



**Data Sheets of  
ST-DVR-04LA4  
ST-DVR-08LA4  
ST-DVR-16LA4**

**Rev 0 Date 17-8-2011**

## Overview:

Developed by SATEN on the basis of the latest technologies, ST-DVR-4/8/16LA4 Series Digital Video Recorder combines with the advanced H.264 video encoding and decoding standard and maintains high performance rock-solid reliability and longer recording service time. ST-DVR-4/8/16LA4 Digital Video Recorder can be used as a standalone video surveillance product, as well as to build up a powerful surveillance network which is suitable for home or small-scale business applications.



Figure 1. ST-DVR-04LA4 Series DVR



Figure 2. ST-DVR-08LA4 Series DVR



Figure 3. ST-DVR-16LA4 Series DVR

# Product Features

## Compression

- PAL/NTSC adaptive video inputs.
- H.264 video compression with high reliability and superior definition.
- G.711 audio compression standard.
- Independent video encoding parameters, including frame rate, resolution, bit rate, video quality, etc.
- Scheduled and event recording parameters configurable for per individual camera.
- Support dual stream.
- Encoding for both audio/video composite stream and video stream; audio and video synchronization during composite stream encoding.
- Compression, storage and network transmission of video image at 4CIF, 2CIF or CIF resolution.
- Watermark technology.

## Local Monitoring

- Up to 1024x768 resolution for VGA output display.
- Simultaneous VGA and CVBS output.
- 1/4/9/16-camera video live view, with the camera order adjustable.
- Group switch, manual switch and automatic cycle modes selectable for video live view, with the auto cycle period configurable.
- Digital zoom in live view mode.
- Shield of assigned channel for live view.
- Privacy masking capability.
- Multiple PTZ protocols supported, and settings and call up of presets, patrols and patterns.
- Video image zoom-in by clicking the mouse and tracing by dragging mouse in PTZ control mode.

## Hard Disk Management

- Connection to 1 SATA hard disk for ST-DVR-04LA4 model and 2 SATA hard disks for ST-DVR-08LA4, ST-DVR-16LA4 models, each HDD with up to 2TB storage capacity.
- S. M. A. R. T technology.
- HDD standby function.
- HDD file system is compatible with Windows. Use pre-allocating hard disk management technology, and no disk fragments.

### Recording

- Cycle and non-cycle recording mode.
- Scheduled and event video encoding parameters.
- Multiple recording types, including manual, continuous, alarm, motion, motion | alarm and motion & alarm recording, etc.
- 8 recording time periods with separate recording types.
- Pre-record and Post-record time for alarm and motion detection, and pre-record time for schedule and manual recording.
- Lock and unlock of video files.
- HDD property can be set to read-only.
- Video data search and playback by channel number, recording type, time etc.
- Digital zoom function in playback mode.
- Pause, play fast, play slow, skip forward, and skip backward when playback, locating in progress bar by dragging the mouse.
- Up to 4/8/16-channel synchronous playback.

### Backup

- Record files backed up via USB or SATA device.
- Bunch backup by file or by time.
- Record files edited for backup in playback.
- Management and maintenance for backup devices.

### Alarm & Exception

- Configurable arming time for alarm in/out.
- Various alarm types supported: alarms for video loss, motion detection, video tempering, video in/out format unmatched, illegal access, network disconnection, IP conflict, hard disk error and hard disk full.
- Various alarm response actions supported: camera recording, relay out, on-screen warning, audible warning and upload to center, etc.
- Auto recovery from exceptions.

### Others

- Control of DVR via front panel keys, mouse, and IR remote control.
- Three-level user management, each user with individual operating permission for DVR and camera.
- Powerful record and search for log of operation, alarm and exceptions.
- Import/export of device configuration files.

### Network

- 10/100M adaptive network interface.
- TCP/IP protocol suites, PPPoE, DHCP, DNS, DDNS, NTP, SADP protocols, etc.
- Unicast and multicast supported; TCP and UDP protocols applicable in unicast transmission.
- Remote search, playback and download, lock/unlock of video files.
- Support breakpoint resume.
- Remote access and configuration of parameters; remote import/export of device configuration parameters.
- Remote access of device running status, system log and alarm status.
- Remote control of DVR via button operation.
- Remote lock/unlock of panel buttons and mouse.
- Remote formatting of hard disk, upgrade, reboot/shutdown and other system maintenance operations.
- RS-232 and RS -485 transparent channel transmission.
- Event alarm and exceptions upload to remote management host.
- Remote manual recording.
- Remote video image capture in JPEG format.
- Remote PTZ control.
- Voice talk and broadcast.
- Built-in WEB Server.

### Development

- Provision of SDK in Windows and Linux operating systems.
- Application software source code of Demo.
- Support and training service for application system development.

## Rear Panel

### ST-DVR-04LA4 Rear Panel

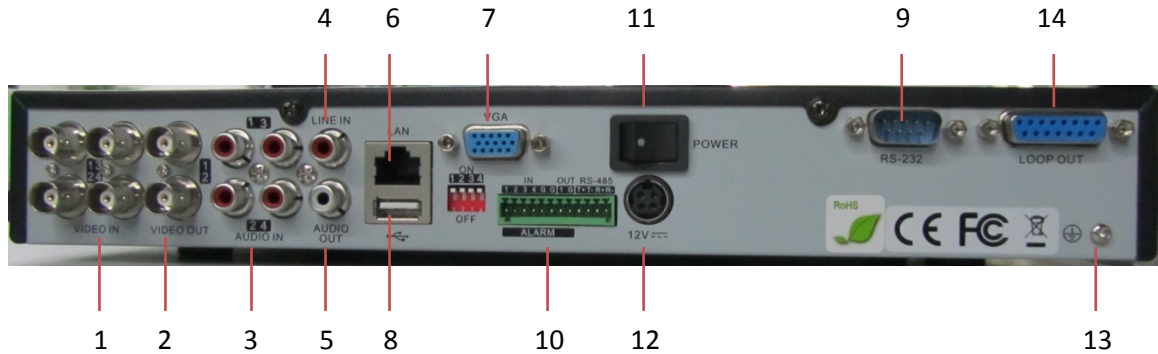


Figure 4. ST-DVR-04LA4 Rear Panel

No.	Item	Description
1	VIDEO IN	BNC connectors for analog video input
2	VIDEO OUT	BNC connector for video output.
3	AUDIO IN	RCA connectors for analog audio input
4	LINE IN	RCA connector for audio input
5	AUDIO OUT	RCA connector for audio output
6	LAN	Connector for LAN (Local Area Network)
7	VGA	DB15 connector for VGA output. Display local video output and menu
8	USB	Connector for USB devices
9	RS-232 Interface	DB9 connector for RS232 devices.
10	ALARM IN	Connector for alarm input
	ALARM OUT	Connector for alarm output
	RS-485 Interface	Connector for RS-485 devices. T+, T- pin connects to PTZ
11	POWER	Switch for turn on/off the device
12	12V	12VDC power supply
13	GND	Ground(needs to be connected when DVR starts up)
14	Loop out	DB15 connector for analog video output

**ST-DVR-08LA4 Rear Panel**

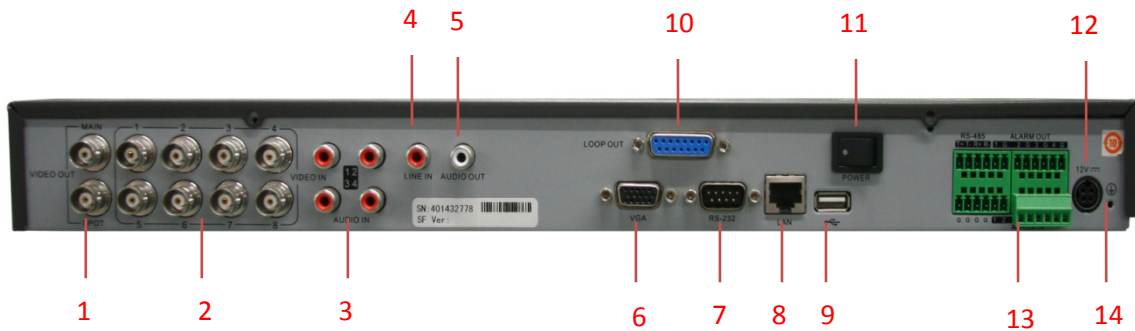


Figure 5. ST-DVR08LA4 Rear Panel

No.	Item	Description
1	MAIN VIDEO OUT	BNC connectors for main video out
	SPOT VIDEO OUT	BNC connectors for spot video out
2	VIDEO IN	BNC connectors for analog video input
3	AUDIO IN	RCA connectors for analog audio input
4	LINE IN	RCA connector for audio input
5	AUDIO OUT	RCA connector for audio output
6	VGA	DB15 connector for VGA output. Display local video output and menu
7	RS-232 Interface	DB9 connector for RS-232 devices.
8	LAN	Connector for LAN (Local Area Network)
9	USB	Connector for USB devices
10	Loop out	DB15 connector for analog video output
11	POWER	Switch for turn on/off the device
12	12V	12VDC power supply
13	ALARM IN	Connector for alarm input
	ALARM OUT	Connector for alarm output
	RS-485 Interface	Connector for RS-485 devices. T+, T- pin connects to PTZ
14	GND	Ground(needs to be connected when DVR starts up)

**ST-DVR-16LA4 Rear Panel**

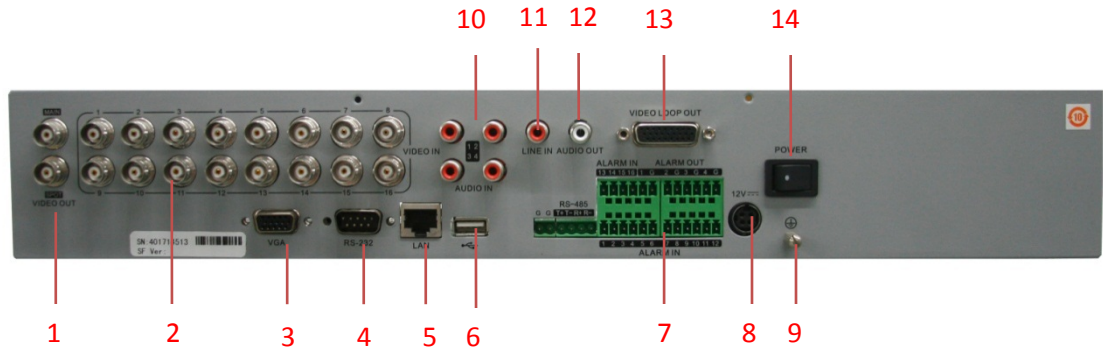


Figure 6. ST-DVR16LA4 Rear Panel

No.	Item	Description
1	MAIN VIDEO OUT	BNC connectors for main video out
	SPOT VIDEO OUT	BNC connectors for spot video out
2	VIDEO IN	BNC connectors for analog video input
3	VGA	DB15 connector for VGA output. Display local video output and menu
4	RS-232 Interface	DB9 connector for RS-232 devices.
5	LAN	Connector for LAN (Local Area Network)
6	USB	Connector for USB devices
7	RS-485 Interface	Connector for RS-485 devices. T+, T- pin connects to PTZ
	ALARM IN	Connector for alarm input
	ALARM OUT	Connector for alarm output
8	12V	12VDC power supply
9	GND	Ground(needs to be connected when DVR starts up)
10	AUDIO IN	RCA connectors for analog audio input
11	LINE IN	RCA connector for audio input
12	AUDIO OUT	RCA connector for audio output
13	Loop out	DB15 connector for analog video output
14	POWER	Switch for turn on/off the device



## Specification

Model		ST-DVR-04LA4
Video/Audio input	Video compression	H.264
	Analog video input	4-ch, BNC connector (1.0Vp-p, 75Ω); PAL/NTSC adaptive
	Audio compression	G.711
	Audio input	4-ch, RCA connector (2Vp-p, 1kΩ)
	VGA output	1-ch, resolution: 1024x768/60Hz
	CVBS output	2-ch, BNC connector (1.0Vp-p, 75Ω); Resolution: PAL: 704x576, NTSC:704x480
	Audio output	1-ch, RCA connector (Linear, 1kΩ)
	Video Loop out	4-ch, DB15 connector
	Recording resolution	4CIF/2CIF/CIF/QCIF
	Frame rate	4CIF/2CIF: 12fps CIF/QCIF: 25fps(P)/30fps(N)
	Video bit rate	32Kbps~2048Kbps, or user-defined (Max. 3072Kbps)
	Stream type	Video/ Video & Audio
	Audio bit rate	64kbps
	Dual stream	Support
	Synchronous playback	4-ch
Voice talk input	1-ch RCA(2.0Vp-p, 1kΩ)	
Hard disk	Type	1 SATA interface
	Capacity	Up to 2TB capacity for each interface
External interface	Network interface	1, RJ45 10M/100M adaptive Ethernet interface
	Serial interface	1 RS-485 interface, 1 RS-232 interface
	USB interface	2, USB2.0
	Alarm in	4
	Alarm out	1
General	Power supply	12VDC
	Consumption	≤10W (without hard disk or DVD-R/W)
	Working temperature	-10°C~+55°C
	Working humidity	10%~90%
	Chassis	19-inch rack-mounted 1U chassis
	Size(mm)	45mm(H) × 315mm(W) ×230mm(D)
	Weight	≤2.5 Kg (without HDD or DVD-R/W)

Model		ST-DVR-08LA4
Video/Audio input	Video compression	H.264
	Analog video input	8-ch, BNC connector (1.0Vp-p, 75Ω); PAL/NTSC adaptive
	Audio compression	G.711
	Audio input	4-ch, RCA connector (2Vp-p, 1kΩ)
	VGA output	1-ch, resolution: 1024x768/60Hz
	CVBS output	2-ch, BNC connector (1.0Vp-p, 75Ω); Resolution: PAL: 704x576, NTSC:704x480
	Audio output	1-ch, RCA connector (Linear, 1 kΩ)
	Video Loop out	8-ch, DB15 connector
	Recording resolution	4CIF/2CIF/CIF/QCIF
	Frame rate	4CIF/2CIF: 8fps CIF/QCIF: 25fps(P)/30fps(N)
	Video bit rate	32Kbps~2048Kbps, or user-defined (Max. 3072Kbps)
	Stream type	Video/ Video & Audio
	Audio bit rate	64kbps
	Dual stream	Support
	Synchronous playback	8-ch
Voice talk input	1-chRCA(2.0Vp-p, 1kΩ)	
Hard disk	Type	2 SATA interfaces
	Capacity	Up to 2TB capacity for each interface
External interface	Network interface	1, RJ45 10M/100M adaptive Ethernet interface
	Serial interface	1 RS-485 interface, 1 RS-232 interface
	USB interface	2, USB2.0
	Alarm in	8
	Alarm out	4
General	Power supply	12VDC
	Consumption	≤10W (without hard disk or DVD-R/W)
	Working temperature	-10°C~+55°C
	Working humidity	10%~90%
	Chassis	19-inch rack-mounted 1U chassis
	Size(mm)	45mm(D)×445mm(W)×290mm(H)
Weight	≤4Kg (without HDD or DVD-R/W)	

Model	<b>ST-DVR-16LA4</b>	
<b>Video/Audio input</b>	<b>Video compression</b>	H.264
	<b>Analog video input</b>	16-ch, BNC connector (1.0Vp-p, 75Ω); PAL/NTSC adaptive
	<b>Audio compression</b>	G.711
	<b>Audio input</b>	4-ch, RCA connector (2Vp-p, 1kΩ)
	<b>Voice talk input</b>	1-ch RCA (2.0Vp-p, 1 kΩ)
	<b>VGA output</b>	1-ch, resolution: 1024x768/60Hz
	<b>CVBS output</b>	2-ch, BNC connector (1.0Vp-p, 75Ω); Resolution: PAL: 704x576, NTSC: 704x480
	<b>Audio output</b>	1-ch, RCA connector (Linear, 1 kΩ)
	<b>Video Loop out</b>	16-ch, DB15 connector
	<b>Recording resolution</b>	4CIF/2CIF/CIF/QCIF
	<b>Frame rate</b>	4CIF/2CIF: 6fps CIF/QCIF: 25fps(P)/30fps(N)
	<b>Video bit rate</b>	32Kbps~2048Kbps, or user-defined (Max. 3072Kbps)
	<b>Stream type</b>	Video/Video & Audio
	<b>Audio bit rate</b>	64kbps
	<b>Dual stream</b>	Support
<b>Synchronous playback</b>	16-ch	
<b>Hard disk</b>	<b>Type</b>	2 SATA interfaces
	<b>Capacity</b>	Up to 2TB capacity for each interface
<b>External interface</b>	<b>Network interface</b>	1, RJ45 10M/100M adaptive Ethernet interface
	<b>Serial interface</b>	1 RS-485 interface, 1 RS-232 interface
	<b>USB interface</b>	2, USB2.0
	<b>Alarm in</b>	16
	<b>Alarm out</b>	4
<b>Others</b>	<b>Power supply</b>	12VDC
	<b>Consumption</b>	≤15W (without hard disk or DVD-R/W)
	<b>Working temperature</b>	-10°C~+55°C
	<b>Working humidity</b>	10%~90%
	<b>Chassis</b>	19-inch rack-mounted 1.5U chassis
	<b>Size(mm)</b>	70mm(H) x440mm(W) x390mm(D)
	<b>Weight</b>	≤8Kg(without HDD or DVD-R/W)