



ST-DVR-16LA4 Technical Manual

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Overview:

Developed by SATEN on the basis of the latest technologies, ST-DVR-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-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.



Main Features

- User-friendly GUI for easy operation
- 1024×768 VGA output resolution
- Simultaneous VGA and CVBS output.
- Up to 4CIF resolution.
- Scheduled and event recording parameters configurable per individual camera
- Partial digital zoom by using mouse when in PTZ control mode
- 16-ch synchronous playback
- Support dual stream
- Different recording storage period configurable for each channel
- NTP, SADP, DHCP protocols supported

Functions & Performances

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 or CIF resolution.

Local Monitoring

- Up to 1024×768 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 callup 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 2 SATA hard disks supported, 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.
- 16-channel synchronous playback.

Backup

- Record files backed up via USB 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 signal abnormal, 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, IR remote control and special keyboard.
- 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.

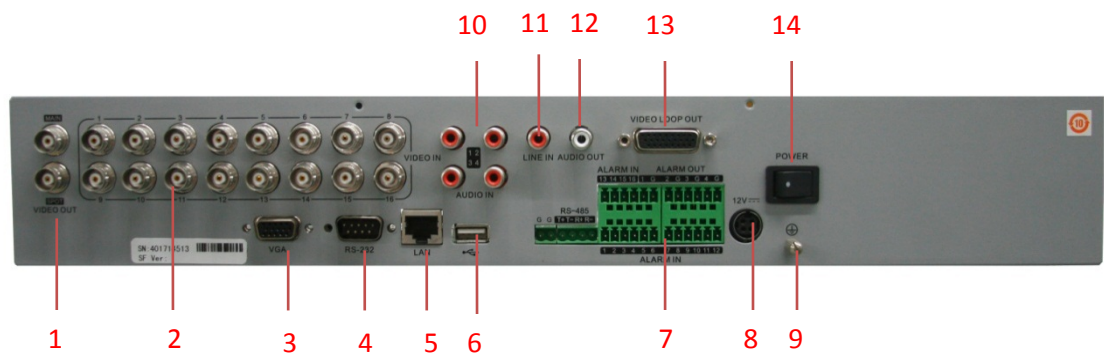
Network

- 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-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.

ST-DVR-16LA4 Rear Panel



1. VIDEO OUT
2. VIDEO IN
3. VGA Interface
4. RS-232 Serial Interface
5. LAN
6. USB Interface
7. RS-485 Interface, ALARM IN, ALARM OUT
8. 12VDC Power Supply Interface
9. GND
10. AUDIO IN
11. LINE IN
12. AUDIO OUT
13. LOOP OUT
14. POWER

Specifications:

ID	Description	ST-DVR-16LA4
		
Video/Audio input		
1	Video Compression:	H.264
2	Video Input:	16-ch
3	Video Input Interface:	BNC (1.0Vp-p, 75Ω) -PAL / NTSC adaptive
4	Audio Compression:	G.711
5	Audio Input:	4-ch
6	Audio Input Interface:	RCA (2Vp-p, 1kΩ)
7	Voice Talk Input:	1-ch , RCA (2Vp-p, 1kΩ)
Video/Audio Output		
8	Preview Resolution:	4CIF (PAL: 704x576; NTSC: 704x480)
9	VGA Output:	1-ch, resolution: 1024x768/60Hz
10	CVBS output	2-ch, BNC (1.0Vp-p, 75Ω)PAL: 704x576 / NTSC 704x480
11	Recording resolution:	4CIF/2CIF/CIF/QCIF
12	Video output:	1-ch, BNC(1.0Vp-p, 75Ω)
13	Video Spot Output:	1-ch, BNC(1.0Vp-p, 75Ω)
14	Video Loop Output:	16-CH, DB15 connector
15	Frame Rate:	4CIF/2CIF: 6fps; CIF/QCIF: 25fps(P)/30 fps (N)
16	Video Bit Rate:	32Kbps~2048Kbps, or user-defined (Max.3Mbps)
17	Stream Type:	Video / Video & Audio
18	Audio Output:	1-ch RCA(Linear electrical level, 1 KΩ)
19	Audio Bit Rate:	64kbps
20	Dual Stream	Support
21	Synchronous Playback	16-CH
Hard Disk Driver		
22	Interface Type:	2 SATA Interfaces
23	Capacity:	Each interface supports up to 2TB capacity
External Interface		
24	Network Interface:	1 RJ45 10M/100M adaptive Ethernet Interface
25	USB Interface:	2 interface, USB 2.0
26	Serial Interface:	1 RS-232 interface; 1 RS-485 interface
27	Alarm Input:	16-ch

28	Alarm Output:	4-ch
29	Remote Control:	IR Remote Control
	General	
30	Power Supply:	12 VDC
31	Consumption:	≤15W (without HDD or DVD-R/W)
32	Working Temperature:	-10°C ~ +55°C
33	Working Humidity:	10%~90%
34	Dimension:	70mm(H) x440mm(W) x390mm(D)
35	Weight:	≤8Kg(without HDD or DVD-R/W)