethernet port
	RS485	1 RS485 port. PTZ control port Support various PTZ control protocols.
	RS232	1 RS232 port. Ordinary COM (Debug),keyboard connection and transparent serial port(COM　input and output via network)
	RS422	1 RS422 port
System Information	Hard Disk Information	Display HDD current status
	Data Stream Statistics	Data stream statistics for each channel (in wave mode)
	Log statistics	Backup to 1024 log files. Support various search engines such as time and type.
	Version	Display version information: channel amount, alarm input and output amount, system version and release date.
	On-line user	Display current on-line user
User Management	User Management	Multi-lever user management; various management modes Integrated management for local user, serial port user and network user. Configurable user power.
		Support user /group and its corresponding rights modification. No limit to the user or group amount.
	Password Authentication	Password modification Administrator can modify other user's password.
		Account lock strategy Five times login failure in thirty minutes may result in account lock.
Upgrade		Web browser, client-end and update tool.
Analog Camera/HDCVI Camera Connection Capability		Support HDCVI camera connection only. Does not support analog camera connection.
Login, Logout and Shutdown		Password login protection to guarantee safety
		User-friendly interface when login. Provide the following options: Logout /shutdown/ restart.
		Right authentication when shut down to make sure only those proper people can turn off DVR
General Parameter	Power	AC90~264V　50+2% Hz (Max 150W)
	Power Consumption	≤53W (With adapter, exclude HDD)

	Working Temperature	-10℃－＋55℃
	Working Humidity	10%－90%
	Air Pressure	86kpa－106kpa
	Dimension	1.5U standard industrial case. 440(W) x410(D) x70(H)mm
	Weight	4.5－5.5KG (Exclude HDD)
	Installation Mode	Desktop/rack installation

1.3.2 Premium General 4-HDD 720P（S2）1.5U Series

	Parameter	24-Channel Series	32-Channel Series
System	Main Processor	High-performance industrial embedded micro controller	
	OS	Embedded LINUX	
	System Resources	Multiplex operations: Multiple-channel record, multiple-channel playback and network operation simultaneously	
	Interface	User-friendly graphical user interface	
	Input Devices	USB mouse	
	Input Method	Arabic number, English character, donation and extension Chinese (optional)	
	Shortcut Function	Copy/paste operation, USB mouse right-key shortcut menu, double click USB mouse to switch screen.	
Compression Standard	Video Compression	H.264	
	Audio Compression	G711A, G711U, PCM	
Video monitor	Video Input	24-CH composite video input: (NTSC/PAL) BNC (1.0VBP- P, B75Ω)	32-CH composite video input: (NTSC/PAL) BNC (1.0VBP- P, B75Ω)
	IP Channel	• The default setup is 0. System supports add IP channel function. • After you disabled one analog channel, you can add one IP channel. System max supports 32 IP channels. • The connection bandwidth is 160Mbps when there are some IP channels. • The connection bandwidth is 250Mbps when there are all IP channels.	• The default setup is 0. • After you disabled one analog channel, you can add one IP channel. System max supports 32 IP channels. • The connection bandwidth is 160Mbps when there are some IP channels. • The connection bandwidth is 250Mbps when there are all IP channels.

	Video Output	1-ch PAL/NTSC, BNC (1.0VP- P, 75Ω) composite video signal output. 1-ch VGA output. 2-ch HDMI output. HDMI port1 has the same video source as the VGA and TV. HDMI port2 is the HD aux output of the analog channel. 1-ch video matrix output. Support TV/VGA/HDMI1/HDMI2 video output at the same time.
	Video Standard	720P/25, 720P/30, 720P/50, 720P/60
	Record Speed	Real-time Mode: PAL 1f/s to 25f/s per channel and NTSC 1f/s to 30f/s per channel
	Video Partition	1/4/8/9/16/25 windows(Optional) 1/4/8/9/16/25/36 windows
	Monitor Touring	Support monitor tour functions such as alarm, motion detection, and schedule auto control.
	Resolution (PAL/NTSC)	Real-time monitor： 720P 1280*720
		Playback： 1/16-ch: 720P 1280×720, 960H 960 × 576/960 × 480, D1 704×576/704×480, HD1 352×576/352×480, 2CIF 704×288/704×240, CIF 352×288/ 352×240, QCIF 176×144/176×120
		Support dual streams: extra stream resolution D1 704×576/704×480, CIF 352×288/ 352×240, QCIF 176×144/176×120
	Image Quality	6-level image quality (Adjustable)
	Privacy mask	Support one privacy mask of user-defined size in full screen. Support max 4 zones.
	Image Information	Channel information, time information and privacy mask zone.
	TV Adjust	Adjust TV output zone suitable to anamorphic video.
	Channel Lock	Cover secret channel with blue screen though system is encoding normally. Screen-lock function to prevent unauthorized user seeing secret video.
	Channel Information	Channel name, recording status, screen lock status, video loss status and motion detection status are shown on the bottom left of display screen.
	Color Configuration	Hue, brightness, contrast, saturation and gain setup for each channel.
Audio	Audio Input	4-ch 200-2000mv 10KΩ(BNC)
	Audio Output	1-ch audio output 200-3000mv 5KΩ(BNC)
	Bidirectional Audio	1-channel MIC IN/1-channel MIC OUT. 200-3000mv 5KΩ(BNC)
	Hard Disk	4 built-in SATA port. Support 4 HDDs.

Hard disk	One HDD Capacity	Max 4T
	Hard Disk Occupation	Audio：PCM 28.8MByte/h Video：56-900MByte/h
Record and playback	Recording Mode	Manual recording, motion detection recording, schedule recording and alarm recording Priority: Manual recording> alarm recording>motion detection recording>schedule recording.
	Storage Mode	Support channel record quota setup
	Recording Length	1 to 60 minutes single record duration (Default setup is 60 minutes)
	Playback Repeat Way	When hard disk is full, system can overwrite previous video file.
	Record Search	Various search engines such as time, type and channel.
	Playback Mode	Various fast play, slow play speeds, manual frame by frame playback and reverse play mode.
	Various File Switch Ways	Can switch to previous or next file or any file in current play list. Can switch to file on other channel of the same time. (If there is a file) Support file continuous play, when file is end system auto plays the next file in the current channel
	Playback Way	Support mark playback
	Multi-channel Playback	Support 1/4/8/16-channel modes
	Window Zoom	Switch between self-adaptive screen/full screen when playback
	Partial Enlargement	When in one-window full-screen playback mode, you can select any zone to activate partial enlargement function.
Backup function	Backup Mode	HDD backup
		Support peripheral USB backup device. (Flash disk, portable disk, USB burner and etc.)
		Support external eSATA device backup
		Support network download and backup
Network Function	Network control	View monitor channel remotely.
		DVR configuration through client-end and web browser
		Upgrade via client or browser to realize remote maintenance.
		View alarm information such as external alarm, motion detection and video loss via client.
		Support network PTZ lens control
		File download backup and playback

		Multiple devices share information via corresponding software such as professional surveillance software (PSS)
		Duplex transparent COM
		Network alarm input and output
		Zero-channel encoding
		Bidirectional audio.
Motion Detection and Alarm	Motion Detection	Zone setup: support 396((PAL 22×18, NTSC 22×15)) detection zones. Various sensitivity levels. Alarm can activate record or external alarm or screen message prompt.
	Video Loss	Alarm can activate external alarm or screen message prompt.
	External Alarm	Support record activation function or activate external alarm or screen message in specified period.
	Manual Alarm Control	Enable or disable alarm input channel Support analog alarm signal to specific alarm output channel.
	Alarm Input	16-ch alarm input（NO/NC）
	Alarm Output	6-channel relay output. （Including one controllable DC 12V output）
	Alarm Relay	30VDC 2A，125VAC 1A（activation alarm）
Interface	USB Interface	3 USB 2.0 ports.
	Network connection	1 RJ45 10M/100M/1000M self-adaptable Ethernet port
	RS485	1 RS485 port. PTZ control port Support various PTZ control protocols.
	RS232	1 RS232 port. Ordinary COM (Debug),keyboard connection and transparent serial port(COM input and output via network)
	RS422	1 RS422 port
System Information	Hard Disk Information	Display HDD current status
	Data Stream Statistics	Data stream statistics for each channel (in wave mode)
	Log statistics	Backup to 1024 log files. Support various search engines such as time and type. Max support 500,000 logs
	Version	Display version information: channel amount, alarm input and output amount, system version and release date.
	On-line user	Display current on-line user
User Management	User Management	Multi-lever user management; various management modes Integrated management for local user, serial port user and network user. Configurable user power.
		Support user /group and its corresponding rights modification. No limit to the user or group amount.

	Password Authentication	Password modification Administrator can modify other user's password.	
		Account lock strategy Five times login failure in thirty minutes may result in account lock.	
Upgrade		Web browser, client-end and update tool.	
Analog Camera/HDCVI Camera Connection Capability		Support analog camera/HDCVI camera connection. Self-adaptive, no need to reboot.	
Login, Logout and Shutdown		Password login protection to guarantee safety	
		User-friendly interface when login. Provide the following options: Logout /shutdown/ restart.	
		Right authentication when shut down to make sure only those proper people can turn off DVR	
General Parameter	Power	AC90~264V 50+2% Hz (Max 150W)	
	Power Consumption	≤53W (With adapter, exclude HDD)	
	Working Temperature	-10℃－＋55℃	
	Working Humidity	10%－90%	
	Air Pressure	86kpa－106kpa	
	Dimension	1.5U standard industrial case. 440(W) x410(D) x70(H)mm	
	Weight	4.5－5.5KG (Exclude HDD)	
	Installation Mode	Desktop/rack installation	

1.3.3 Premium General 720P 2U Series

	Parameter	24-Channel Series	32-Channel Series
System	Main Processor	High-performance industrial embedded micro controller	
	OS	Embedded LINUX	
	System Resources	Multiplex operations: Multiple-channel record, multiple-channel playback and network operation simultaneously	
	Interface	User-friendly graphical user interface	
	Input Devices	USB mouse	
	Input Method	Arabic number, English character, donation and extension Chinese (optional)	
	Shortcut Function	Copy/paste operation, USB mouse right-key shortcut menu, double click USB mouse to switch screen.	
Compression Standard	Video Compression	H.264	
	Audio Compression	G711A, G711U, PCM	

Video monitor	Video Input	24-CH composite video input: (NTSC/PAL) BNC (1.0VBP- P, B75Ω)	32-CH composite video input: (NTSC/PAL) BNC (1.0VBP- P, B75Ω)
	IP Channel	• The default setup is 0. • After you disabled one analog channel, you can add one IP channel. System max supports 24 IP channels. • The connection bandwidth is 160Mbps when there are some IP channels. • The connection bandwidth is 250Mbps when there are all IP channels.	• The default setup is 0. • After you disabled one analog channel, you can add one IP channel. System max supports 32 IP channels. • The connection bandwidth is 160Mbps when there are some IP channels. • The connection bandwidth is 250Mbps when there are all IP channels.
	Video Output	1-ch PAL/NTSC, BNC (1.0VP- P, 75Ω) composite video signal output. 1-ch VGA output. 2-ch HDMI output. HDMI port1 has the same video source as the VGA and TV. HDMI port2 is the HD aux output of the analog channel. 1-ch video matrix output. Support TV/VGA/HDMI1/HDMI2 video output at the same time.	
	Video Standard	720P/25, 720P/30, 720P/50, 720P/60	
	Record Speed	Real-time Mode: PAL 1f/s to 25f/s per channel and NTSC 1f/s to 30f/s per channel	
	Video Partition	1/4/8/9/16/25 windows(Optional)	1/4/8/9/16/25/36 windows(Optional)
	Monitor Touring	Support monitor tour functions such as alarm, motion detection, and schedule auto control.	
	Resolution (PAL/NTSC)	Real-time monitor： 720P 1280*720	
		Playback： 1/16-ch: 720P 1280×720, 960H 960 × 576/960 × 480,D1 704×576/704×480, HD1 352×576/352×480, 2CIF 704×288/704×240, CIF 352×288/ 352×240, QCIF 176×144/176×120	
		Support dual streams: extra stream resolution D1 704×576/704×480 CIF 352×288/ 352×240, QCIF 176×144/176×120	
	Image Quality	6-level image quality (Adjustable)	
	Privacy mask	Support one privacy mask of user-defined size in full screen. Support max 4 zones.	
	Image Information	Channel information, time information and privacy mask zone.	

	TV Adjust	Adjust TV output zone suitable to anamorphic video.
	Channel Lock	Cover secret channel with blue screen though system is encoding normally. Screen-lock function to prevent unauthorized user seeing secret video.
	Channel Information	Channel name, recording status, screen lock status, video loss status and motion detection status are shown on the bottom left of display screen.
	Color Configuration	Hue, brightness, contrast, saturation and gain setup for each channel.
Audio	Audio Input	16-ch 200-2000mv 10KΩ(BNC)
	Audio Output	1-ch audio output 200-3000mv 5KΩ(BNC)
	Bidirectional Audio	1-channel MIC IN/1-channel MIC OUT. 200-3000mv 5KΩ(BNC)
Hard disk	Hard Disk	8 built-in SATA port. Support 8 HDDs.
	One HDD Capacity	Max 4T
	Hard Disk Occupation	Audio：PCM 28.8MByte/h Video：56-900MByte/h
Record and playback	Recording Mode	Manual recording, motion detection recording, schedule recording and alarm recording Priority: Manual recording> alarm recording>motion detection recording>schedule recording.
	Storage Mode	Support channel record quota setup
	Recording Length	1 to 60 minutes single record duration (Default setup is 60 minutes)
	Playback Repeat Way	When hard disk is full, system can overwrite previous video file.
	Record Search	Various search engines such as time, type and channel.
	Playback Mode	Various fast play, slow play speeds, manual frame by frame playback and reverse play mode.
	Various File Switch Ways	Can switch to previous or next file or any file in current play list. Can switch to file on other channel of the same time. (If there is a file) Support file continuous play, when file is end system auto plays the next file in the current channel
	Playback Way	Support mark playback
	Multi-channel Playback	Support 1/4/8/16-channel modes

	Window Zoom	Switch between self-adaptive screen/full screen when playback
	Partial Enlargement	When in one-window full-screen playback mode, you can select any zone to activate partial enlargement function.
Backup function	Backup Mode	HDD backup
		Support peripheral USB backup device. (Flash disk, portable disk, USB burner and etc.)
		Support external eSATA device backup
		Support network download and backup
Network Function	Network control	View monitor channel remotely.
		DVR configuration through client-end and web browser
		Upgrade via client or browser to realize remote maintenance.
		View alarm information such as external alarm, motion detection and video loss via client.
		Support network PTZ lens control
		File download backup and playback
		Multiple devices share information via corresponding software such as professional surveillance software (PSS)
		Duplex transparent COM
		Network alarm input and output
		Zero-channel encoding
		Bidirectional audio.
Motion Detection and Alarm	Motion Detection	Zone setup: support 396((PAL 22×18, NTSC 22×15)) detection zones. Various sensitivity levels. Alarm can activate record or external alarm or screen message prompt.
	Video Loss	Alarm can activate external alarm or screen message prompt.
	External Alarm	Support record activation function or activate external alarm or screen message in specified period.
	Manual Alarm Control	Enable or disable alarm input channel Support analog alarm signal to specific alarm output channel.
	Alarm Input	16-ch alarm input（NO/NC）
	Alarm Output	6-channel relay output. （Including one controllable DC 12V output）
	Alarm Relay	30VDC　2A，125VAC　1A（activation alarm）
Interface	USB Interface	4 USB 2.0 ports.
	Network connection	2 RJ45 10M/100M/1000M self-adaptable Ethernet ports
	RS485	1 RS485 port. PTZ control port Support various PTZ control protocols.
	RS232	1 RS232 port. Ordinary COM (Debug),keyboard connection and transparent serial port(COM　input and output via network)
	RS422	1 RS422 port.

System Information	Hard Disk Information	Display HDD current status
	Data Stream Statistics	Data stream statistics for each channel (in wave mode)
	Log statistics	Backup to 1024 log files. Support various search engines such as time and type.
	Version	Display version information: channel amount, alarm input and output amount, system version and release date.
	On-line user	Display current on-line user
User Management	User Management	Multi-lever user management; various management modes Integrated management for local user, serial port user and network user. Configurable user power.
		Support user /group and its corresponding rights modification. No limit to the user or group amount.
	Password Authentication	Password modification Administrator can modify other user's password.
		Account lock strategy Five times login failure in thirty minutes may result in account lock.
Upgrade		Web browser, client-end and update tool.
Analog Camera/HDCVI Camera Connection Capability		Support HDCVI camera connection only. Does not support analog camera.
Login, Logout and Shutdown		Password login protection to guarantee safety
		User-friendly interface when login. Provide the following options: Logout /shutdown/ restart.
		Right authentication when shut down to make sure only those proper people can turn off DVR
General Parameter	Power	AC90~264V 50+2% Hz (Max 150W)
	Power Consumption	≤53W (With adapter, exclude HDD)
	Working Temperature	-10℃－＋55℃
	Working Humidity	10%－90%
	Air Pressure	86kpa－106kpa
	Dimension	2U standard industrial case. 440(W) x460(D) x89(H)mm
	Weight	7.0－8.0KG (Exclude HDD)
	Installation Mode	Desktop/rack installation

1.3.4 Premium General 720P（S2） 2U Series

	Parameter	24-Channel Series	32-Channel Series

System	Main Processor	High-performance industrial embedded micro controller	
	OS	Embedded LINUX	
	System Resources	Multiplex operations: Multiple-channel record, multiple-channel playback and network operation simultaneously	
	Interface	User-friendly graphical user interface	
	Input Devices	USB mouse	
	Input Method	Arabic number, English character, donation and extension Chinese (optional)	
	Shortcut Function	Copy/paste operation, USB mouse right-key shortcut menu, double click USB mouse to switch screen.	
Compression Standard	Video Compression	H.264	
	Audio Compression	G711A, G711U, PCM	
Video monitor	Video Input	24-CH composite video input: (NTSC/PAL) BNC (1.0VBP- P, B75Ω)	32-CH composite video input: (NTSC/PAL) BNC (1.0VBP- P, B75Ω)
	IP Channel	• The default setup is 0. System supports add IP channel function. • After you disabled one analog channel, you can add one IP channel. System max supports 32 IP channels. • The connection bandwidth is 160Mbps when there are some IP channels. • The connection bandwidth is 250Mbps when there are all IP channels.	• The default setup is 0. • After you disabled one analog channel, you can add one IP channel. System max supports 32 IP channels. • The connection bandwidth is 160Mbps when there are some IP channels. • The connection bandwidth is 250Mbps when there are all IP channels.
	Video Output	1-ch PAL/NTSC, BNC (1.0VP- P, 75Ω) composite video signal output. 1-ch VGA output. 2-ch HDMI output. HDMI port1 has the same video source as the VGA and TV. HDMI port2 is the HD aux output of the analog channel. 1-ch video matrix output. Support TV/VGA/HDMI1/HDMI2 video output at the same time.	
	Video Standard	720P/25, 720P/30, 720P/50, 720P/60	
	Record Speed	Real-time Mode: PAL 1f/s to 25f/s per channel and NTSC 1f/s to 30f/s per channel	
	Video Partition	1/4/8/9/16/25 windows(Optional)	1/4/8/9/16/25/36 windows(Optional)

	Monitor Touring	Support monitor tour functions such as alarm, motion detection, and schedule auto control.
	Resolution (PAL/NTSC)	Real-time monitor： 720P 1280*720
		Playback： 1/16-ch: 720P 1280×720, 960H 960 × 576/960 × 480,D1 704×576/704×480, HD1 352×576/352×480, 2CIF 704×288/704×240, CIF 352×288/ 352×240, QCIF 176×144/176×120
		Support dual streams: extra stream resolution D1 704×576/704×480 CIF 352×288/ 352×240, QCIF 176×144/176×120
	Image Quality	6-level image quality (Adjustable)
	Privacy mask	Support one privacy mask of user-defined size in full screen. Support max 4 zones.
	Image Information	Channel information, time information and privacy mask zone.
	TV Adjust	Adjust TV output zone suitable to anamorphic video.
	Channel Lock	Cover secret channel with blue screen though system is encoding normally. Screen-lock function to prevent unauthorized user seeing secret video.
	Channel Information	Channel name, recording status, screen lock status, video loss status and motion detection status are shown on the bottom left of display screen.
	Color Configuration	Hue, brightness, contrast, saturation and gain setup for each channel.
Audio	Audio Input	16-ch 200-2000mv 10KΩ(BNC)
	Audio Output	1-ch audio output 200-3000mv 5KΩ(BNC)
	Bidirectional Audio	1-channel MIC IN/1-channel MIC OUT. 200-3000mv 5KΩ(BNC)
Hard disk	Hard Disk	8 built-in SATA port. Support 8 HDDs.
	One HDD Capacity	Max 4T
	Hard Disk Occupation	Audio：PCM 28.8MByte/h Video：56-900MByte/h
Record and playback	Recording Mode	Manual recording, motion detection recording, schedule recording and alarm recording Priority: Manual recording> alarm recording>motion detection recording>schedule recording.
	Storage Mode	Support channel record quota setup

	Recording Length	1 to 60 minutes single record duration (Default setup is 60 minutes)
	Playback Repeat Way	When hard disk is full, system can overwrite previous video file.
	Record Search	Various search engines such as time, type and channel.
	Playback Mode	Various fast play, slow play speeds, manual frame by frame playback and reverse play mode.
	Various File Switch Ways	Can switch to previous or next file or any file in current play list. Can switch to file on other channel of the same time. (If there is a file) Support file continuous play, when file is end system auto plays the next file in the current channel
	Playback Way	Support mark playback
	Multi-channel Playback	Support 1/4/8/16-channel modes
	Window Zoom	Switch between self-adaptive screen/full screen when playback
	Partial Enlargement	When in one-window full-screen playback mode, you can select any zone to activate partial enlargement function.
Backup function	Backup Mode	HDD backup
		Support peripheral USB backup device. (Flash disk, portable disk, USB burner and etc.)
		Support external eSATA device backup
		Support network download and backup
Network Function	Network control	View monitor channel remotely.
		DVR configuration through client-end and web browser
		Upgrade via client or browser to realize remote maintenance.
		View alarm information such as external alarm, motion detection and video loss via client.
		Support network PTZ lens control
		File download backup and playback
		Multiple devices share information via corresponding software such as professional surveillance software (PSS)
		Duplex transparent COM
		Network alarm input and output
		Zero-channel encoding
		Bidirectional audio.
Motion Detection and Alarm	Motion Detection	Zone setup: support 396((PAL 22×18, NTSC 22×15)) detection zones. Various sensitivity levels. Alarm can activate record or external alarm or screen message prompt.
	Video Loss	Alarm can activate external alarm or screen message prompt.

	External Alarm	Support record activation function or activate external alarm or screen message in specified period.
	Manual Alarm Control	Enable or disable alarm input channel Support analog alarm signal to specific alarm output channel.
	Alarm Input	16-ch alarm input（NO/NC）
	Alarm Output	6-channel relay output. （Including one controllable DC 12V output）
	Alarm Relay	30VDC 2A，125VAC 1A（activation alarm）
Interface	USB Interface	4 USB 2.0 ports.
	Network connection	2 RJ45 10M/100M/1000M self-adaptable Ethernet ports
	RS485	1 RS485 port. PTZ control port Support various PTZ control protocols.
	RS232	1 RS232 port. Ordinary COM (Debug),keyboard connection and transparent serial port(COM input and output via network)
	RS422	1 RS422 port.
System Information	Hard Disk Information	Display HDD current status
	Data Stream Statistics	Data stream statistics for each channel (in wave mode)
	Log statistics	Backup to 1024 log files. Support various search engines such as time and type.
	Version	Display version information: channel amount, alarm input and output amount, system version and release date.
	On-line user	Display current on-line user
User Management	User Management	Multi-lever user management; various management modes Integrated management for local user, serial port user and network user. Configurable user power.
		Support user /group and its corresponding rights modification. No limit to the user or group amount.
	Password Authentication	Password modification Administrator can modify other user's password.
		Account lock strategy Five times login failure in thirty minutes may result in account lock.
Upgrade		Web browser, client-end and update tool.
Analog Camera/HDCVI Camera Connection Capability		Support analog camera/HDCVI camera connection. Self-adaptive, no need to reboot.
Login, Logout and Shutdown		Password login protection to guarantee safety
		User-friendly interface when login. Provide the following options: Logout /shutdown/ restart.
		Right authentication when shut down to make sure only those proper people can turn off DVR

General Parameter	Power	AC90~264V 50+2% Hz (Max 150W)		
	Power Consumption	≤53W (With adapter, exclude HDD)		
	Working Temperature	-10℃－＋55℃		
	Working Humidity	10%－90%		
	Air Pressure	86kpa－106kpa		
	Dimension	2U standard industrial case. 440(W) x460(D) x89(H)mm		
	Weight	7.0－8.0KG (Exclude HDD)		
	Installation Mode	Desktop/rack installation		

1.3.5 Advanced 1080P 1.5U Series

	Parameter	4-Ch Series	8-Ch Series	16-Ch Series
System	Main Processor	High-performance industrial embedded micro controller		
	OS	Embedded LINUX		
	System Resources	Multiplex operations: Multiple-channel record, multiple-channel playback and network operation simultaneously		
	Interface	User-friendly graphical user interface		
	Input Devices	USB mouse		
	Input Method	Arabic number, English character, donation and extension Chinese (optional)		
	Shortcut Function	Copy/paste operation, USB mouse right-key shortcut menu, double click USB mouse to switch screen.		
Compression Standard	Video Compression	H.264		
	Audio Compression	G711A, G711U, PCM		
	Video Input	4-CH composite video input: (NTSC/PAL) BNC (1.0VBP- P, B75Ω)	8-CH composite video input: (NTSC/PAL) BNC (1.0VBP- P, B75Ω)	16-CH composite video input: (NTSC/PAL) BNC (1.0VBP- P, B75Ω)

Video monitor	IP Channel	- The default setup is 0. - After you disabled one analog channel, you can add one IP channel. - System supports add IP channel function. For 4 channel series product, it max supports 8 IP channels. For 8 channel series product, it max supports 16 IP channels. For 16 channel series product, it max supports 32 IP channels. - The connection bandwidth is 160Mbps when there are some IP channels. - The connection bandwidth is 250Mbps when there are all IP channels.		
	Video Output	1-ch PAL/NTSC, BNC (1.0VP- P, 75Ω) composite video signal output. 1-ch VGA output. 2-ch HDMI output. HDMI port1 has the same video source as the VGA and TV. HDMI port2 is the HD aux output of the analog channel. 1-ch video matrix output. Support TV/VGA/HDMI1/HDMI2 video output at the same time.		
	Video Standard	720P/25, 720P/30, 720P/50, 720P/60, 1080P/25, 1080P/30		
	Record Speed	Real-time Mode: PAL 1f/s to 25f/s per channel and NTSC 1f/s to 30f/s per channel		
	Video Partition	1/4 windows	1/4/8/9 windows	1/4/8/9/16 windows
	Monitor Touring	Support monitor tour functions such as alarm, motion detection, and schedule auto control.		
	Resolution (PAL/NTSC)	Real-time monitor： 1080P 1920*1080		
		Playback： 1/16-ch: 1080P 1920*1080, 720P 1280×720, 960H 960 × 576/960 × 480,D1 704×576/704×480, HD1 352×576/352×480, 2CIF 704×288/704×240, CIF 352×288/ 352×240, QCIF 176×144/176×120		
		Support dual streams: extra stream resolution D1 704×576/704×480, CIF 352×288/ 352×240, QCIF 176×144/176×120		
	Image Quality	6-level image quality (Adjustable)		
	Privacy mask	Support one privacy mask of user-defined size in full screen. Support max 4 zones.		
	Image Information	Channel information, time information and privacy mask zone.		
	TV Adjust	Adjust TV output zone suitable to anamorphic video.		
	Channel Lock	Cover secret channel with blue screen though system is encoding normally. Screen-lock function to prevent unauthorized user seeing secret video.		

	Channel Information	Channel name, recording status, screen lock status, video loss status and motion detection status are shown on the bottom left of display screen.		
	Color Configuration	Hue, brightness, contrast, saturation and gain setup for each channel.		
Audio	Audio Input	4-ch 200-2000mv 10KΩ(BNC)		
	Audio Output	1-ch audio output 200-3000mv 5KΩ(BNC)		
	Bidirectional Audio	1-channel MIC IN and 1-channel MIC OUT. 200-3000mv 5KΩ(BNC)		
Hard disk	Hard Disk	4 built-in SATA port. Support 4 HDDs.		
	One HDD Capacity	Max 4T		
	Hard Disk Occupation	Audio：PCM 28.8MByte/h Video：56-900MByte/h		
Record and playback	Recording Mode	Manual recording, motion detection recording, schedule recording and alarm recording Priority: Manual recording> alarm recording>motion detection recording>schedule recording.		
	Storage Mode	Support channel record quota setup		
	Recording Length	1 to 60 minutes single record duration (Default setup is 60 minutes)		
	Playback Repeat Way	When hard disk is full, system can overwrite previous video file.		
	Record Search	Various search engines such as time, type and channel.		
	Playback Mode	Various fast play, slow play speeds, manual frame by frame playback and reverse play mode.		
	Various File Switch Ways	Can switch to previous or next file or any file in current play list. Can switch to file on other channel of the same time. (If there is a file) Support file continuous play, when file is end system auto plays the next file in the current channel		
	Playback Way	Support mark playback		
	Multi-channel Playback	Support 1/4-channel modes	Support 1/4/8-channel modes	Support 1/4/8/16-channel modes
	Window Zoom	Switch between self-adaptive screen/full screen when playback		
	Partial Enlargement	When in one-window full-screen playback mode, you can select any zone to activate partial enlargement function.		
Backup	Backup Mode	HDD backup		

function		Support peripheral USB backup device. (Flash disk, portable disk, USB burner and etc.)
		Support external eSATA device backup
		Support network download and backup
Network Function	Network control	View monitor channel remotely.
		DVR configuration through client-end and web browser
		Upgrade via client or browser to realize remote maintenance.
		View alarm information such as external alarm, motion detection and video loss via client.
		Support network PTZ lens control
		File download backup and playback
		Multiple devices share information via corresponding software such as professional surveillance software (PSS)
		Duplex transparent COM
		Network alarm input and output
		Zero-channel encoding
		Bidirectional audio.
Motion Detection and Alarm	Motion Detection	Zone setup: support 396((PAL 22×18, NTSC 22×15)) detection zones. Various sensitivity levels. Alarm can activate record or external alarm or screen message prompt.
	Video Loss	Alarm can activate external alarm or screen message prompt.
	External Alarm	Support record activation function or activate external alarm or screen message in specified period.
	Manual Alarm Control	Enable or disable alarm input channel Simulate alarm signal to specific alarm output channel.
	Alarm Input	4-ch alarm input（NO/NC） | 8-ch alarm input（NO/NC）| 16-ch alarm input（NO/NC）
	Alarm Output	6-channel relay output. （Including one controllable DC 12V output）
	Alarm Relay	30VDC 2A，125VAC 1A（activation alarm ）
Interface	USB Interface	3 USB 2.0 ports.
	Network connection	1 RJ45 10M/100M/1000M self-adaptable Ethernet port
	RS485	1 RS485 port. PTZ control port Support various PTZ control protocols.
	RS232	1 RS232 port. Ordinary COM (Debug),keyboard connection and transparent serial port(COM input and output via network)
	RS422	1 RS422 port
System Information	Hard Disk Information	Display HDD current status
	Data Stream Statistics	Data stream statistics for each channel (in wave mode)

	Log statistics	Backup to 1024 log files. Support various search engines such as time and type.
	Version	Display version information: channel amount, alarm input and output amount, system version and release date.
	On-line user	Display current on-line user
User Management	User Management	Multi-lever user management; various management modes Integrated management for local user, serial port user and network user. Configurable user power.
		Support user /group and its corresponding rights modification. No limit to the user or group amount.
	Password Authentication	Password modification Administrator can modify other user's password.
		Account lock strategy Five times login failure in thirty minutes may result in account lock.
Upgrade		Web browser, client-end and update tool.
Analog Camera/HDCVI Camera Connection Capability		Support analog camera/HDCVI camera connection. Self-adaptive, no need to reboot.
Login, Logout and Shutdown		Password login protection to guarantee safety
		User-friendly interface when login. Provide the following options: Logout /shutdown/ restart.
		Right authentication when shut down to make sure only those proper people can turn off DVR
General Parameter	Power	AC90~264V 50+2% Hz (For 4-channel series product: max 75W. For 8-channel series product: max 75W power. For 16-channel series product: max 150W)
	Power Consumption	≤44W (With adapter, exclude HDD)
	Working Temperature	-10℃－＋55℃
	Working Humidity	10%－90%
	Air Pressure	86kpa－106kpa
	Dimension	1.5U standard industrial case. 440(W) x410(D) x70(H)mm
	Weight	4.5－5.5KG (Exclude HDD)
	Installation Mode	Desktop/Rack installation

1.3.6 Advanced 1080P 2U Series

	Parameter	4-Ch Series	8-Ch Series	16-Ch Series
	Main Processor	High-performance industrial embedded micro controller		

System	OS	Embedded LINUX		
	System Resources	Multiplex operations: Multiple-channel record, multiple-channel playback and network operation simultaneously		
	Interface	User-friendly graphical user interface		
	Input Devices	USB mouse		
	Input Method	Arabic number, English character, donation and extension Chinese (optional)		
	Shortcut Function	Copy/paste operation, USB mouse right-key shortcut menu, double click USB mouse to switch screen.		
Compression Standard	Video Compression	H.264		
	Audio Compression	G711A, G711U, PCM		
Video monitor	Video Input	4-CH composite video input: (NTSC/PAL) BNC (1.0VBP- P, B75Ω)	8-CH composite video input: (NTSC/PAL) BNC (1.0VBP- P, B75Ω)	16-CH composite video input: (NTSC/PAL) BNC (1.0VBP- P, B75Ω)
	IP Channel	● The default setup is 0. ● After you disabled one analog channel, you can add one IP channel. ● System supports add IP channel function. For 4-channel series product, it max supports 8 IP channels. For 8-channel series product, it max supports 16 IP channels. For 16-channel series product, it max supports 32 IP channels. ● The connection bandwidth is 160Mbps when there are some IP channels. ● The connection bandwidth is 250Mbps when there are all IP channels.		
	Video Output	1-ch PAL/NTSC, BNC (1.0VP- P, 75Ω) composite video signal output. 1-ch VGA output. 2-ch HDMI output. HDMI port1 has the same video source as the VGA and TV. HDMI port2 is the HD aux output of the analog channel. 1-ch video matrix output. Support TV/VGA/HDMI1/HDMI2 video output at the same time.		
	Video Standard	720P/25, 720P/30, 720P/50, 720P/60, 1080P/25, 1080P/30		
	Record Speed	Real-time Mode: PAL 1f/s to 25f/s per channel and NTSC 1f/s to 30f/s per channel		
	Video Partition	1/4 windows	1/4/8/9 windows	1/4/8/9/16 windows
	Monitor Touring	Support monitor tour functions such as alarm, motion detection, and schedule auto control.		
	Resolution (PAL/NTSC)	Real-time monitor： 1080P 1920*1080		

		Playback： 1/16-ch: 1080P 1920*1080, 720P 1280×720, 960H 960 × 576/960 × 480, D1 704×576/704×480, HD1 352×576/352×480, 2CIF 704×288/704×240, CIF 352×288/ 352×240, QCIF 176×144/176×120		
		Support dual streams: extra stream resolution D1 704×576/704×480, CIF 352×288/ 352×240, QCIF 176×144/176×120		
	Image Quality	6-level image quality (Adjustable)		
	Privacy mask	Support one privacy mask of user-defined size in full screen. Support max 4 zones.		
	Image Information	Channel information, time information and privacy mask zone.		
	TV Adjust	Adjust TV output zone suitable to anamorphic video.		
	Channel Lock	Cover secret channel with blue screen though system is encoding normally. Screen-lock function to prevent unauthorized user seeing secret video.		
	Channel Information	Channel name, recording status, screen lock status, video loss status and motion detection status are shown on the bottom left of display screen.		
	Color Configuration	Hue, brightness, contrast, saturation and gain setup for each channel.		
Audio	Audio Input	4-ch 200-2000mv 10KΩ(BNC)	8-ch 200-2000mv 10KΩ(BNC)	16-ch 200-2000mv 10KΩ(BNC)
	Audio Output	1-ch audio output 200-3000mv 5KΩ(BNC)		
	Bidirectional Audio	1-channel MIC IN and 1-channel MIC OUT. 200-3000mv 5KΩ(BNC)		
Hard disk	Hard Disk	8 built-in SATA port. Support 8 HDDs.		
	One HDD Capacity	Max 4T		
	Hard Disk Occupation	Audio：PCM 28.8MByte/h Video：56-900MByte/h		
Record and playback	Recording Mode	Manual recording, motion detection recording, schedule recording and alarm recording Priority: Manual recording> alarm recording>motion detection recording>schedule recording.		
	Storage Mode	Support channel record quota setup		
	Recording Length	1 to 60 minutes single record duration (Default setup is 60 minutes)		

	Playback Repeat Way	When hard disk is full, system can overwrite previous video file.		
	Record Search	Various search engines such as time, type and channel.		
	Playback Mode	Various fast play, slow play speeds, manual frame by frame playback and reverse play mode.		
	Various File Switch Ways	Can switch to previous or next file or any file in current play list. Can switch to file on other channel of the same time. (If there is a file) Support file continuous play, when file is end system auto plays the next file in the current channel		
	Playback Way	Support mark playback		
	Multi-channel Playback	Support 1/4-channel modes	Support 1/4/8-channel modes	Support 1/4/8/16-channel modes
	Window Zoom	Switch between self-adaptive screen/full screen when playback		
	Partial Enlargement	When in one-window full-screen playback mode, you can select any zone to activate partial enlargement function.		
Backup function	Backup Mode	HDD backup		
		Support peripheral USB backup device. (Flash disk, portable disk, USB burner and etc.)		
		Support external eSATA device backup		
		Support network download and backup		
Network Function	Network control	View monitor channel remotely.		
		DVR configuration through client-end and web browser		
		Upgrade via client or browser to realize remote maintenance.		
		View alarm information such as external alarm, motion detection and video loss via client.		
		Support network PTZ lens control		
		File download backup and playback		
		Multiple devices share information via corresponding software such as professional surveillance software (PSS)		
		Duplex transparent COM		
		Network alarm input and output		
		Zero-channel encoding		
		Bidirectional audio.		
Motion Detection and Alarm	Motion Detection	Zone setup: support 396((PAL 22×18, NTSC 22×15)) detection zones. Various sensitivity levels. Alarm can activate record or external alarm or screen message prompt.		
	Video Loss	Alarm can activate external alarm or screen message prompt.		

	External Alarm	Support record activation function or activate external alarm or screen message in specified period.		
	Manual Alarm Control	Enable or disable alarm input channel Simulate alarm signal to specific alarm output channel.		
	Alarm Input	4-ch alarm input（NO/NC）	8-ch alarm input（NO/NC）	16-ch alarm input（NO/NC）
	Alarm Output	6-channel relay output. （Including one controllable DC 12V output）		
	Alarm Relay	30VDC 2A，125VAC 1A（activation alarm ）		
Interface	USB Interface	4 USB 2.0 ports.		
	Network connection	2 RJ45 10M/100M/1000M self-adaptable Ethernet ports		
	RS485	1 RS485 port. PTZ control port Support various PTZ control protocols.		
	RS232	1 RS232 port. Ordinary COM (Debug),keyboard connection and transparent serial port(COM input and output via network)		
	RS422	1 RS422 port		
System Information	Hard Disk Information	Display HDD current status		
	Data Stream Statistics	Data stream statistics for each channel (in wave mode)		
	Log statistics	Backup to 1024 log files. Support various search engines such as time and type.		
	Version	Display version information: channel amount, alarm input and output amount, system version and release date.		
	On-line user	Display current on-line user		
User Management	User Management	Multi-lever user management; various management modes Integrated management for local user, serial port user and network user. Configurable user power.		
		Support user /group and its corresponding rights modification. No limit to the user or group amount.		
	Password Authentication	Password modification Administrator can modify other user's password.		
		Account lock strategy Five times login failure in thirty minutes may result in account lock.		
Upgrade		Web browser, client-end and update tool.		
Analog Camera/HDCVI Camera Connection Capability		Support analog camera/HDCVI camera connection. Self-adaptive, no need to reboot.		
Login, Logout and Shutdown		Password login protection to guarantee safety		
		User-friendly interface when login. Provide the following options: Logout /shutdown/ restart.		

		Right authentication when shut down to make sure only those proper people can turn off DVR
General Parameter	Power	AC90~264V 50+2% Hz (For 4-channel series product: max 75W. For 8-channel series product: max 75W power. For 16-channel series product: max 150W)
	Power Consumption	≤44W (With adapter, exclude HDD)
	Working Temperature	-10℃－＋55℃
	Working Humidity	10%－90%
	Air Pressure	86kpa－106kpa
	Dimension	2U standard industrial case. 440(W) x460(D) x89(H)mm
	Weight	7.0－8.0KG (Exclude HDD)
	Installation Mode	Desktop/Rack installation

1.3.7 Advanced 1080P 2U RAID Series

	Parameter	**16-ch**
System	Main Processor	High-performance industrial embedded micro controller
	OS	Embedded LINUX
	System Resources	Multiplex operations: Multiple-channel record, multiple-channel playback and network operation simultaneously
	Interface	User-friendly graphical user interface
	Input Devices	Front panel, USB mouse, remote control
	Input Method	Arabic number, English character, donation and extension Chinese (optional)
	Shortcut Function	Copy/paste operation, USB mouse right-key shortcut menu, double click USB mouse to switch screen.
Compression Standard	Video Compression	H.264,
	Audio Compression	G711A, G711U, PCM
	Video Input	16-CH composite video input: (NTSC/PAL) BNC (1.0V$_{P-P,}$ 75Ω)

Video monitor	IP Channel	• The default setup is 0 IP channels. • After you disabled one analog channel, you can add one IP channel. • System supports add IP channel function. It max supports 32 IP channels. • The connection bandwidth is 160Mbps when there are some IP channels. • The connection bandwidth is 250Mbps when there are all IP channels.
	Video Output	1-ch PAL/NTSC, BNC (1.0VP- P, 75Ω) composite video signal output. 1-ch VGA output. 2-ch HDMI output. HDMI port1 has the same video source as the VGA and TV. HDMI port2 is the HD aux output of the analog channel. 1-ch video matrix output. Support TV/VGA/HDMI1/HDMI2 video output at the same time.
	Video Standard	Support PAL/NTSC
	Record Speed	Real-time Mode: PAL 1f/s to 25f/s per channel and NTSC 1f/s to 30f/s per channel
	Video Partition	1/4/8/9/16/25/36 windows
	Monitor Touring	Support monitor tour functions such as alarm, motion detection, and schedule auto control.
	Resolution (PAL/NTSC)	PAL(700TVL, 50f/s)/NTSC(700TVL, 60f/s)
		Real-time monitor： 960H　960 ×576/960×480
		Playback 1/16-ch: 1/16-ch: 1080P 1920*1080, 720P 1280×720, 960H 960 × 576/960 × 480,D1 704×576/704×480, HD1 352×576/352×480, 2CIF 704×288/704×240, CIF 352×288/ 352×240, QCIF 176×144/176×120
		Support dual streams: extra stream resolution D1 704×576/704×480, CIF 352×288/ 352×240, QCIF 176×144/176×120
	Motion Detection	Zone setup: support max 396(22×18) zones. Support various sensitivities.
	Image Quality	6-level image quality (Adjustable)
	Privacy mask	Support one privacy mask of user-defined size in full screen. Support max 4 zones.
	Image Information	Channel information, time information and privacy mask zone.
	TV Adjust	Adjust TV output zone suitable to anamorphic video.

	Channel Lock	Cover secret channel with blue screen though system is encoding normally. Screen-lock function to prevent unauthorized user seeing secret video.
	Channel Information	Channel name, recording status, screen lock status, video loss status and motion detection status are shown on the bottom left of display screen.
	Color Configuration	Hue, brightness, contrast, saturation and gain setup for each channel.
Audio	Audio Input	16-ch 200-2000mv 10KΩ (BNC)
	Audio Output	1-ch audio output 200-3000mv 5KΩ(BNC)
	Bidirectional Audio	1-channel MIC IN and 1-channel MIC OUT. 200-3000mv 5KΩ(BNC)
Hard disk	Hard Disk	8 built-in SATA port. Support 8 HDD. Max 4T/HDD
	Hard Disk Occupation	Audio：PCM 28.8MByte/h Video：56-900MByte/h
Record and playback	Recording Mode	Manual recording, motion detection recording, schedule recording and alarm recording Priority: Manual recording> alarm recording>motion detection recording>schedule recording.
	Storage Mode	Support channel record quota setup
	Recording Length	1 to 60 minutes single record duration (Default setup is 60 minutes)
	Playback Repeat Way	When hard disk is full, system can overwrite previous video file.
	Record Search	Various search engines such as time, type and channel.
	Playback Mode	Various fast play, slow play speeds, manual frame by frame playback and reverse play mode.
	Various File Switch Ways	Can switch to previous or next file or any file in current play list. Can switch to file on other channel of the same time. (If there is a file) Support file continuous play, when file is end system auto plays the next file in the current channel
	Playback Way	Support mark playback
	Multi-channel Playback	Support single channel, 4 channel, 9 channel and 16 channel modes
	Window Zoom	Switch between self-adaptive screen/full screen when playback
	Partial Enlargement	When in one-window full-screen playback mode, you can select any zone to activate partial enlargement function.

	Real-time Playback	The preview channel can playback the previous 5 to 60 minutes record of current channel.
Backup function	Backup Mode	HDD backup
		Support peripheral USB backup device. (Flash disk, portable disk, USB burner and etc.)
		RAID0/RAID1/RAID5/RAID10/Hotspare
		Support external eSATA device backup
		Support network download and save
Network Function	Network control	View monitor channel remotely.
		DVR configuration through client-end and web browser
		Upgrade via client or browser to realize remote maintenance.
		View alarm information such as external alarm, motion detection and video loss via client.
		Support network PTZ lens control
		File download backup and playback
		Multiple devices share information via corresponding software such as professional surveillance software (PSS)
		Duplex transparent COM
		Network alarm input and output
		Bidirectional audio.
		The dual-network port has the multiple-access, fault-tolerance, load-balance setup mode.
Motion Detection and Alarm	Motion Detection	4 zone setups: support 396((PAL 22×18, NTSC 22×15)) detection zones. Various sensitivity levels and threshold setups. Alarm can activate record or external alarm or screen message prompt. Once any of the four zones is triggered, the motion detect of current channel is valid now.
	Video Loss	Alarm can activate external alarm or screen message prompt.
	External Alarm	Support record activation function or activate external alarm or screen message in specified period.
	Manual Alarm Control	Enable or disable alarm input channel. Support analog alarm signal to specific alarm output channel.
	Alarm Input	16-ch alarm input（NO/NC.）
	Alarm Output	6-channel relay output.　(Including one controllable　DC+12v output)
	Alarm Relay	30VDC　2A，125VAC　0.5A（activation alarm ）
Interface	USB Interface	4 USB 2.0 ports.
	Network connection	Two RJ45 10M/100M/1000M self-adaptable Ethernet ports
	RS485	PTZ control port. Support various PTZ control protocols.

	RS232	Ordinary COM (Debug),keyboard connection and transparent serial port(COM input and output via network)
System Information	Hard Disk Information	Display HDD current status
	Data Stream Statistics	Data stream statistics for each channel (in wave mode)
	Log statistics	Backup to 1024 log files. Support various search engines such as time and type.
	Version	Display version information: channel amount, alarm input and output amount, system version and release date.
	On-line user	Display current on-line user
	Remote device info	View remote device status information.
	Network information	View network load, test network status and implement network sniffer.
User Management	User Management	Multi-lever user management; various management modes Integrated management for local user, serial port user and network user. Configurable user power.
		Support user /group and its corresponding rights modification. No limit to the user or group amount.
	Password Authentication	Password modification Administrator can modify other user's password.
		Account lock strategy Five times login failure in thirty minutes may result in account lock.
Upgrade		Web browser, client-end and update tool.
Analog Camera/HDCVI Camera Connection Capability		Support analog camera/HDCVI camera connection. Self-adaptive, no need to reboot.
Login, Logout and Shutdown		Password login protection to guarantee safety
		User-friendly interface when login. Provide the following options: Logout /shutdown/ restart.
		Right authentication when shut down to make sure only those proper people can turn off DVR
General Parameter	Power	AC90~264V 50+2% Hz (Max 150W)
	Power Consumption	＜44W (Exclude HDD)
	Working Temperature	-10℃－＋55℃
	Working Humidity	10%－90%
	Air Pressure	86kpa－106kpa
	Dimension	2U standard industrial case. 440(W) x460(D) x89(H)mm
	Weight	7.0－8.0KG (Exclude HDD)

	Installation Mode	Desktop/Rack installation