

# RECORDERS

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## Comparison Chart by Model

### Standalone DVR

SHR-2040 / SHR-2042  
SHR-2080 / SHR-2082  
SHR-2160 / SHR-2162  
SHR-4081  
SHR-4160  
GV-EM130DD  
GV-EM412DD

### Real Time VCR

SVR-960A

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# DVR Comparison Chart by Model




## Stand Alone DVRs

Models	SHR-2040	SHR-2042	SHR-2080	SHR-2082
Spec.				
HDD Basic	250GB	250GB	250GB	250GB
Max. Expansion	500GB x 3	500GB x 2	500GB x 4	500GB x 3
Display Speed (ips)	120ips	120ips	240ips	240ips
Recording Speed	120ips	120ips	120ips	120ips
Remote Control	RS-485 (PTZ)	RS-485 (PTZ)	RS-485 (PTZ)	RS-485 (PTZ)
Data Back Up	USB / External CD-RW	USB/Built-in CD-RW	USB/ External CD-RW	USB/Built-in CD-RW
Multiplex Function	Triplex	Triplex	Triplex	Triplex
Power Requirements	12VDC, 4.5A	AC100~240V, 50/60Hz	AC100~240V,50 / 60HZ	AC100~240V,50 / 60Hz
Weight lb	7.3	16.1	14.3	16.1
Dimensions in (WxHxD)	84.5 x 3.5 x 13.3	16.9 x 3.5 x 15.7	16.9 x 3.5 x 15.7	16.9 x 3.5 x 15.7

## Stand Alone DVRs

Models	SHR-2160	SHR-2162	SHR-4081	SHR-4160
Spec.				
HDD Basic	250GB	250GB	250GB	250GB
Max. Expansion	500GB x 4	500GB x 3	250GB x 4	250GB x 4
Display Speed (ips)	480ips	480ips	240ips	480ips
Recording Speed	120ips	120ips	240ips	360ips
Remote Control	RS-485 (PTZ)	RS-485 (PTZ)	RS-485 (PTZ)	RS-485 (PTZ)
Data Back Up	USB/ External CD-RW	USB/Built-in CD-RW	Ultra SCSI / IEEE-1394	Ultra SCSI / IEEE-1394
Multiplex Function	Triplex	Triplex	Triplex	Triplex
Power Requirements	AC100~240V,50 / 60Hz	AC100~240V,50 / 60Hz	AC100~240V,50 / 60Hz	AC100~240V,50 / 60Hz
Weight lb	14.3	16.1	14.3	14.3
Dimensions in (WxHxD)	16.9 x 3.5 x 15.7	16.9 x 3.5 x 15.7	16.9 x 3.5x15.7	16.9 x 3.5 x 15.7

## Removable Hard Drive DVRs

Models	GV-EM130DD	GV-EM412DD	GV-EM412M
Spec.			 (Metal Case Included)
Max. Expansion	500GB	500GB	500GB
Display Speed (IPS)	30ips	120ips	120ips
Recording Speed	30ips	120ips	120ips
Remote Control Wired	N/A	N/A	Yes
Data Backup	Compact Flash, Network and Removable HDD	Compact Flash, Network and Removable HDD	Compact Flash, Network and Removable HDD
Multiplex Functions	Simplex	Simplex	Simplex
Power Requirements	12Vdc Power Supply Included	12Vdc Power Supply Included	12Vdc
Weight lb	7.1	7.3	7.7
Dimensions (WxDxH)	6.3 x 9.8 x 3.5	6.3 x 9.8 x 3.5	6.3 x 9.8 x 3.5

## GV-VB-59SP

### 2 Wire Video Transceiver Over CAT5



The two wire video transceiver video balun is a surge protected tool-less terminal/BNC connector that enables you to transmit color images 2200 feet and B/W images 2500 feet over CAT5 cable. No screws or tools are required for installation.



# SHR-2040 / SHR-2042

4 Channel Standalone Digital Video Recorder



DVR

The SHR-2040/ SHR-2042 is a 4 channel Improved MPEG-4 Digital Video Recorder capable of recording 120ips in CIF mode. The SHR-2040/ SHR-2042 operates in Triplex mode (monitoring/playback/recording) and can also record synchronized audio on 4 channels at selectable resolutions CIF & Half D1. Minimum file size is 2.5Kbyte @ CIF: 352x240, Half D1: 720x240. Each channel can independently record at variable rates helping reduce HDD storage.

The SHR-2040/ SHR-2042 includes built-in front USB 2.0 slot for expanded external storage. The USB 2.0 slot can be used for internal HDD expansion or external Back Up storage. It can also be used with a memory stick adding speed and convenience to video clip downloads.



# SHR-2040 / SHR-2042

## 4 Channel Standalone Digital Video Recorder

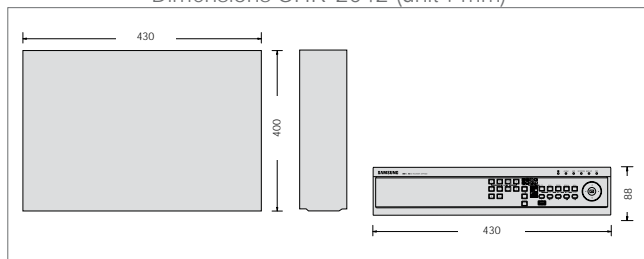
### Features

- Four Channel DVR
- Triplex Operation (Monitoring/Playback/Recording)
- Resolution: CIF, Half D1
- Improved MPEG-4 (Compression) (Min. File Size 2.5K)
- Recording Rate: Max. 120ips (CIF)
- Built In CD-RW, USB 2.0
- Back Up: USB HDD, CD-RW (SHR-2042 Only), Memory
- Audio Recording: 4 IN/1 OUT
- Motion Detection
- PTZ Control
- Loop Through Video
- Ethernet 10/100 Base T
- DDNS support (Multiple Options)
- Available Without CD-RW As SHR-2040
- Audio Through Internet Supported

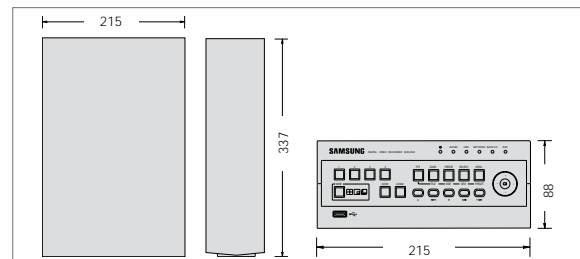
### Accessories

- ADDITIONAL HARD DRIVES
- GV-160GBHD, 160GB Fixed Hard Drive
  - GV-250GBHD, 250GB Fixed Hard Drive
  - GV-500GBHD, 500GB Fixed Hard Drive

Dimensions SHR-2042 (unit : mm)



Dimensions SHR-2040 (unit : mm)



### Specifications

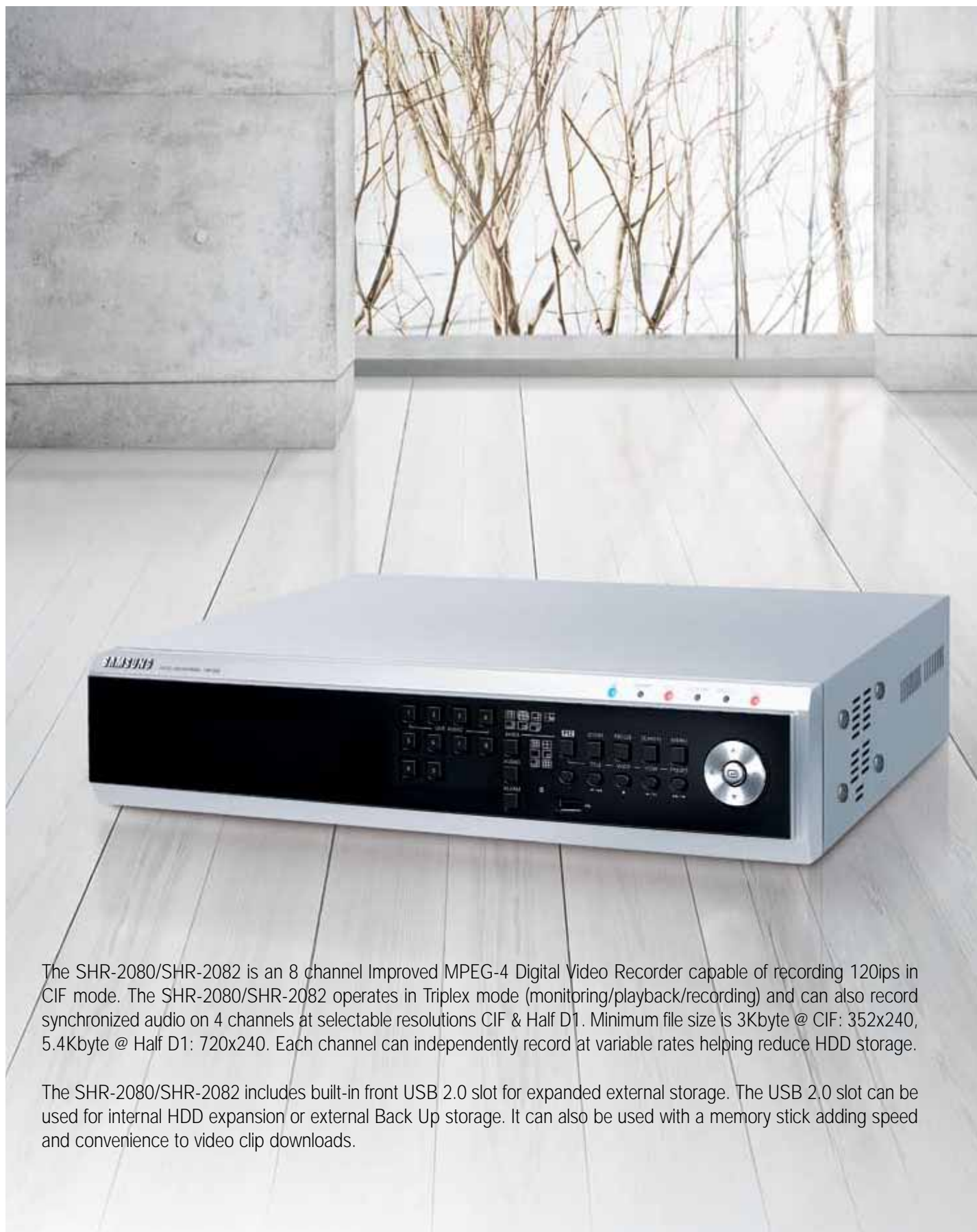
DVR Type		4 Channel Video Input
Operating System		Embedded OS
Storage	Internal	250GB
	Internal capacity	500GB x 3 (SHR-2040) 500GB x 2 (SHR-2042)
Video	External	USB HDD 250GB (optional)
	Input	4 Channel, (1Vp-p unbalanced, 75 ohm)
	Output	4 Channel, (1Vp-p unbalanced, 75 ohm)
		Main, Spot, S-Video, VGA
	Compression	MPEG4
	Display Resolution	720x480
	Display Speed	120IPS
	Display Modes	Single, Quad, Auto Sequence
Compression Rate	Low	2.4KB (352x240), 6.3KB (720x240)
	Standard	3.9KB (352x240), 10KB (720x240)
	High	5KB (352x240), 13.2KB (720x240)
	Very High	6.7KB (352x240), 17.2KB (720x240)
Audio	Compression	ADPCM
	Input	4 Channel, -5dBm
	Output	1 Channel, -6dBm
	Signal/Noise	Above 40db
Recording Modes		Manual, Schedule, Event (Alarm, Motion, Video Loss, Pre & Post)
	Speeds	NTSC: 1ips/3ips/5ips/7.5ips/10ips/15ips/30ips CIF @ 30ips max. (352x240)
	Resolution Speed	Half D1 (N) 15ips max. (720x288)
Search	Methods	Event/Time & Date/First/Last/Backup
Controls		Mode/Play/Rec/Stop/Still/Fast Fwd/ Rewind/PTZ/Menu/Audio
Special Features		Alarm/Search/CDRW Eject (SHR-2042 only)
		Motion Detection (Area & Sensitivity selectable), PIP, PTZ Control & 20 Presets, Digital Zoom x2, DST, Password Protected
Connector Rear	Video	4 BNC Input/Outputs (Composite), VGA, S-Video
	Audio	BNC Main, BNC Spot
	Alarm	4 RCA Input/1 RCA Output
	Communication	In/Out/Reset/Gnd
	Network	RS-485, RS-232
	USB 2.0	RJ-45
Network	Ethernet	One
Backup	USB	10/100 Base T, ADSL (PPPoE), DHCP, DDNS
		External HDD, CD/DVD Writer, Flash Memory
		Internal CD-RW (SHR-2042)
Alarm	Input	4, 5mA
	Output	2, Relay Output
	Reset	1, 5mA
OSD		Yes
Remote Viewer	OS	Win98se, WinME, Win2000, WinXP
Operating Temperature		41° ~ 104° F (0° ~ 40° C)
Operating Humidity		20 ~ 85% RH
Power	Power Source	110-220 VAC, 12VDC (SHR-2040)
	Power Consumption	51W (SHR-2042) / (30W for SHR-2040)
Physical Specifications	Dimension (W x H x D)	16.93" x 3.46" x 15.75" / 430 x 88 x 400mm (SHR-2042) 8.46" x 3.46" x 13.27" / 215 x 88 x 337mm (SHR-2040)
	Weight	16lbs./7.3Kg (SHR-2042) / 7.39lbs. / 3.35Kg (SHR-2040)
Certifications	UL, FCC, IC	





# SHR-2080 / SHR-2082

8-Channel Standalone Digital Video Recorder



DVR

The SHR-2080/SHR-2082 is an 8 channel Improved MPEG-4 Digital Video Recorder capable of recording 120ips in CIF mode. The SHR-2080/SHR-2082 operates in Triplex mode (monitoring/playback/recording) and can also record synchronized audio on 4 channels at selectable resolutions CIF & Half D1. Minimum file size is 3Kbyte @ CIF: 352x240, 5.4Kbyte @ Half D1: 720x240. Each channel can independently record at variable rates helping reduce HDD storage.

The SHR-2080/SHR-2082 includes built-in front USB 2.0 slot for expanded external storage. The USB 2.0 slot can be used for internal HDD expansion or external Back Up storage. It can also be used with a memory stick adding speed and convenience to video clip downloads.



# SHR-2080 / SHR-2082

## 8-Channel Standalone Digital Video Recorder

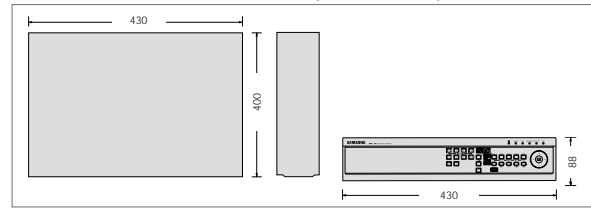
### Features

- Eight Channel DVR
- Triplex Operation (Monitoring/Playback/Recording)
- Resolution: CIF, Half D1
- Improved MPEG-4 (Compression) (Min. File Size 3K)
- Recording Rate: Max. 120ips (CIF)
- Built In CD-RW, USB 2.0
- Back Up: USB HDD, CD-RW, Memory
- Audio Recording: 4 IN/1 OUT
- Motion Detection
- PTZ Control
- Loop Through Video
- Ethernet 10/100 Base T
- DDNS Support (Multiple Options)
- Audio Through Internet Supported
- Available Without CD-RW as SHR-2080
- Remote Controller

### Accessories

- ADDITIONAL HARD DRIVES
- GV-160GBHD, 160GB Fixed Hard Drive
  - GV-250GBHD, 250GB Fixed Hard Drive
  - GV-500GBHD, 500GB Fixed Hard Drive

Dimensions (unit : mm)



SHR-2080 / SHR-2082

### Specifications

DVR Type		8 Channel Video Input
Operating System		Embedded OS
Storage	Internal	250GB
	Internal capacity	500GB x 3 (SHR-2082) 500GB x 4 (SHR-2080)
Video	External	USB HDD 250GB (optional)
	Input	8 Channel, (1Vp-p unbalanced, 75 ohm)
	Output	8 Channel, (1Vp-p unbalanced, 75 ohm)
		Main, Spot, S-Video, VGA
	Compression	MPEG4
	Display Resolution	720x480
	Display Speed	240IPS
	Display Modes	Single, Quad, 6,7,8,9, Auto Sequence
Compression Rate	Low	3KB (352x240), 5.4KB (720x240)
	Standard	4KB (352x240), 8.5KB (720x240)
	High	6.4KB (352x240), 11.25KB (720x240)
	Very High	8.5KB (352x240), 14.6KB (720x240)
Audio	Compression	ADPCM
	Input	4 Channel, -5dBm
	Output	1 Channel, -6dBm
	Signal/Noise	Above 40db
Recording Modes		Manual, Schedule, Event (Alarm, Motion, Video Loss, Pre & Post)
	Speeds	NTSC: .9ips/1.9ips/3.8ips/7.5ips/15ips/30ips
	Resolution Speed	CIF @ 30ips max. (352x240)
Search Controls	Methods	Half D1 (N) 15ips max. (720x288)
		Event/Time & Date/First/Last/Backup Mode/Play/Rec/Stop/Still/Fast Fwd/ Rewind/PTZ/Menu/Audio
Special Features		Alarm/Search/CDRW Eject (SHR-2082 only)
		Motion Detection (Area & Sensitivity selectable), PIP, PTZ Control & 20 Presets, Digital Zoom x2, DST, Password Protected, Infrared Remote Control
Connector Rear	Video	8 BNC Input/Outputs (Composite), VGA, S-Video
	Audio	BNC Main, BNC Spot
	Alarm	4 RCA Input/1 RCA Output
	Communication	In/Out/Reset/Gnd
	Network	RS-485, RS-232
	USB 2.0	RJ-45
Network Backup	Ethernet	One
	USB	10/100 Base T, ADSL (PPPoE), DHCP, DDNS
Alarm	Input	External HDD, CD/DVD Writer, Flash Memory
	Output	Internal CDRW (only in SHR-2082)
	Reset	8, 5mA
OSD		4, Relay Output
Remote Viewer	OS	1, 5mA
Operating Temperature		Yes
Operating Humidity		Win98se, WinME, Win2000, WinXP
Power	Power Source	41° ~ 104° F (0° ~ 40° C)
	Power Consumption	20 ~ 85% RH
Physical Specifications	Dimension (W x H x D)	110-220 VAC
	Weight	56W (SHR-2080) / 60W (SHR-2082)
Certifications		16.93" x 3.46" x 15.75" (430 x 88 x 400mm)
		14.33lbs./6.5Kg (SHR-2080) / 16.1lb / 7.3Kg (SHR-2082)

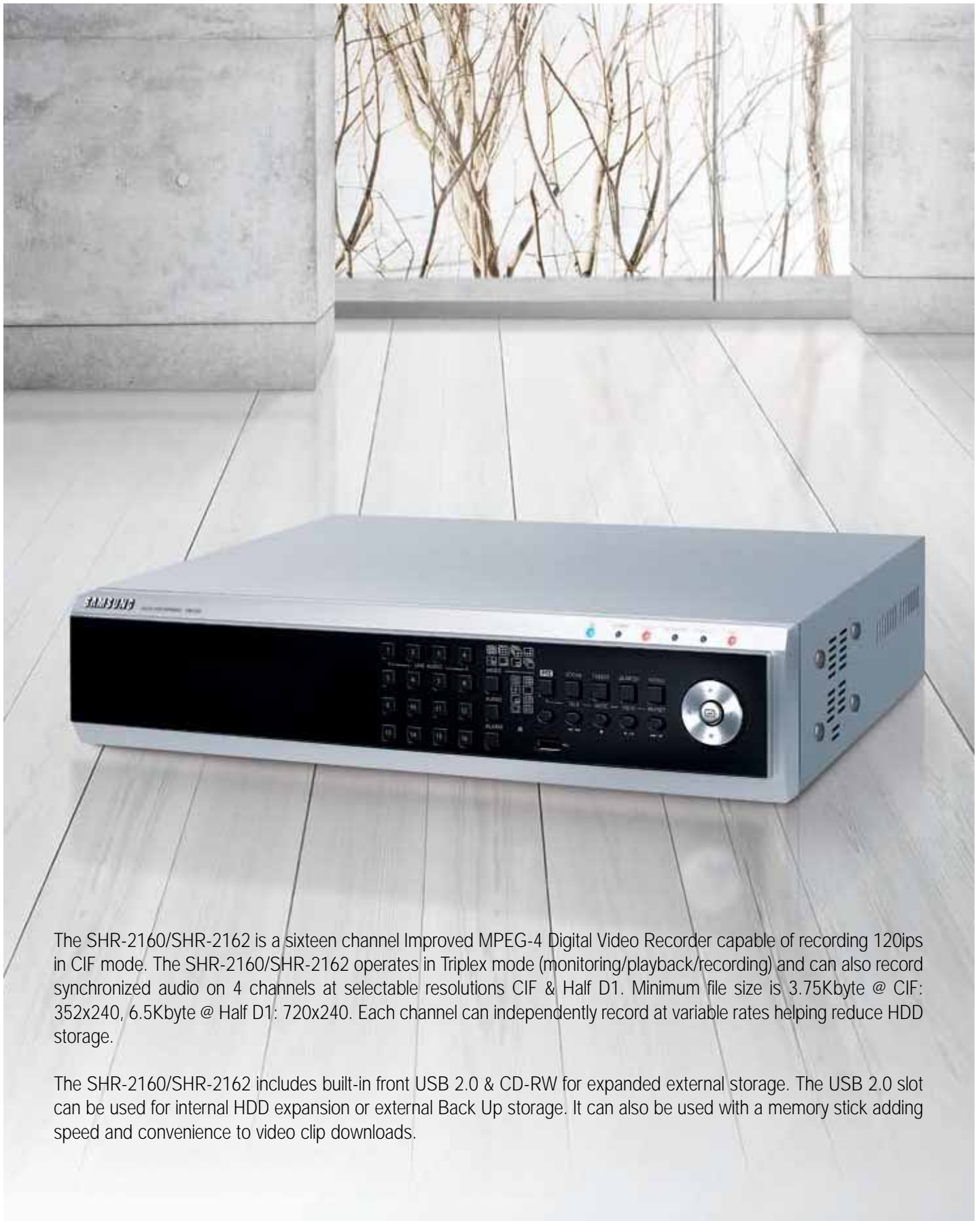


# SHR-2160 / SHR-2162

16-Channel Standalone Digital Video Recorder

Digital Video Security System Technology

DIGITAL VIDEO RECORDERS



DVR

The SHR-2160/SHR-2162 is a sixteen channel Improved MPEG-4 Digital Video Recorder capable of recording 120ips in CIF mode. The SHR-2160/SHR-2162 operates in Triplex mode (monitoring/playback/recording) and can also record synchronized audio on 4 channels at selectable resolutions CIF & Half D1. Minimum file size is 3.75Kbyte @ CIF: 352x240, 6.5Kbyte @ Half D1: 720x240. Each channel can independently record at variable rates helping reduce HDD storage.

The SHR-2160/SHR-2162 includes built-in front USB 2.0 & CD-RW for expanded external storage. The USB 2.0 slot can be used for internal HDD expansion or external Back Up storage. It can also be used with a memory stick adding speed and convenience to video clip downloads.



# SHR-2160 / SHR-2162

## 16-Channel Standalone Digital Video Recorder

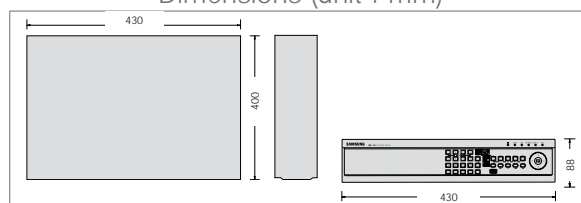
### Features

- Sixteen Channel DVR
- Triplex Operation (Monitoring/Playback/Recording)
- Resolution: CIF, Half D1
- Improved MPEG-4 (Compression) (Min. File Size 3.75K)
- Recording Rate: Max. 120ips (CIF)
- Built In CD-RW, USB 2.0
- Back Up: USB HDD, CD-RW, Memory
- Audio Recording: 4 IN/1 OUT
- Motion Detection
- PTZ Control
- Loop Through Video
- Ethernet 10/100 Base T
- DDNS Support (Multiple Options)
- Audio Through Internet Supported
- Available Without CD-RW as SHR-2160
- Remote Controller

### Accessories

- ADDITIONAL HARD DRIVES
- GV-160GBHD, 160GB Fixed Hard Drive
  - GV-250GBHD, 250GB Fixed Hard Drive
  - GV-500GBHD, 500GB Fixed Hard Drive

Dimensions (unit : mm)



SHR-2160 / SHR-2162

### Specifications

DVR Type		16 Channel Video Input
Operating System		Embedded OS
Storage	Internal	250GB
	Internal capacity	500GB x 3 (SHR-2162) 500GB x 4 (SHR-2160)
	External	USB HDD 250GB (optional)
Video	Input	16 Channel, (1Vp-p unbalanced, 75 ohm)
	Output	16 Channel, (1Vp-p unbalanced, 75 ohm)
		Main, Spot, S-Video, VGA
	Compression	MPEG4
	Display Resolution	720x480
	Display Speed	480IPS
	Display Modes	Single, Quad, 6, 7, 8, 9, 16, Auto Sequence
Compression Rate	Low	3.75KB (352x240), 6.5KB (720x240)
	Standard	6KB (352x240), 10.25KB (720x240)
	High	7.6KB (352x240), 13.5KB (720x240)
	Very High	10.25KB (352x240), 17.6KB (720x240)
Audio	Compression	ADPCM
	Input	4 Channel, -5dBm
	Output	1 Channel, -6dBm
	Signal/Noise	Above 40db
Recording Modes		Manual, Schedule, Event (Alarm, Motion, Video Loss, Pre & Post)
	Speeds	NTSC: .9ips/1.9ips/3.8ips/7.5ips/15ips/30ips
	Resolution Speed	CIF @ 30ips max. (352x240) Half D1 (N) 15ips max. (720x288)
Search	Methods	Event/Time & Date/ First/Last/Backup
Controls		Mode/Play/Rec/Stop/Still/Fast Fwd/ Rewind/PTZ/Menu/Audio / Alarm/Search
Special Features		Motion Detection (Area & Sensitivity selectable), PIP, PTZ Control & 20 Presets, Digital Zoom x2, DST, Password Protected, Infrared Remote Control
Connector Rear	Video	16 BNC Input/Outputs (Composite), VGA, S-Video BNC Main, BNC Spot
	Audio	4 RCA Input/1 RCA Output
	Alarm	In/Out/Reset/Gnd
	Communication	RS-485, RS-232
	Network	RJ-45
	USB 2.0	One
Network	Ethernet	10/100 Base T, ADSL (PPPoE), DHCP, DDNS
Backup	USB	External HDD, CD/DVD Writer, Flash Memory Internal CD-RW (SHR-2162)
Alarm	Input	16, 5mA
	Output	4, Relay Output
	Reset	1, 5mA
OSD		Yes
Remote Viewer	OS	Win98se, WinME, Win2000, WinXP
Operating Temperature		41° - 104° F (0° - 40° C)
Operating Humidity		20 - 85% RH
Power	Power Source	110-220 VAC
	Power Consumption	56W (SHR-2160) / 60W (SHR-2162)
Physical Specifications	Dimension (W x H x D)	16.93" x 3.46" x 15.75" (430 x 88 x 400mm)
	Weight	14.3lb / 6.4Kg (SHR-2160) / 16.1lb / 7.3Kg (SHR-2162)
Certifications		UL, FCC, IC





# SHR-4081

Real Time 8 Ch Standalone Digital Video Recorder



DVR

SHR-4081 is an 8-channel MPEG-4 real time Digital Video Recorder capable of 240ips recording rate in CIF mode. It can also record 8 channels of synchronized audio and various kinds of resolutions in different modes, such as CIF: 352x240, Half D1: 720x240 and Full D1: 720x480.

Each channel can be individually adjusted at a variable record rate which will help save HDD storage. Available external interface methods are USB 2.0(Front: 1, Rear: 1) and IEEE1394.



# SHR-4081

## Real Time 8 Ch Standalone Digital Video Recorder

### Features

- Eight Channel DVR
- Triplex Operation (Monitoring/Playback/Recording)
- Resolution: CIF, Half D1, Full D1
- Improved MPEG-4 (Compression) (Min. File Size 3.3K)
- Recording Rate: Max. 240ips (CIF)
- Built In, USB 2.0 & IEEE-1394 interface
- Back Up: USB HDD, IEEE-1394, Memory
- Audio Recording: 8 IN/1 OUT
- Motion Detection
- PTZ Control
- Loop Through Video
- Ethernet 10/100 Base T

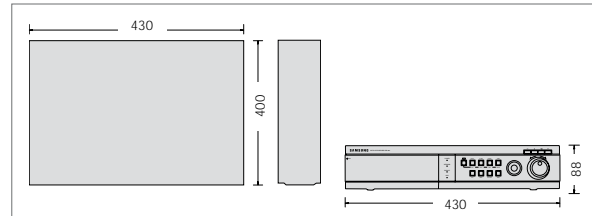
\* Unit can record 720x480 in 1 Ch mode

### Accessories

#### ADDITIONAL HARD DRIVES

- GV-160GBHD, 160GB Fixed Hard Drive
- GV-250GBHD, 250GB Fixed Hard Drive

Dimensions (unit : mm)



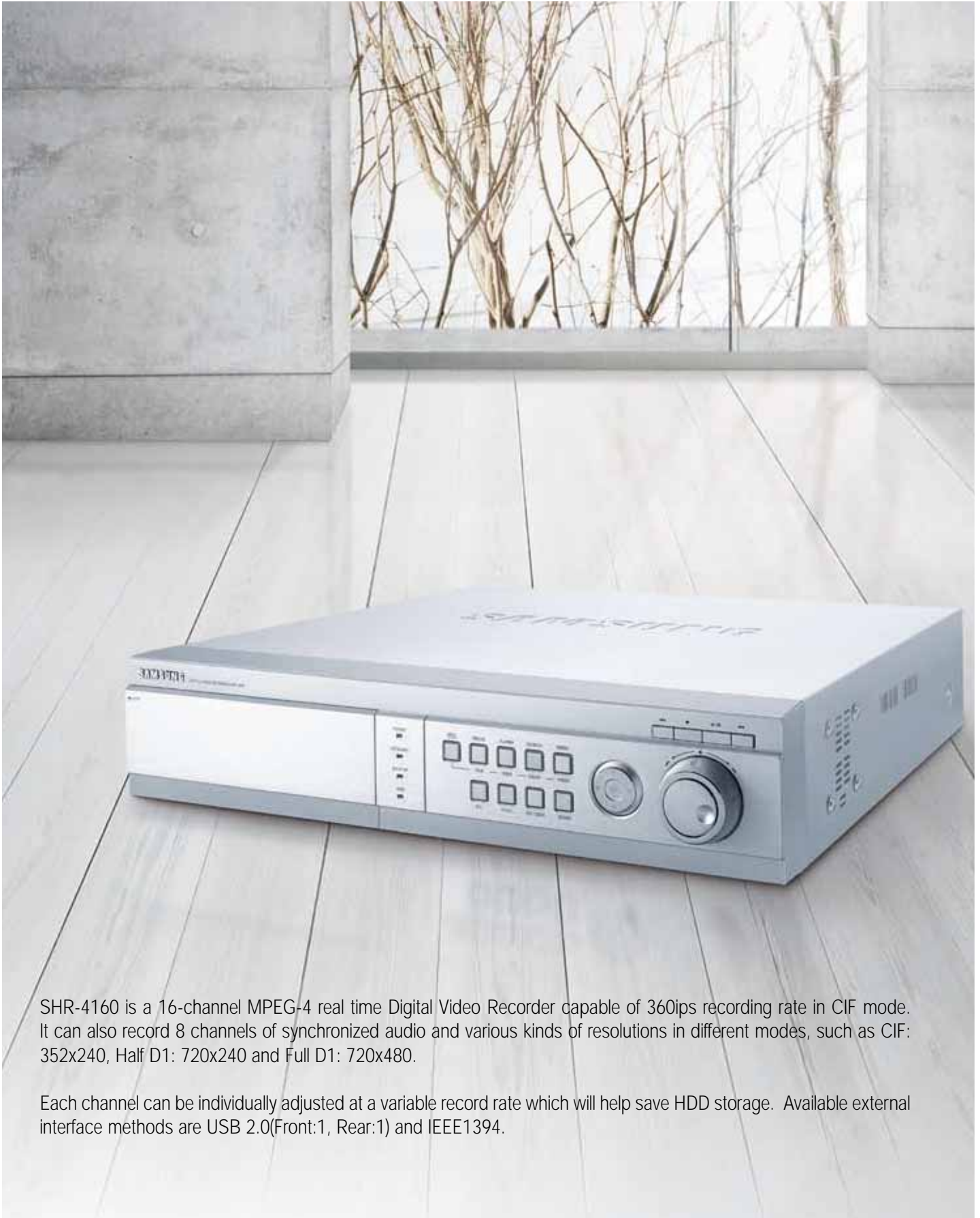
### Specifications

DVR Type		8 Channel Video Input
Operating System		Embedded OS
Storage	Internal	250GB
	Internal capacity	250GB x 4, PATA
	External	HDD 250GB (optional) IEEE-1394 250GB x 6 Max. (optional)
Video	Input	8 Channel, (1Vp-p Unbalanced, 75 ohm)
	Output	8 Channel, (1Vp-p Unbalanced, 75 ohm) Main, Spot, S-Video, VGA
	Compression	MPEG4
	Display Resolution	720x480
	Display Speed	240IPS
	Display Modes	Single, Quad, 6,7,8,9, Auto Sequence, PIP, 2X Zoom
Compression Rate	Low	3.3KB (352x240), 4.3KB (720x240), 9.KB (720x480) Min. rate
	Standard	4.1KB (352x240), 5.7KB (720x240), 11.4KB (720x480) Min. rate
	High	4.9KB (352x240), 6.9KB (720x240), 13.8KB (720x480) Min. rate
	Very High	6.1KB (352x240), 8.1KB (720x240), 16.3KB (720x480) Min. rate
	Audio	Compression
	Input	8 Channel, Mono, -5db, 600 ohms
	Output	1 Channel, Mono, -6db
	Signal/Noise	Above 40db
Recording Modes		Manual, Panic, Schedule, Event (Alarm, Motion, Video Loss, Pre & Post), Panic
	Speeds	NTSC: 1ips/3ips/5ips/7.5ips/10ips/15ips/30ips
	Resolution Speed	CIF © 30ips max. (352x240) Half D1 (N) 15ips max. (720x240) Full D1 7.5ips max (720x480)
Search Controls	Methods	Event/Time & Date/Panic/First/Last/Backup Jog/Shuttle/Mode/Play/Rec/Panic/Stop/ Still/Fast Fwd/Rewind/PTZ/Menu/Audio Alarm/Search
		Motion Detection (Area & Sensitivity selectable), PIP, PTZ Control & 20 Presets, Digital Zoom x2, DST, Password Protected
Connector Rear	Video	8 BNC Input/Outputs (Composite), VGA, S-Video BNC Main, BNC Spot
	Audio	8 RCA Input/1 RCA Output
	Alarm	In/Out/Reset/Gnd
	Communication	RS-485, RS-232
	Network	RJ-45
	USB 2.0	One
Network Backup	IEEE-1394	One
	Ethernet	10/100 Base T, ADSL (PPPoE), DHCP
Alarm	USB	CD/DVD Writer, Flash Memory
	IEEE-1394	HDD (6 Max.)
OSD	Input	8, 5mA
	Output	4, Relay Output
	Reset	1, 5mA
Remote Viewer	OS	Yes
Operating Temperature		Win98se, WinME, Win2000, WinXP
Operating Humidity		41° - 104° F (0° - 40° C)
Power Source		20 - 85% RH
Power Consumption		120 VAC
Physical Specifications		85W
	Dimension (W x H x D)	16.93" x 3.46" x 15.75" (430 x 88 x 400mm)
Certifications	Weight	15.65lbs./7.1Kg
	UL, FCC, IC	



# SHR-4160

## 16 Channel Standalone Digital Video Recorder



SHR-4160 is a 16-channel MPEG-4 real time Digital Video Recorder capable of 360ips recording rate in CIF mode. It can also record 8 channels of synchronized audio and various kinds of resolutions in different modes, such as CIF: 352x240, Half D1: 720x240 and Full D1: 720x480.

Each channel can be individually adjusted at a variable record rate which will help save HDD storage. Available external interface methods are USB 2.0(Front:1, Rear:1) and IEEE1394.



# SHR-4160

## 16 Channel Standalone Digital Video Recorder

### Features

- Sixteen Channel DVR
- Triplex Operation (Monitoring/Playback/Recording)
- Resolution: CIF, Half D1, Full D1
- Improved MPEG-4 (Compression) (Min. File Size 3.3K)
- Recording Rate: Max. 360ips (CIF)
- Built In, USB 2.0 & IEEE-1394 Interface
- Back Up: USB HDD, IEEE-1394, Memory
- Audio Recording: 8 IN/1 OUT
- Motion Detection
- PTZ Control
- Loop Through Video
- Ethernet 10/100 Base T

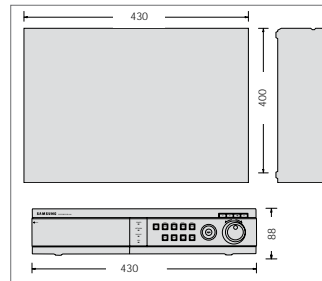
\* Unit can record 720x480 on 1 Ch mode

### Accessories

#### ADDITIONAL HARD DRIVES

- GV-160GBHD, 160GB Fixed Hard Drive
- GV-250GBHD, 250GB Fixed Hard Drive

#### Dimensions (unit : mm)



### Specifications

DVR Type		16 Channel Video Input
Operating System	Embedded OS	Embedded OS
Storage	Internal	250GB
	Internal capacity	250GB x 4, PATA
	External	SCSI HDD 250GB (optional)
		IEEE-1394 250GB x 6 Max. (optional)
Video	Input	16 Channel, (1Vp-p unbalanced, 75 ohm)
	Output	16 Channel, (1Vp-p unbalanced, 75 ohm)
		Main, Spot, S-Video, VGA
	Compression	MPEG4
	Display Resolution	720x480
	Display Speed	480IPS
	Display Modes	Single, Quad, 6,7,8,9, 16, Auto Sequence, PIP, 2X Zoom
Compression Rate	Low	3.3KB (352x240), 4.3KB (720x240), 9.KB (720x480) Min. rate
	Standard	4.1KB (352x240), 5.7KB (720x240), 11.4KB (720x480) Min. Rate
	High	4.9KB (352x240), 6.9KB (720x240), 13.8KB (720x480) Min. rate
	Very High	6.1KB (352x240), 8.1KB (720x240), 16.3KB (720x480) Min. Rate
Audio	Compression	G.726
	Input	8 Channel
	Output	Mono -5db, 600 ohms
	Signal/Noise	1 Channel Mono -6db
Recording Modes		Above 40db
		Manual, Panic, Schedule, Event (Alarm, Motion, Video Loss, Pre & Post), Panic
	Speeds	NTSC: 1ips/3ips/5ips/7.5ips/10ips/15ips/30ips
	Resolution Speed	CIF @ 30ips max. (352x240)
		Half D1 (N) 15ips max. (720x240)
		Full D1 7.5ips max (720x480)
Search Controls	Methods	Event/Time & Date/Panic/First/Last/Backup
		Jog/Shuttle/Mode/Play/Rec/Panic/Stop/Still/Fast Fwd/Rewind/PTZ/Menu/Audio Alarm/Search
Special Features		Motion Detection (Area & Sensitivity selectable), PIP, PTZ Control & 20 Presets, Digital Zoom x2, DST, Password Protected
		16 BNC Input/Outputs (Composite), VGA, S-Video BNC Main, BNC Spot
Connector Rear	Video	8 RCA Input/1 RCA Output
	Audio	In/Out/Reset/Gnd
	Alarm	RS-485, RS-232
	Communication	RJ-45
	Network	One
	USB 2.0	One
	IEEE-1394	One
Network Backup	Ethernet	10/100 Base T, ADSL (PPPoE), DHCP
	USB	External HDD, CD/DVD Writer, Flash Memory
	IEEE-1394	HDD (6 Max.)
Alarm	Output	Input 8, 5mA
	Reset	4, Relay Output
		1, 5mA
OSD		Yes
Remote Viewer	OS	Win98se, WinME, Win2000, WinXP
Operating Temperature		41° ~ 104° F (0° ~ 40° C)
Operating Humidity		20 ~ 85% RH
Power Source		120 VAC
Power Consumption		85W
Physical Specifications	Dimension (W x H x D)	16.93" x 3.46" x 1.75"
		430 x 88 x 400mm
	Weight	15.65lbs./7.1Kg
Certifications	UL, FCC, IC	





# GV-EM130DD / GV-EM412DD

Digital Video Security System Technology

DIGITAL VIDEO RECORDERS

1 Ch and 4 Ch Digital Video Recorders with Removable Hard Drive



DVR

The GV-EM130DD (1 Channel) and GV-EM412DD (4 Channel) are cost effective DVRs that record on a removable hard-disk drive and are equipped with a compact flash memory slot. With optional accessories, the GV-EM Series can also be used as a mobile DVR with a separate control panel for remote monitoring and control. LAN connectivity is standard in the GV-EM series and it also features smooth motion and clear playback.

The units come bundled with DVR reader software that allows you to view DVR video on a PC. Taking out the removable hard-drive and placing it in a PC that contains a compatible removable hard-drive bay\* (\*removable hard-drive bay is optional), will allow playback of video using the DVR reader software.

The DVR reader software also saves images in AVI, MPEG, or BMP file formats. The "Heart-Beat" rebooting feature makes the unit rock solid reliable in the event of recovering after a system halt.



# GV-EM130DD / GV-EM412DD

## 1 Ch and 4 Ch Digital Video Recorders with Removable Hard Drive

### Features

- 4/1 Channels
- Simplex Operation
- Record Quality: Low, Standard, High, Very High
- Min. File Size: 5kb
- 120 fps Max Recording Rate: 30 fps: GV-EM130DD
- Removable HD
- Compact Flash Slot
- Audio Recording: 1 in / 1 out
- Motion Detection
- Ethernet 10/100 base T

### Accessories

- ADDITIONAL HARD DRIVES
- GV-160GB, 160GB Fixed Hard Drive
  - GV-250GB, 250GB Fixed Hard Drive
  - GV-500GB, 500GB Fixed Hard Drive



#### GV-EM412CASE

- Compatible with all GV-EM series DVRs
- Metal case with anti-vibration mount
- Hardware for pole mount
- Security lock and key included



#### GV-EM412MPV

- Portable external viewer/controller
- Compatible only with GV-EM412M RS-232 Port
- Jog/Shuttle
- 5.5" LCD screen
- 9 ft Cable included



#### GV-EM412MKT-80

- 80 GB hard drive included
- One GV-EM412M
- One GV-EM412MPV

- GV-EM130DD is also available in 4 Channel and with 120ips recording speed at 360 x 240 as GV-EM412M. This unit comes pre-installed in GV-EM412CASE
- All DVRs in this series are also available with 80Gb Hard Drive as GV-EM130DD-80, GV-EM412DD-80, GV-EM412M-80

## Specifications

DVR Type	GV-EM412DD: 4 Ch Video	GV-EM130DD: 1 Ch Video
Operating System	Embedded OS	Embedded OS
Storage: Internal	160Gb	160Gb
Storage: Internal Capacity	750Gb	750Gb
Storage: External	Compact Flash Slot	Compact Flash Slot
Video Input	4	1
Video Output	Main, S-Video	Main, S-Video
Video Display Modes	Single, Quad, Sequential	Single
Compression Rate	Low 5-10Kb, Standard 10-15Kb	Low 5-10Kb, Standard 10-15Kb
	High 15-20Kb, Very High 20-24Kb	High 15-20Kb, Very High 20-24Kb
Audio Input	1	1
Audio Output	1	1
Recording Modes	Schedule, Continuous, Alarm	Schedule, Continuous, Alarm
	Post Alarm	Post Alarm
Recording Speeds	1-8, 16, 30	1-8, 16, 30
Recording Resolution	720x480, 360x240	720x480, 360x240
Search	Jog Shuttle - Backward/Forward	Jog Shuttle - Backward/Forward
	x2, x4, x16, x32, x256, x1024, x8192, frame	x2, x4, x16, x32, x256, x1024, x8192, frame
Special Features	Motion Detection + Sensitivity	Motion Detection + Sensitivity
	Heartbeat, POS,	Heartbeat, POS,
	Image Difference Store Method	Image Difference Store Method
Connector: Rear	4 BNC Inputs, S-Video	1 BNC Input, S-Video
Connector: Video	Monitor out-BNC	Monitor out-BNC
Connector: Audio	1 RCA Input/1 RCA Output	1 RCA Input/1 RCA Output
Connector: Alarm	Input/Relay	Input/Relay
Connector: Communication	RS-232	RS-232
Connector: Network	RJ-45	RJ-45
Network	10/100 Base T	10/100 Base T
	DHCP, Static, DDNS	DHCP, Static, DDNS
Backup	Compact Flash	Compact Flash
Alarm Input	4	4
Alarm Output	1, Relay	1, Relay
OSD	Yes	Yes
Remote Viewer	Yes	Yes
Operating Temp.	32° - 104° F (HD dependent) / 0°C - 40°C.	32° - 104° F (HD dependent) / (0°C - 40°C)
Operating Humidity	85% Max	85% Max
Power Source	12 Vdc, 4.5 Amps	12 Vdc, 4.5 Amps
Controls	Camera 1-4, Quad, Alarm, Menu	REC, Reverse, Pause, Play
	PWR, Jog shuttle, Playback,	Alarm, OSD, PWR, Menu
	Rewind, FWD, F-FWD, Escape, Enter	Jog Shuttle
Physical Specifcation	6.3" x 9.8" x 3.5" (WxDxH)	6.3" x 9.8" x 3.5" (WxDxH)
Weight	7.1lb	7.3lb



# SRV-960A

## Real Time Recorder



TIMELAPSE VCR

The SRV-960A is a real time and time lapse videocassette recorder that can record color or monochrome video signals. Featuring multiple recording and playback methods, this VCR can be programmed to record in multiple modes, dates and times.

The multiple recording densities allow a high video capture rate, more than what is found in a standard time lapse recorder. With up to 30 hour audio recording, alarm recording, power loss memory and record check, this recorder serves as the basis for recording and used in most small surveillance systems.

Additional features include a built-in time/date generator, repeat recording, one shot recording and jog shuttle control. The SRV-960A delivers 300 lines of resolution in color and over 350 lines of resolution in monochrome recording.



# SRV-960A

## Real Time Recorder

### Features

- Real/Time Lapse VCR
- Recording Speeds: 6/18/30/72/120/168/240/480/960Hrs
- Color 300/BW 350 TV Lines Resolution
- Three Audio Recording Modes
- Jog/Shuttle Dial
- Built-In Time/Date Generator
- Super Clear and Natural Picture
- Timer Program Recording (Ten)
- Repeat, One Shot, Series and Alarm recording
- Power Loss Memory Function
- Record Check Function
- (OSD) On Screen Display

### Accessories

GV-FR1819, VCR LOCK BOX

This tamper proof, lightweight, all aluminum VCR box has a hinged front door and a removable rear panel for easy installation. The enclosure is key locked. This lock box can accommodate most popular VCR and multiplexer combination. The vented side panels mean that, in most cases a blower unit is not required.

Body: All aluminum, gauge 12, alloy # 3105H14

Cover: Hinged, key locked / Finish: Black polyurethane coating / Weight: 11lb (5kg)

Dimensions: (HxWxD) 6.0" x 18.50" x 17.0" / 152 x 470 x 432mm



Dimensions (unit : mm)



Front/Rear Panel



## Specifications

Picture	Resolution	300 Color/350 BW TV lines
Video	Recording Method	Rotation Head Azimuth Type
	REC/PB Speeds	6H/18H/30H/72H/120H/168H/240H/480H/960H/000H
Input	Output	1 Channel, (1Vp-p unbalanced, 75 ohm)
	Signal/Noise	1 Channel, (1Vp-p unbalanced, 75 ohm) Above 43db
Audio	Recording Mode	L6, L18, L30H
	Input	1 Channel, -8db
	Output	1 Channel, -8db
	Signal/Noise	Above 40db
Tape Speed		11.12mm/sec (L6Hr Mode)
Tape	Front	Loading
	Applicable Video Tapes	T-30, T-60, T-90, T-120, T-160
Recording System		Manual/Program/Alarm/Series REC/ Repeat REC/1-Shot
System	Modes	NTSC
Controls	Jog/Shuttle	
		Playback/Rec/Stop/Eject Slow/Still/Fast Rewind & Forwarding Fwd/Rev Search
Connector Rear	Video	2 BNC Input/Outputs (Composite),
	Audio	2 RCA Input/Outputs
	Alarm	In/Out/Reset/Gnd
	Series	In/Out/Gnd
	Tape End	Out
	Trigger	Out
Operating Temperature		41° ~ 104° F (5° ~ 40° C)
Operating Humidity		Below 80%
Power Source		120VAC, 60Hz
Power Consumption		16W
Physical Specifications	Dimension (W x H x D)	16.93" x 3.56" x 12.26" (430 x 90.5 x 311.5mm)
	Weight	9.48lbs./4.3Kg
Certifications	UL, FCC, IC	