# SANYO

# Digital Video Recorder

## DSR-M810 1-channel NTSC/PAL

### DIGITAL
#### NETWORK SOLUTIONS
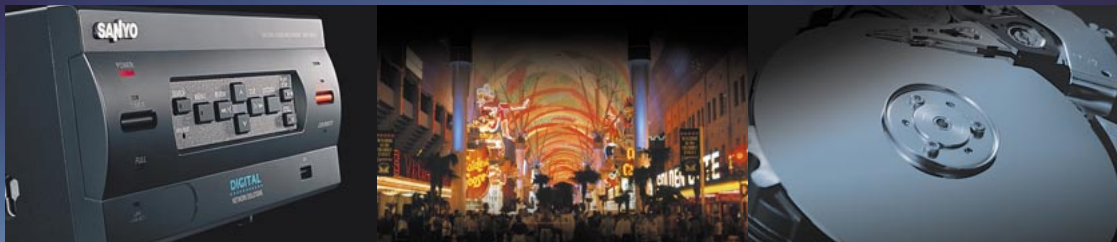
- Non-stop recording of real-time images
- Simultaneous recording and playback at 30 FPS
- Compact size of 210 mm width
- Remote surveillance and operation via network
- Provides advanced digital performance unavailable from VCRs
  - The ideal replacement for VCRs



## Half Rack Width
### REAL-TIME RECORDING

# DSR-M810 1-channel NTSC/PAL

**DIGITAL**
NETWORK SOLUTIONS

DIGITAL VIDEO RECORDER DSR-M810

## A compact package that offers new features including a huge capacity HDD, recording/playback of real-time video with high picture quality, audio recording, extended recording time, and networking.

### Solid Capabilities in Compact Appearance
The DSR-M810 has a compact body, suitable for casinos and convenience stores. Its digital recording enables outstanding picture quality and clear sound. In addition, its one-week non-stop recording comes with high-definition picture quality, and user can survey live video images and remote-control the device via a network*.

*With the VA-SW814, sold separately

### Playback and Image Retrieval while Video Recording
The DSR-M810 can record at the speed of 30 frames/sec with 720 x 480 pixels (NTSC). In addition, recorded images can be played back simultaneously and impeccable surveillance is possible even while retrieving and playing back desired video images.

### Choose a 300GB or 120GB HDD
The DSR-M810 with 120 GB HDD performs one-week (168 hr) of nonstop 30 frames/sec (NTSC) recording with "HIGH" mode picture quality. Moreover, the unit has an expansion bay for an additional HDD; another 120GB HDD enables more than two-week (336 hr) of nonstop recording time. The 300GB HDD model offers 2.5 weeks (420 hr) of nonstop recording and it can be still further expanded. The additional HDD can also be used for mirror recording* to backup recorded data. For further information on HDD expansion, contact the place of purchase.

> **\*Mirror Recording**
> Each DSR-M810 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.
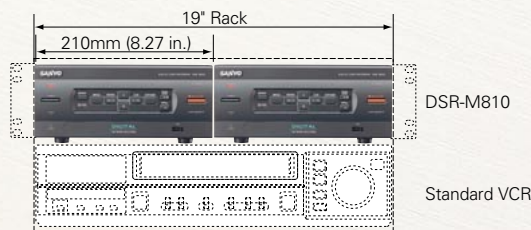
| CAPACITY \ PICTURE QUALITY | SUPER+ | SUPER | HIGH | STANDARD |
|---|---|---|---|---|
| 120GB | 56 H | 84 H | 168 H (1-week) | 336 H (2-week) |
| 240GB | 112 H | 168 H (1-week) | 336 H (2-week) | 672 H (4-week) |
| 300GB | 140 H | 210 H | 420 H | 840 H (5-week) |
| 600GB | 280 H | 420 H | 840 H (5-week) | 1680 H (10-week) |

### Audio Recording
MPEG1 Audio Layer2 allows recording with clear sound quality. Plus easy downloading with video images via a network.

### Compact Size of 210 mm Width
The DSR-M810 incorporates advanced digital functions into a compact design that allows it to be used in locations with limited space.

19" Rack
210mm (8.27 in.)
DSR-M810
Standard VCR

### Multiple Recording Methods
Available modes are "Normal recording" for surveillance images, "Timer recording" for predefined recording hours, and "Alarm recording" with an external alarm signal. The latter two can be combined to perform multiple recording functions.

> **Timer recording**
> Uniform daily programming and independent programming for each day of the week are both available.
> **Alarm recording**
> When an alarm signal is received from an external sensor, DSR-M810 will automatically start recording in the mode predetermined by the user.

### Various Playback Functions
The DSR-M810 features 6 playback functions: Playback, Still, Cue / Review (7.5x to 180x), Frame advance, Slow (1/8 to 1/2, forward and backward), and Search.
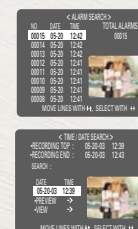
### Search Functions
The two search functions — "Alarm search" and "Time / date search" — call up desired images instantly.
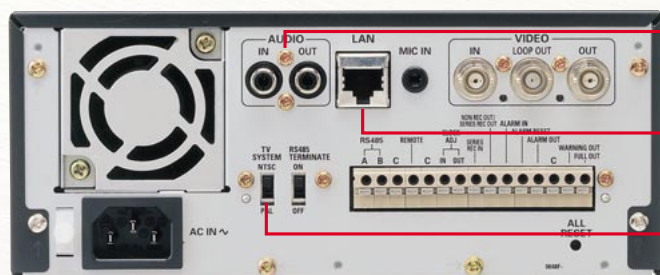
> **Alarm search**
> Recorded alarm images are retrieved from a list of alarm events and played back.
> **Time/date search**
> The user can designate time and date of recorded video images and play back retrieved images.

The device sends out clear sound and receives input from external devices.

100BASE-TX / 10BASE-T Ethernet terminal standard connection to PCs and HUBs.

Switching between NTSC / PAL is possible.

## Security Lock
There are two levels of security lock — Administrators and Users. — offering the best option for your security needs.

## Buzzer
Depending on the user's preference, the unit can be set up to emit a warning buzzer when (1) there is an alarm; (2) HDD becomes full; (3) recording suddenly stops; (4) an abnormality occurs; (5) an operation button is pressed.

## TV-System Switching between NTSC / PAL
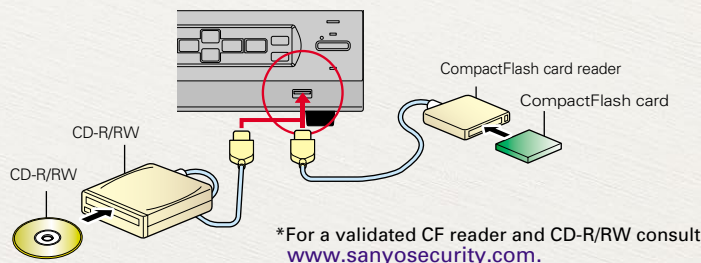A changeover switch in the back directs video signals of surveillance camera input / monitor output to NTSC or PAL circuit. (Note: this switch only routes the video signal to an appropriate circuit and does not mean that the unit converts an NTSC input to PAL format, or vice versa.)
Also, the AC power source is for 120 to 240V.

# This compact DVR excels in networking and expandability.

## Built-in USB Terminal
The USB terminal on the front panel gives easy access for backing up data onto a CD-R / RW or a CF card reader*. Downloading and uploading of setup menus by use of a CF card offer an easy option for setting up additional DSR-M810 recorders.
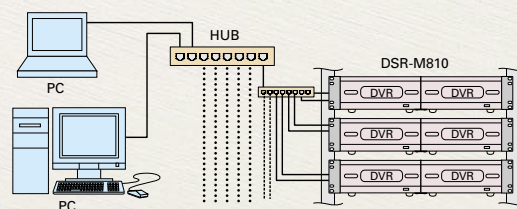


CompactFlash card reader
CompactFlash card
CD-R/RW
CD-R/RW

*For a validated CF reader and CD-R/RW consult www.sanyosecurity.com.

## Built-in Control Terminals
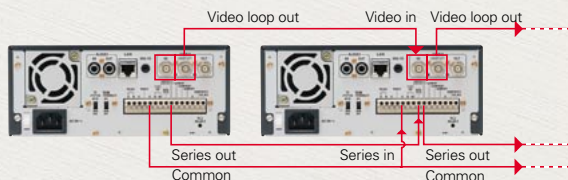These terminals make it possible to control the DSR-M810 using the separately sold VA-RMN01 Remote Controller.

## Also Comes with a LAN Terminal
There is a built-in 100BASE-TX / 10-BASE-T LAN terminal, allowing remote surveillance / control from PC via LAN with the VA-SW814 (sold separately).



HUB
PC
DSR-M810
DVR DVR
DVR DVR
DVR DVR
PC

## Series Recording
Multiple DSR-M810 recorders can be connected in a series for vastly increased recording capacity, allowing extended recording at high resolutions and easy storage of recordings.



Video loop out   Video in   Video loop out
Series out   Series in   Series out
Common   Common

## Built-in RS-485 Terminals
The unit has built-in RS-485 terminals for SSP (SANYO Security Serial Protocol) usage. Separately sold system controller VSP-8000 can control up to 128 units of DSR-M810.

## Remote surveillance/control available
### DVR Utility Software
# VA-SW814 (sold separately)
By installing VA-SW814 in PCs, the user can build a remote surveillance system that links DVRs and PCs via LAN. In addition to each setup, recording, retrieval, playback and live surveillance are available. Moreover, up to 4000 DVRs in a network can be controlled by a PC. Complete security involves an ID-password, regulating operational limits in 4 steps. In addition, the software features a function that verifies original data by detecting any alteration to recorded images.
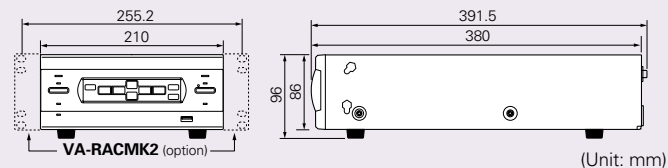
| System environment | | |
|---|---|---|
| | Multi Monitoring | Single Monitoring |
| System | IBM PC / AT or Compatible | |
| CPU* | Pentium® 4  3GHz or faster | Pentium® III  800MHz |
| Memory | 256MB | |
| Interface | 100BASE-TX, USB(1.1) | |
| Display | XGA (1,024 x 768 pixel), 16-million color or greater AGP graphics card for hardware overlay | |
| Sound | Sound card that supports 48 kHz stereo playback (PCI connection recommended) | |
| OS | Windows® XP Professional | |

*For multiple split-screen monitoring, CPU clock frequency of 750MHz is required per screen.

# Other Features

- 30-day memory back-up
- Resume function
- End-of-medium alarm
- On-screen mode setting, menu languages built in: English / French / Spanish
- Built-in time date generator
- Auto repeat recording
- Alarm counter
- Automatic daylight savings time adjustment
- Lifetime counter
- Through output of video
- Push-lock terminals for easy installation (refer to photo of rear panel )

## DSR-M810

255.2
210
391.5
380
96
86

VA-RACMK2 (option)

(Unit: mm)

| MODEL | | DSR-M810 |
|---|---|---|
| General | Hard disk capacity | 120GB or 300GB (One HDD can be added.) |
| | Picture resolution | NTSC: 720 x 480 (Super+ / Super / High), 352 x 480 (Standard) PAL: 720 x 576 (Super+ / Super / High), 352 x 576 (Standard) |
| | Compression | MPEG2 (Video), MPEG1 Audio Layer2 (Audio) |
| | Picture quality | 4 levels (Super+ / Super / High / Standard) |
| | Recording type | Frame |
| | Recording speed | NTSC: 30 frames/sec  PAL: 25 frames/sec |
| | Menu language | English / French / Spanish |
| | Clock setup | Month / Day / Year / Hour / Minute / Second |
| | Signal format | NTSC / PAL color signal standard (Switchable) |
| | Playback | Playback / Still / Search / Cue / Review / Frame advance / Slow |
| Search mode | Time/date search | Search by time and date |
| | Alarm search | Search by alarm event list |
| Video | Video input | 1.0 V p-p / 75 Ω unbalanced (BNC) |
| | Video output | 1.0 V p-p / 75 Ω unbalanced (BNC) |
| Audio | Audio input | -8dbs, 27 kΩ  unbalanced (RCA pin jack) |
| | Audio output | -8dbs, 600 Ω  unbalanced (RCA pin jack) |
| | Microphone input | -60dBs, 10 kΩ unbalanced (3.5mm mini jack) |
| Interface | LAN terminal | 100BASE-TX / 10BASE-T (RJ-45) |
| | USB terminal | For CompactFlash reader and CD-R / RW drive (Front) |
| Control signal | RS-485 | 3 terminals: A / B / GND |
| | Remote control in | VA-RMN01 remote control or External switch connection |
| | Clock adjust input | Normal open, Low level active |
| | Clock adjust output | Normal 5 V, Low level active |
| | Series REC input | Normal open, Low level active |
| | Non REC output | Normal 5 V, Low level active |
| | Series REC output | Normal 5 V, Low level active |
| | Alarm input | Normal open, Low level active |
| | Alarm output | Normal 5 V, Low level active |
| | Alarm reset input | Normal open, Low level active |
| | Warning output | Open collector (500mA), Low level active |
| | Full output warning | Open collector (50mA), Low level active |
| Electrical | Power source | 120 V to 240 V AC, 50 / 60 Hz |
| | Current consumption | 310 mA to 440 mA |
| Physical | Operating conditions | Temperature: 5°C to 40°C  [41°F to 104°F], Humidity: 10% to 80% |
| | Dimensions (W x H x D) | 210 (W) x 86 (H) x 380 (D) mm [8.27(W) x 3.78(H) x 14.96(D) in.] |
| | Weight (approx.) | 3.6 kg [7.9 lbs.] |

*Specifications subject to change without notice

# Horizontal resolution 520 TV line cameras

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

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

1/3" Color CCD DSP High-resolution Camera
**VCC-6674**

1/3" Color CCD DSP High-resolution Camera
**VCC-6574A**

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

1/4" Color CCD DSP High-resolution Weatherproof Day/Night Camera
**VCC-XV400** 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 Speed Dome Camera
**VCC-9300**

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

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

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

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

# SSP compatible devices

## IP Product

Network Video Server
**VSP-SV2000**

## Recorders

| | |
|---|---|
| 16ch Digital Video Recorder | **DSR-3016** |
| 9ch Digital Video Recorder | **DSR-3009** |
| 1ch Digital Video Recorder | **DSR-300** |
| 4ch Digital Video Recorder | **DSR-M804** |
| 960-hour Recording + Real Time VCR *The optional VZU-485/232C board is required | **SRT-8960** |
| 168-hour Recording + Real Time VCR *The optional VZU-485/232C board is required | **SRT-8168** |
| 40-hour Recording + Real Time VCR *The optional VZU-485/232C board is required | **SRT-8040** |
| 40-hour Recording + Real Time VCR The optional VZU-40485 board is required | **SRT-4040** |
| 40-hour Recording + Real Time VCR The optional VZU-40485 board is required | **SRT-4040DC** |
| 8-hour Recording Real Time VCR | **SRC-850A** |
| 960-hour Recording Time Lapse VCR The optional VZU-40485 board is required | **TLS-4960** |
| 72-hour Recording Time Lapse VCR The optional VZU-40485 board is required | **TLS-4072** |

## SSP System Units

SSP System Controller
**VSP-8000**

SSP Coaxial Converter
**VSP-CB10**

## Cameras

| | |
|---|---|
| 1/4" Color CCD DSP High-resolution Day/Night Speed Dome Camera DAY NIGHT | **VCC-9400** |
| 1/4" Color CCD DSP High-resolution Speed Dome Camera | **VCC-9300** |
| 1/4" Color CCD DSP High-resolution Day/Night AF Zoom Camera DAY NIGHT | **VCC-ZM400** |
| 1/4" Color CCD DSP High-resolution AF Zoom Camera | **VCC-ZM300** |

## Multiplexers

| | |
|---|---|
| 16-channel Digital Transport Multiplexer (Color) | **MPX-CD163** |
| 16-channel Duplex Multiplexer (Color) | **MPX-CD162** |
| 16-channel Duplex Multiplexer (B/W) | **MPX-MD162** |
| 9-channel Digital Transport Multiplexer (Color) | **MPX-CD93** |
| 9-channel Duplex Multiplexer (Color) | **MPX-CD92** |
| 9-channel Duplex Multiplexer (B/W) | **MPX-MD92** |

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" and "Internet Explorer" 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.

**\*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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