

# HD-SDI Camera Accessory

## SPH-120R / SPH-110C



### Specifications

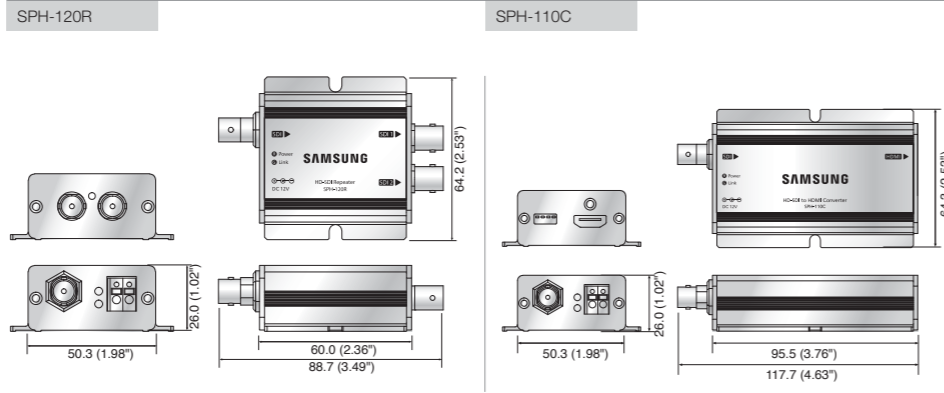
		SPH-120R (Repeater)
<b>VIDEO (BNC)</b>		
Input		1CH (SMPTE 292M)
Output		2CH (SMPTE 292M)
Output	Video Format	720p, 1080p
	Distance	Approx. 200m of RG6, 140m of RG59
	Function	Equalizer, Re-clocker, Driver included
	Compatibility	HDcctv compliance SMPTE-292/296M
<b>OPERATIONAL</b>		
I/O	LED	Power, Link
<b>GENERAL</b>		
Power Consumption		12V DC, 3W
Operating Temperature		+0°C ~ +50°C (+32°F ~ +122°F)
Operating Humidity		0% ~ 80% RH
Dimensions (WxHxD)		64.2 x 88.7 x 26.0mm (2.53" x 3.49" x 1.02")
Weight		100g (0.22lb)



### Specifications

		SPH-110C (Converter)
<b>VIDEO</b>		
Input	HD-SDI (BNC)	1CH (SMPTE 292M)
	Resolution	1080p (1920 x 1080) / 720p (1280 x 720)
Output	HDMI	1CH (SMPTE 292M)
	Resolution	1080p (50Hz/60Hz), 720p (50Hz/60Hz)
<b>OPERATIONAL</b>		
Mode Switch		4 Switch for function
Indicator		Power LED (RED), Link LED (Green)
<b>GENERAL</b>		
Power Consumption		12V DC, 4W
Operating Temperature		+0°C ~ +50°C (+32°F ~ +122°F)
Operating Humidity		0% ~ 80% RH
Dimensions (WxHxD)		64.3 x 111.7 x 26.0mm (2.53" x 4.40" x 1.02")
Weight		129g (0.28lb)

### Dimensions Unit : mm (inch)



# Full HD on your analogue security system

With Samsung HD-SDI cameras and recorders



SCB-6000 | HD-SDI Box Camera  
 SCD-6080 | HD-SDI Dome Camera  
 SRD-480D | 4CH HD-SDI DVR



The Eco mark represents Samsung Techwin's will to create environment-friendly products, and indicates that the product satisfies the EU RoHS Directive.

Design and specifications are subject to change without notice.



**SAMSUNG TECHWIN CO., LTD.**  
 701, Sampyeong-dong, Bundang-gu, Seongnam-si, Gyeonggi-do Korea 463-400  
 Tel : +82-70-7147-8741~8749, 8752~8760 Fax : +82-31-8018-3745  
 www.samsungipolis.com www.samsungsecurity.com

**SAMSUNG TECHWIN AMERICA Inc.**  
 1480 Charles Willard St, Carson, CA 90746, UNITED STATES  
 Tel Free : +1-877-213-1222 Fax : +1-310-632-2195  
 www.samsungcctvusa.com

**SAMSUNG TECHWIN EUROPE LTD.**  
 Samsung House, 1000 Hillwood Drive, Hillwood Business Park  
 Chertsey, Surrey, UNITED KINGDOM KT16 0PS  
 Tel : +44-1932-45-5300 Fax : +44-1932-45-5325

**TIANJIN SAMSUNG TECHWIN OPTO-ELECTRONICS CO., LTD.**  
 No.11 Wei 6 Street, Micro-Electronic Industrial Park  
 Jingang Road, Tianjin, P.R. CHINA 300385  
 Tel : +86-22-23887788 Fax : +86-22-23887788

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## Full HD on Analogue System

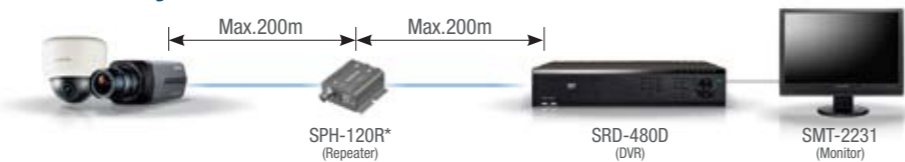
High Definition (HD) and megapixel image capture are hot issues in the video surveillance industry as users continue to demand higher resolutions from their security systems. Until now, higher resolutions have been synonymous with IP network based systems which not only require specialist knowledge in setting up but also major investment into Ethernet cabling, switches, hubs and servers. However, with the introduction of HD-SDI it is now possible to transmit and record Full HD (1080p) images over your existing analogue infrastructure allowing you to take advantage of all the advantages of high resolution without any hassle.

### HD-SDI – Full HD (1080p) over your analogue infrastructure

HD-SDI (High Definition Serial Digital Interface), is the standard used in the broadcast industry to transmit high definition images digitally over an analogue infrastructure. It provides transmission of uncompressed and non-packetized digital video signals which results in zero loss of image data and zero latency when viewing.

Samsung HD-SDI security solutions provide over five times the image quality of conventional analogue systems coupled with a more cost-effective and easier alternative to network based systems.

#### 1 Recording in HD-SDI



\* The SPH-120R can repeat the signals from HD-SDI cameras and enables the extension for the transmission distance.

#### 2 Live Monitoring in HD-SDI



\*\* The SPH-110C accepts the HD-SDI signal from the HD-SDI cameras, and converts the signal for presentation on the HDMI input of the monitor.

## Benefits of Samsung HD CCTV System

### Higher resolution image capture and recording

Samsung 2 megapixel HD-SDI cameras are able to output Full HD 1080p (1920x1080p) resolution images in real time (25ips PAL / 30ips NTSC). This offers over five times the resolution that standard definition analogue cameras are able to achieve. Samsung's HD-SDI Digital Video Recorders (DVRs) provide real-time recording at HD 720p resolution across all channels allowing users to review video at any time at HD 720p resolution

High Quality Image

### No image deterioration or latency

Because HD-SDI video signals are not compressed or packetized before transmission there can be no image artifacts or frame rate interruptions. This means that users can enjoy Full HD 1080p resolution images with zero latency and because HD-SDI transmits a digitized video signal there is no attenuation or deformation of images that can occur with standard resolution analogue systems.

### Utilizing existing analogue infrastructure

Samsung HD-SDI security solutions use an analogue infrastructure making them suitable for users looking to increase the quality of their current security system using their existing analogue cabling or new sites that do not wish to use an IP based network. What's more, Samsung HD-SDI cameras and DVRs are similar to standard definition cameras and DVRs to install and operate do not require any additional specialist knowledge or skills.

Easy Installation & Operation

### No IP issues

Samsung HD-SDI security solutions can resolve issues associated with IP network based video surveillance systems. No IT or IP network knowledge is required and bandwidth requirements are never an issue because each camera is individually attached to the DVR and not operated over a network.



## Who can benefit from HD-SDI?

Samsung HD-SDI solutions are suitable for any application where high resolution image capture is demanded, without the hassle of installation and administering an IP based network. Installations with an existing analogue infrastructure looking to upgrade to a Full HD 1080p system for example can quickly benefit from increased image quality and usability.



### Problem 1

The user is satisfied with their current analogue CCTV system, but wants to benefit from high resolution image capture in key areas such as the entrance to the building and points where cash is handled.

### Problem 2

An existing building has a network infrastructure for its IT system to run effectively, but not enough capacity to run an IP based video surveillance system. To modify and expand the network infrastructure has a large cost attached to it making it impossible to realize.

### Problem 3

The site is experiencing image drop-out during live monitoring and recording due to the unstable network environment.

Higher resolution image capture and recording

### Solution 1

Samsung HD-SDI cameras are easily integrated into existing standard definition CCTV systems. Users are able to utilize standard definition CCTV in overview areas and HD CCTV in key areas where high resolution image capture is required.

No IP issues

### Solution 2

A Samsung HD-SDI security solution does not require network infrastructure to provide Full HD 1080p images and can simply run over an analogue infrastructure, making it possible for the user to benefit from high resolution image capture without investing in their network infrastructure.

No image deterioration or latency

### Solution 3

A Samsung HD-SDI security solution does not compress or packetize video signal to transmit, thus provides images with no deterioration or latency. In addition, users do not have to worry about unstable network environment as video is transmitted straight from the camera to the DVR using analogue infrastructure.

Full HD HD-SDI Camera

# SCB-6000



## Features

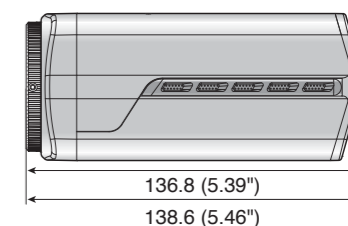
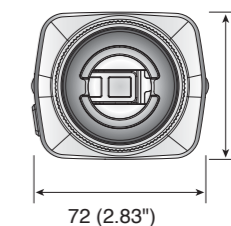
- Full HD (1,920x1,080, 30fps) mega resolution, HD(1280 x 720, 60fps)
- Min. Illumination 1 Lux @F1.2 (Color), 0.1 Lux (B/W)
- True Day & Night (ICR), MD
- SSNRIII(3D+2D), RS-485, dual Power

## Specifications

SCB-6000	
<b>VIDEO</b>	
Imaging Device	1/3" Progressive Scan CMOS
Total Pixels	2,010(H) x 1,108(V), 2.2M Pixels
Effective Pixels	1,944(H) x 1,092(V), 2.1M Pixels
Scanning System	Progressive Scan
Min. Illumination	Color : 1Lux @ F1.2, 0.017 Lux (Sens-up, 60x), B/W : 0.1 Lux @ F1.2, 0.0017 Lux (Sens-up, 60x)
S / N Ratio	50dB (AGC off, Weight on)
Video Output	SMPTTE292M (HD-SDI), Monitoring CVBS
<b>LENS TYPE</b>	
Lens Type	Manual / DC Auto Iris
Mount Type	C/CS
<b>OPERATIONAL</b>	
On Screen Display	English, Korean, French, German, Spanish, Italian, Chinese, Russian, Polish, Swedish, Danish, Portuguese, Japanese, Serbian, Czech, Romanian, Turkish, Taiwanese, Thai
Camera Title	Off / On (Displayed 15 characters)
Day & Night	Auto (ICR), Color & B/W, External
Backlight Compensation	Off / User BLC / HLC
Contrast Enhancement	SSDR (Off / On)
Digital Noise Reduction	SSNRIII (Off / On)
Motion Detection	Motion Detection (Off / On)
Privacy Masking	Off / On (16 Rectangular zones)
Sens-up (Frame Integration)	2x - 60x
Gain Control	Off / Low / Medium / High
White Balance	ATW / Outdoor / Indoor / Manual / AWC (1,700K° ~ 11,000K°)
Electronic Shutter Speed	Esc / A.FLK / Manual (1/30~1/12,000) / Fixed
Digital Zoom	Off / On (1x ~ 16x)
Reverse	Off / H-Rev / V-Rev / HV-Rev
Alarm	(MD) Output 1, External D/N In 1
Communication	RS-485
Protocol	RS-485 : SAMSUNG-T, SAMSUNG-E, Pelco-D, Pelco-P, BOSCH, Honeywell, VICON, PANASONIC, GE, AD
<b>ENVIRONMENTAL</b>	
Operating Temperature / Humidity	0°C ~ +50°C (+32°F ~ +122°F) / Less than 90% RH
<b>ELECTRICAL</b>	
Input Voltage/Current	Dual (24V AC±10% & 12V DC±10%)
Power Consumption	Max. 6W
<b>MECHANICAL</b>	
Color / Material	Body : Dark Gray / Aluminum, Steel
Dimension (WxHxD)	72.0 x 60.0 x 136.8mm (2.83" x 2.36" x 5.39")
Weight	434g (0.96 lb)
<b>TRANSMISSION DISTANCE</b>	
5C2V (75ohm)	Max. 100 ~ 140m
L-6CHD (75ohm)	Max. 200m

\* This transmission distance is theoretically calculated number, and real transmission distance can be affected by installation environment.

## Dimensions Unit : mm (inch)



## Accessories (Optional)

- SPH-120R(Repeater)
- SPH-110C(Converter)

### SCB-6000 HD-SDI Box Camera

- Full HD 1080p image capture over analogue
- Min. Illumination 1 Lux @F1.2 (Color), 0.1 Lux (B/W)
- True Day & Night (ICR), MD
- SSNRIII(3D+2D), RS-485, dual Power
- Compatible accessories: SPH-120R(Repeater), SPH-110C(Converter)

### SCD-6080 HD-SDI Dome Camera

- Full HD 1080p image capture over analogue
- Min. Illumination 1 Lux @F1.2 (Color), 0.1 Lux (B/W)
- 2.8x varifocal lens(3 ~ 8.5mm)
- True Day & Night (ICR), MD
- SSNRIII(3D+2D), RS-485, dual Power
- Compatible accessories: SPH-120R(Repeater), SPH-110C(Converter)

### SRD-480D 4CH HD-SDI DVR

- Real-time recording at 720p HD resolution for each channel
- 1080p Full HD resolution recording support
- De-interlace function for clear edge of moving object
- 4ch audio input and 1ch audio output
- DVD-RW, USB back up support

## HD-SDI Dome Camera

# SCD-6080



### Features

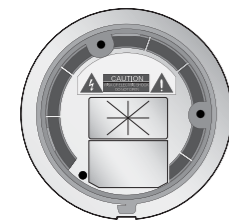
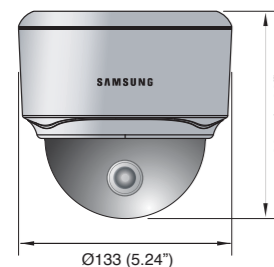
- Full HD (1,920x1,080, 30fps) mega resolution, HD(1280 x 720, 60fps)
- Min. Illumination 1 Lux @F1.2 (Color), 0.1 Lux (B/W)
- 2.8x varifocal lens(3 ~ 8.5mm)
- True Day & Night (ICR), MD
- SSNRIII (3D+2D), RS-485, dual Power

### Specifications

SCD-6080	
<b>VIDEO</b>	
Imaging Device	1/3" Progressive Scan CMOS
Total Pixels	2,010(H) x 1,108(V), 2.2M Pixels
Effective Pixels	1,944(H) x 1,092(V), 2.1M Pixels
Scanning System	Progressive Scan
Min. Illumination	Color : 1Lux @ F1.2, 0.017Lux (Sens-up, 60x), B/W : 0.1 Lux @ F1.2, 0.0017Lux (Sens-up, 60x)
S / N Ratio	50dB (AGC off, Weight on)
Video Output	SMPTTE292M (HD-SDI), Monitoring CVBS
<b>LENS TYPE</b>	
Focal Length (Zoom Ratio)	3 ~ 8.5mm (2.8x)
Max. Aperture Ratio	1 : 1.24(Wide) ~ 2.16(Tele)
Angular Field of View	H : 105°(Wide) ~ 36.9°(Tele) / V : 58°(Wide) ~ 20.8°(Tele)
Min. Object Distance	0.5m
Focus Control	Manual, One-shot
Lens Type	DC Auto Iris, Motorized V/F
Mount Type	Board Type
<b>PAN / TILT</b>	
Pan Range	0° ~ 355°
Tilt Range	0° ~ 90°
Rotate Range	0° ~ 355°
<b>OPERATIONAL</b>	
On Screen Display	English, Korean, French, German, Spanish, Italian, Chinese, Russian, Polish, Swedish, Danish, Portuguese, Japanese, Serbian, Czech, Romanian, Turkish, Taiwanese, Thai
Camera Title	Off / On (Displayed 15 characters)
Day & Night	Auto (ICR), Color & B/W, External
Backlight Compensation	Off / User BLC / HLC
Contrast Enhancement	SSDR (Off / On)
Digital Noise Reduction	SSNRIII (Off / On)
Motion Detection	Motion Detection (Off / On)
Privacy Masking	Off / On (16 Rectangular zones)
Sens-up (Frame Integration)	2x ~ 60x
Gain Control	Off / Low / Medium / High
White Balance	ATW / Outdoor / Indoor / Manual / AWC (1,700K° ~ 11,000K°)
Electronic Shutter Speed	Esc / A.FLK / Manual (1/30~1/12,000) / Fixed
Digital Zoom	Off / On (1x ~ 16x)
Reverse	Off / H-Rev / V-Rev / HV-Rev
Alarm	(MD) Output 1, External D/N In 1
Communication	RS-485
Protocol	RS-485 : SAMSUNG-T, SAMSUNG-E, Pelco-D, Pelco-P, BOSCH, Honeywell, VICON, PANASONIC, GE, AD
<b>ENVIRONMENTAL</b>	
Operating Temperature / Humidity	0°C ~ +50°C (+32°F ~ +122°F) / Less than 90% RH
<b>ELECTRICAL</b>	
Input Voltage/Current	Dual (24V AC±10% & 12V DC±10%)
Power Consumption	Max. 6W
<b>MECHANICAL</b>	
Color / Material	Body : Ivory / Plastic
Dimension (HxØ)	H129.4 x Ø133mm (H5.09" x Ø5.24")
Weight	537g (1.18 lb)
<b>TRANSMISSION DISTANCE</b>	
5C2V (75ohm)	Max. 100~140m
L-6CHD (75ohm)	Max. 200m

\* This transmission distance is theoretically calculated number, and real transmission distance can be affected by installation environment.

### Dimensions Unit : mm (inch)



### Accessories (Optional)

- SPH-120R(Repeater)
- SPH-110C(Converter)

## 4CH HD-SDI Digital Video Recorder

# SRD-480D



### Features

- Up to 120 (NTSC) / 100 (PAL)fps recording rate at 720p HD resolution
- 1080p Full HD resolution recording support
- De-interlace function for clear edge of moving object
- 4ch audio input and 1ch audio output
- DVD-RW, USB back up support
- Max. 4 internal HDD
- Video (H.264) / Audio (ADPCM)

### Specifications

SRD-480D	
<b>DISPLAY</b>	
Video	Inputs: 4CH (HD-SDI SMPTE292M) Resolution: 720p 30fps / 720p 60fps / 1080p 30fps Frame Rate: 120fps
Live	Resolution: 1920 x 1080p Multi Screen Display: 1 / 4 / SEQUENCE
<b>PERFORMANCE</b>	
Operating System	Embedded: Linux Compression: H.264 Record Rate: 1280 x 720p : 120fps / 1920 x 1080p : 120fps
Recording	Mode: Manual & Event or Schedule & Event, Event source (Motion / Alarm / Video Loss / Text), Pre/Post Overwrite Modes: Continuous Pre-alarm: Up to 15sec (1, 2, 3, 4, 5, 10, 15sec) Post-alarm: Up to 60sec (1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60sec) Search Mode: Date/Time, Calendar, Event search, Thumbnail search
Search & Playback	Playback Function: Forward (2x, 4x, 8x, 16x, 32x, 64x) *1-frame only Backward (1/2x, 1x, 2x, 4x, 8x, 16x, 32x, 64x) *1-frame only Step Forward/Backward play at single channel (I+P frame) *All frame
Network	Transmission Speed: Dual codec (CIF120fps / 2CIF120fps / 4CIF120fps) Single codec (720p, 1080p) Bandwidth: Up to (15)Mbps, 15M ~ 256kbps Bandwidth Control: Selectable Stream: 720p, 1080p (Record encoding), 4CIF / 2CIF / CIF(Dual codec) selectable Max. Remote Users: Live monitor 10 (Search 2) Protocol Support: TCP/IP, DHCP, HTTP, PPPoE, DDNS (iPOLIS only), NTP, SMTP, TLS Monitoring: NET-i viewer, SmartViewer, Webviewer
Storage	Internal HDD: Up to 4 SATA HDDs (Basic 1TB, Up to 2TB x 4ea) External HDD Writer: SVS-5R (Only storage support), Total 16TB (internal + external) DVD Writer (Back up): Yes (DVD-R, CD-R support) USB (Back up): 2 USB ports (Max. 32GB) File Format (Back up): AVI, EXE (Include player), VFS4 (CD/DVD back up)
Security	Password Protection: 1 Admin, 10 User, User can be assigned authority for function Data Authentication: Watermark
<b>INTERFACE</b>	
Monitors	VGA: 1920 x 1080p resolution HDMI: 1920 x 1080p resolution
Audio	Inputs / Output: 4CH line in / 1CH line out Compression: ADPCM Sampling Rate: 16KHz
Alarm	Inputs / Output: Terminal 4 inputs (NO/NC) / Terminal 4 relay outputs (NO/NC) Remote Notification: Notification via e-mail Ethernet: 10/100Mbps ethernet
Connections	Serial Interface: RS-485 for PTZ, Samsung system keyboard USB: USB 2.0, 2 ports e-SATA: 1 External SATA port Application Support: Mouse, Remote controller, Samsung system keyboard (SPC-6000) Protocol Support: Samsung-T/E, Pelco-D/P
<b>GENERAL</b>	
Electrical	Input Voltage / Current: 100 ~ 240V AC ±10%, 50/60Hz, Autoranging Power Consumption: Max. 85W (With 1x HDD)
Environmental	Operating Temperature / Humidity: +0°C ~ +40°C (+32°F ~ +104°F) / 20% ~ 85% RH Dimensions (WxHxD): 445.0 x 88.0 x 412.0mm (17.52" x 3.46" x 16.22")
Mechanical	Weight (With hard disks): Approx. 9Kg (19.84 lb) Rack Mount Kit: 2ea
Language	Korean, Japanese, Chinese, English, French, German, Spanish, Italian, Russian, Polish, Czech, Turkish, Netherlands, Portuguese, Swedish, Danish, Thai, Rumanian, Serbian, Croatian, Hungarian, Greek (22 Language)

### Dimensions Unit : mm (inch)

