

SANYO

Digital Video Recorder with Built-in Multiplexer

- An HDD recorder with a complete 6-ch multiplexer
- A clear picture with horizontal resolution of 520 TV lines
- Simultaneous recording and playback at 60 fields/sec.
- Live picture monitoring at 30 FPS
- Remote monitoring with networking capability

DSR-3506 6-channel NTSC

DIGITAL

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NETWORK SOLUTIONS



Made in Japan

The product introduced here is manufactured in Japan utilizing advanced technologies and quality control.

Huge Capacity / High Picture Quality

Built-in 6-channel Multiplexer

DSR-3506 incorporates a 6-channel multiplexer and a hard disk drive. It offers a compact, space-saving solution.

Select HDD Capacity Depending on Need

Best suited for small scale operations, the DSR-3506 comes with three sizes of HDD* — select 80 GB or 160 GB for economy, or 300 GB for versatility. Extensive recording of images from six cameras is possible without degradation of picture quality, and digitalization enables the construction of a system effective for every application.

*As of November 2004

Approximate recording time for 80 GB and 300 GB HDD

30 fields/sec 80 GB HDD / 300 GB HDD

	80 GB HDD	300 GB HDD
Basic	41 hours	156 hours
Normal	29 hours	110 hours
Enhanced	22 hours	83 hours
Fine	16 hours	60 hours
Super Fine	13 hours	51 hours

* Recording time also depends on video contents and environmental conditions.

Expandable to 600 GB

DSR-3506 unit has an expansion bay; longer time recording is possible by adding a hard disk drive. Setting up mirror recording* is also possible. For further details about HDD expansion, contact the place of purchase.

*Mirror Recording

Each DSR-3506 comes with two HDD bays. By adding an optional HDD with the same capacity as the master HDD, it is possible to record the same video on two HDDs, treating one as a backup unit.

Audio Recording Available

Audio recording is available for recording speeds from 60 fields/sec to 1 field/sec.

Horizontal Resolution of 520 TV Lines

Digital recording with Motion JPEG video compression makes it possible to achieve high picture quality of more than 520 TV lines horizontal resolution and 48dB S/N ratio. This eliminates smears, vertical divergence, and jitters commonly seen in analog recordings, offering clear and crisp pictures.

An All New 6-ch Model Now Available in SANYO's Popular DVR Series The Best Choice for Small Scale Operations

High picture quality, long recording time,
max. capacity of 600 GB, and networking capability.



DSR-3506 6-channel NTSC

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DSR-3506 Recording Time After expansion to 300 GB (100%-usage)

Recording Speed		Picture Quality					Audio Recording
fields/sec	Recording Interval (sec.)	Basic	Normal VHS (EP)	Enhanced VHS (SP)	Fine S-VHS	Super Fine S-VHS +	
		Recording Time (unit: hour)					Available
60.00	0.017	78	55	41	30	25	
30.00	0.033	156	110	83	60	51	
20.00	0.050	234	166	124	90	76	
15.00	0.067	313	221	166	120	102	
10.00	0.100	469	332	249	181	153	
7.50	0.133	626	443	332	241	204	
6.00	0.167	782	554	415	302	255	
5.00	0.200	939	665	498	362	307	
4.29	0.233	1,095	776	582	423	358	
3.75	0.267	1,252	886	665	483	409	
3.33	0.300	1,408	997	748	544	460	
3.00	0.333	1,565	1,108	831	604	511	
2.73	0.367	1,721	1,219	914	665	562	
2.31	0.433	2,034	1,441	1,080	786	665	
2.00	0.500	2,347	1,663	1,247	907	767	
1.67	0.600	2,817	1,995	1,496	1,088	921	
1.43	0.700	3,286	2,328	1,746	1,269	1,074	
1.25	0.800	3,756	2,660	1,995	1,451	1,228	
1.11	0.900	4,226	2,993	2,245	1,632	1,381	
1.00	1	4,695	3,326	2,494	1,814	1,535	
0.50	2	9,391	6,652	4,989	3,628	3,070	
0.33	3	14,087	9,978	7,483	5,442	4,605	
0.25	4	18,782	13,304	9,978	7,256	6,140	
0.20	5	23,478	16,630	12,472	9,071	7,675	
0.10	10	46,956	33,261	24,945	18,142	15,351	
0.05	20	93,913	66,522	49,891	36,284	30,702	
0.03	30	140,870	99,783	74,837	54,427	46,053	

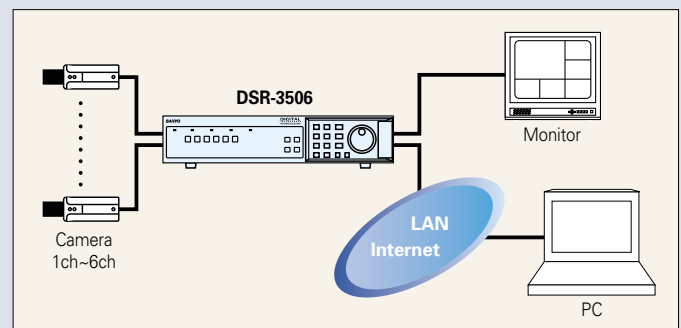
* The recording time may vary slightly depending on the complexity of the images and the presence of an audio signal.
* The table above lists the picture quality vs. recording time for field recording using the normal recording area of the 300 GB HDD. The recording time will change depending on the settings for the storage area, the use of frame recording, and the availability of an optional HDD. Contact the place of purchase for details on increasing the capacity by adding a HDD.

Reference: 24H = 1 day, 168H = 1 week, 720H = 1 month, 8760H = 1 year

Networking Capability

Remote Control by a PC

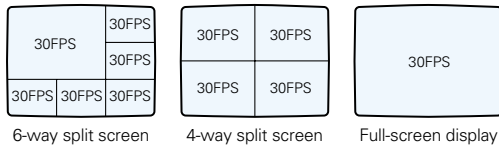
The built-in LAN terminal enables remote control of the DSR-3506 through a PC that is connected to the network (using Internet Explorer Version 5.0 or higher). It is also possible to monitor the live video, play back recorded pictures, and download video / audio recordings to the PC.



Recording & Playback of Real-time Image

Live Picture Monitoring at 30 FPS

The capability to display live images on a 6-way or 4-way split screen, or a single screen display, depending on the situation. Live images can be monitored at 30 frames/sec even if multiple cameras are connected.



Simultaneous Recording and Playback (up to 60 fields/sec)

SANYO's exclusive digital technology allows recording and playback at the same time at 60 fields/sec (maximum). Smooth images can be reproduced and every incident in the monitored areas is successfully recorded.

Quick Retrieval of Recorded Video

DSR-3506 features five different search functions: Time / date Search, Alarm Search, Alarm Thumbnail Search, Archive Area Search, and Motion Detection Search. Since all data is recorded on a hard disk drive, the target image is brought up instantly despite the disk's ability to store a large amount of data. This eliminates the time wasted winding / rewinding tapes on a conventional time-lapse VCR. In addition, with digital recording technology, the user can view a noise-free picture in a fast-forward or fast-rewind search.

Warning Functions

Using the built-in motion sensor and external sensors, the following warning functions are available.
 (1) Monitor display switching
 (2) Buzzer and indicator lamp warnings

Multiple Options in Recording

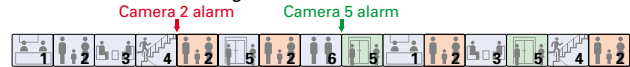
Three Recording Modes for Flawless Recording

DSR-3506 has three recording modes; Alarm, Timer, and Program. The three modes can operate individually or in any combination.

Alarm Recording

A full range of settings for picture quality, recording speed, and audio recording are possible. Alarm recording is triggered by an alarm signal from the built-in motion sensor or an external sensor. There are two operating modes in alarm recording — alternate recording and continuous recording.

SW 1 (alternate recording)

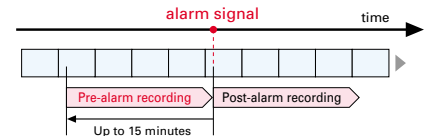


ONLY 2 (continuous recording)



Pre-alarm Recording

The pre-alarm recording mode allows the user to save up to 15 minutes of video prior to an alarm input, offering a great advantage when analyzing a situation.



Timer Recording

The timer recording mode allows the user to set eight different settings. Different settings for each day of the week and multiple settings for the same day are possible. It is also possible to specify the start / stop time or use a different recording speed.

Programmed Recording

For each of four available programs (P1 to P4), the user can specify particular cameras for recording. In addition, different recording speeds can be set for each program. These programs can also be used when making a timer recording.

Useful Functions

Motion Sensor for Catching All Activities

DSR-3506 comes with a motion sensor function that splits the screen into 140 sections and catches all questionable movements at the precise locations that need to be monitored. The sensor function can be set up independently for all six cameras and starts recording upon detection of any movement. DSR-3506 also allows the user to instantaneously locate the suspicious incidents and play them back.

Easy Recording with Minimal Setup

If you choose to bypass the detailed settings for recording, there is also a Simplified Recording Mode. Only two types of settings are required — the recording day setting, with which the number of days and time slots for recording are set, and the recording rate setting, with which the video speed is controlled.

Setting time periods

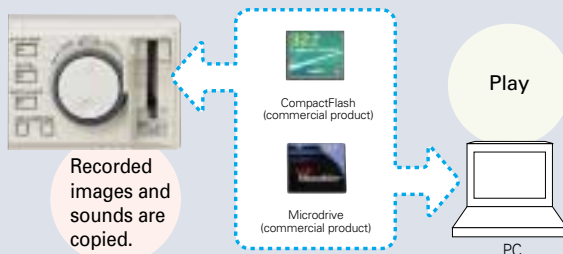
By dividing a day into four time periods T1, T2, T3, and T4, you can set up an independent setting in each time period, for each of the following functions.

- (1) Motion Sensor
- (2) Monitor Masking
- (3) Display Interval for Full-screen Sequential Display

Storing Recorded Video

CF Type II Expansion Slot

The user can copy recorded data onto CompactFlash or a Microdrive, which allows data to be easily transferred to a PC. Also the user can upload / download menu items and the same settings can be easily copied on other DSR-3506s.



Print Directly from a CF Card or a Microdrive

By using SANYO digital photo printer DVP-P1, it is possible to print images directly from a CF card or a Microdrive. SANYO does not assume responsibility when other printers are used.

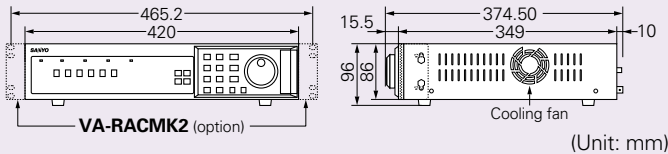
Other Features

- Multiplex recording with one-field switching
- Three storage areas
- Video loss alarm
- Two-level password security lock (admin / user)
- 30-day memory back-up
- Resume function
- End-of-medium alarm
- Jog shuttle
- On-screen mode setting, menu languages built in: English / French / Spanish
- Built-in time date generator
- Timer recording
- Auto repeat recording
- Alarm counter
- Auto delete
- Trigger shot recording
- Forward / reverse field advance
- Automatic daylight savings time adjustment
- Lifetime counter
- Buzzer
- Through output of video
- Position adjustable camera titles (10-character)
- One push adjustable clock
- Push-lock terminals for easy installation (refer to photo of rear panel)

Rear View



DSR-3506



MODEL	DSR-3506	
General	Hard disk Capacity	80GB, 160GB, 250GB or 300GB (One HDD can be added.)
	Picture resolution	720 x 240 (Field)
	Compression	M-JPEG
	Picture quality	5 levels (Basic, Normal, Enhanced, Fine, Super Fine)
	Recording type	Field recording
	Recording speed	27 levels. (60.00 to 0.03 fps.)
	Recording area	Normal Recording Area / Alarm Recording Area / Archive Area
	Number of cameras	6
	Magnification	x 2 digital zoom (in playback mode only)
	Menu language	English / French / Spanish
Clock setup	Month, day, year (last two digits), hour, minute, second	
Search Mode	Time/date search	Search by time and date
	Alarm search	Search by alarm event list
	Alarm thumbnail search	Search by alarm event thumbnails
	Archive area search	Search Archive Area with event list
	Motion detection search	Search by specifying a motion sensor
Video	Signal format	NTSC standard (color) / EIA standard (B/W) auto select, 525 lines, 60 fields/sec
	Video input	VBS / VS, 1.0 V (p-p), 75 Ω, BNC x 6
	Video output	VBS / VS, 1.0 V (p-p), 75 Ω, BNC x 6
	Main monitor output	VBS 1.0V (p-p), 75 Ω, BNC x1
Monitor 2 output	VBS / VS 1.0V (p-p), 75 Ω, BNC x1	
Audio	Audio input	-8 dBs 27 kΩ unbalanced, RCA x 1
	Audio output	-8 dBs 600 Ω unbalanced, RCA x 1
	Microphone input	-60 dBs 10 kΩ unbalanced, 3.5 mm mini jack x 1
Interface	CompactFlash slot	CF type II (Front)
	LAN	10BASE-T / 100BASE-TX (RJ-45)
Control signal	Remote control in	Push-lock terminal x 2, Push-lock terminal x 1 (GND)
	Alarm in	No-volt contacts (100ms or more) x 6
	Alarm out	Open collector Level low active x 1
	Alarm reset	No-volt contacts (100ms or more) x 1
	Sensor alarm output	Open collector (25mA) Level low active x 6
	NON Rec out	Normal 5 V DC, Low level active x 1
	Clock adjust input	No-volt contacts (100ms or more) x 1
	Clock adjust output	Normal 5 V DC, Low level active x 1
	Warning out	Normal 5 V DC, Low level active x 1
	Disk full out	Normal 5 V DC, Low level active x 1
	Alarm full out	Normal 5 V DC, Low level active x 1
	External timer input	No-volt contacts (1sec or more) x 1
Electrical	Power source	120 V to 240 V AC, 50 / 60 Hz
	Power consumption	32 W, 270 mA to 480 mA
	Operating conditions	Temperature: 5°C to 40°C [41°F to 104°F], Humidity: 80% or less
Physical	Dimensions	420(W) x 96(H) x 364.5(D) mm [16.54(W) x 3.78(H) x 14.35(D)]
	Weight (Approx.)	6.2 kg [13.7 lbs.] (with one HDD unit)
Regulatory	UL, CSA, FCC Class B, DOC Class B	

NOTE: Specifications subject to change without notice

Warnings regarding HDDs

- Do not attempt to install or replace an HDD on your own. You cannot use these HDDs on PCs.
- The unit may be damaged if it is exposed to an impact or vibration, or the power plug is disconnected during operation.
- Sanyo will not be held liable for any data loss due to an HDD error or a failure during recording.

* "Microsoft", "Internet Explorer" and "Windows" are registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.

* All other company and product names are registered trademarks and/or trademarks of their respective owners.

Horizontal resolution 520 TV line cameras

1/3" Color CCD
DSP High-sensitivity/resolution Camera
VCC-6594



1/3" Color CCD DSP High-resolution
Day/Night Camera
VCC-4594 DAY NIGHT



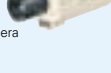
1/4" Color CCD DSP High-resolution
Day/Night Speed Dome Camera
VCC-9400 DAY NIGHT



1/4" Color CCD
DSP High-resolution Day/Night
Vandal Proof Dome Camera
VDC-D2184VA
DAY NIGHT



1/3" Color CCD
DSP High-sensitivity/resolution Camera
VCC-5984



1/4" Color CCD DSP High-resolution
Day/Night AF Zoom Camera
VCC-ZM400 DAY NIGHT



1/4" Color CCD DSP High-resolution
Speed Dome Camera
VCC-9300



1/4" Color CCD
DSP High-resolution Day/Night
Vandal Proof Dome Camera
VDC-D1184VA
DAY NIGHT



1/3" Color CCD
DSP High-resolution Camera
VCC-6584



1/4" Color CCD DSP High-resolution
AF Zoom Camera
VCC-ZM300



1/4" Color CCD DSP
High-resolution Weatherproof
Day/Night Camera
VCC-XV400 DAY NIGHT



***Caution:** Please consult the instruction manual to ensure safe and proper operation of the product.



DI Solutions Company of SANYO Electric Co., Ltd. obtained Quality Management System ISO9001 and Environmental Management System ISO14001 certifications.

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