

Super Vision at Anytime, Anywhere



SAMSUNG

if One Camera Can Truly Perform
in 'All' Light Conditions...



Superior
Image Resolution



Revolutionary
Low-Light Sensitivity



Outstanding
Wide Dynamic Range

SUPER VISION **SVIII**



SHC-730

Extra High Sensitivity & WDR
Premier Color Camera

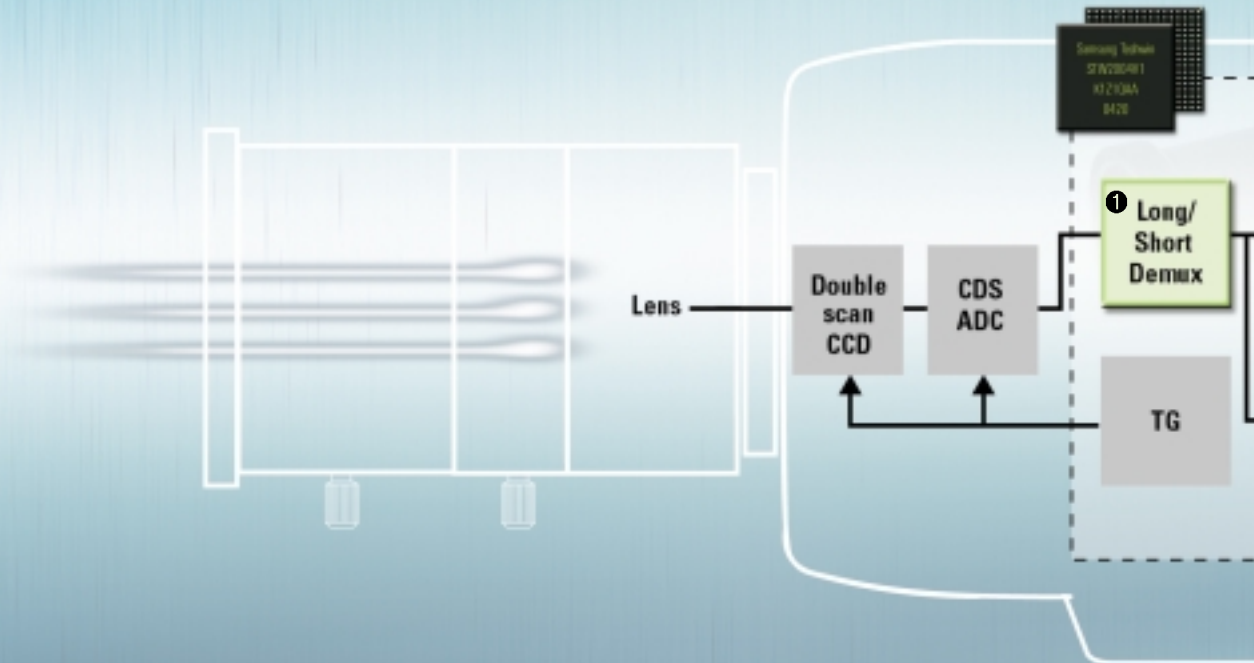
In **CCTV** systems, light level is the most critical factor affecting camera performance and picture quality. Appropriate light sensitivity control is, therefore, the most important yet hardest-to-achieve technology.

Samsung Techwin has made a real breakthrough in this light-sensitive technology and developed a camera, which produces much clearer and better-defined images under 'any' lighting conditions. The key to this breakthrough technology is the **SVIII**, a revolutionarily new version of the **SV (Super Vision)** Series DSP systems. The new **SVIII** technology achieves a trinity which consists of an strikingly improved low-light sensitivity of 0.05 Lux @ F1.2 in normal color mode, a 126 times more extended dynamic range, and more sophisticated images with a high resolution of 520TV lines.

The new **SHC-730** is a 1/3" CCD professional-quality high sensitivity & WDR color camera that incorporates **SVIII** DSP system. It is truly an optimized surveillance solution covering all the variable light conditions ranging from the extreme dark locations to harsh backlight conditions.



SVIII : The Ultimate Solution for All-Time Crisp Pictures

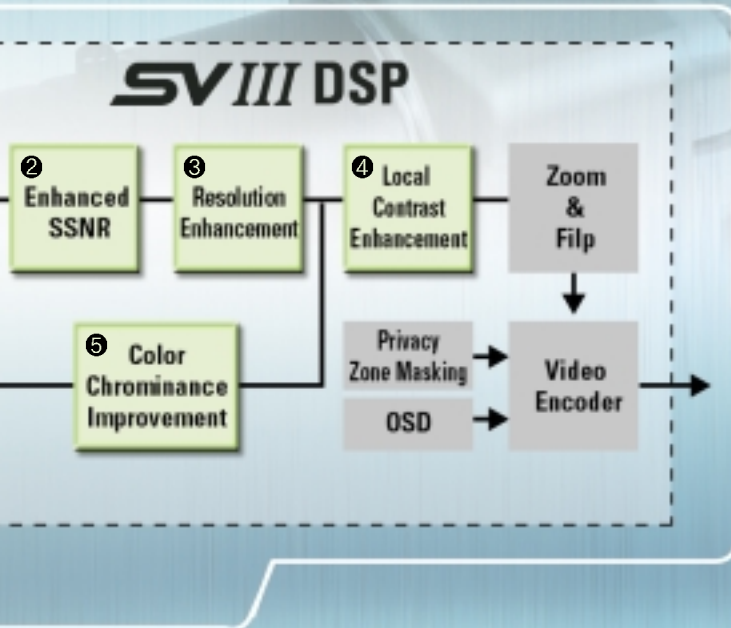


❶ Wider Dynamic Range

The **SVIII** interfaces a double-speed scan CCD, allowing wider dynamic range capturing from the sensor. Using two inputs, 12 bits each, the **SVIII** can actually handle over 80db of dynamic range. This vast information is handled within the DSP using bus width of up to 23 bits for its internal calculations, to ensure no losing of data. The dynamic range is then compressed into 10 bits using non-linear, adaptive dynamic range compression algorithm.

❷ Enhanced Sensitivity

The **SVIII** DSP implements powerful sensitivity technology that features a motion adaptive, 3D filtering of the video signal to optimize the signal-to-noise, allowing much better visibility in low-light conditions, at full frame-rate. It also has day and night (ICR) capability, and gives colors even in significantly low light conditions when other cameras already show B/W images.



3 Enhanced Resolution

The **SVIII** achieves enhanced resolution of 520TV lines with color sensor (standard cameras feature 470-480TV lines). The new DSP implements adaptive de-mosaic color reproduction algorithm, and extracts more fine details from each pixel without the typical aliasing effects. This feature allows the **SVIII** cameras to reach resolution of more than 520TV lines with color sensor, out of the theoretical 570TV lines that is possible when using monochrome sensor.

4 Advanced Local Contrast

The **SVIII** DSP features advanced local contrast enhancement techniques, to achieve good contrast even in difficult lighting conditions. Differing from other contrast-enhancement techniques, such as histogram stretching, or histogram equalization, this is done on a local basis, and not on the whole image, so it works well even in conditions where in-trainage contrast is good, meaning that even if there are dark and bright zones in the image, and it has good global contrast, yet the local fine-details can enjoy from local-contrast handling.

5 Superior Color Handling

The **SVIII** unique color metering enables the extended white-balancing range allowing reproduction of accurate colors with wide range of lighting sources. This also means that white balancing can be detected and color mode is supported at low-light situation.

0.05 Low-Light...

-
-
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Unmatched **Low-Light** Sensitivity of **0.05Lux**



The new SHC-730 premier camera achieves a minimum subject illumination of an incredibly low 0.05Lux @ F1.2 in color and an amazing 0.0004Lux @ F1.2 in Sens Up mode, which ensures that the camera can recognize subjects even in the extreme dark.

The revolutionary SVIII DSP technology uses Intelligent Gain Control and Enhanced SSNR in order to provide the highest level of performance for ultra-low-light imaging. In unfavorable light conditions, it analyzes the input data and applies unique SVIII gain control process to each signal. As a result, it substantially minimizes picture noise as well as provides an extra high sensitivity and unmatched picture quality.

Moreover, reduced noise can help to keep image file sizes down when recorded digitally.

This is because image noise is perceived by the compression engine as being a changed or a varied area of tone.

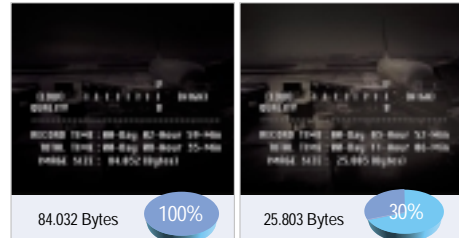
Removing Picture Noise



Standard Camera

SVIII

Disk Saving Effect



84,032 Bytes

100%

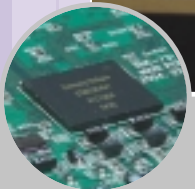
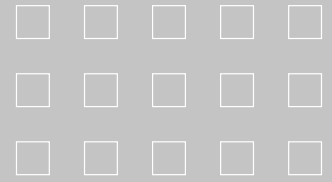
25,803 Bytes

30%

Standard Camera

SVIII

126 WDR...

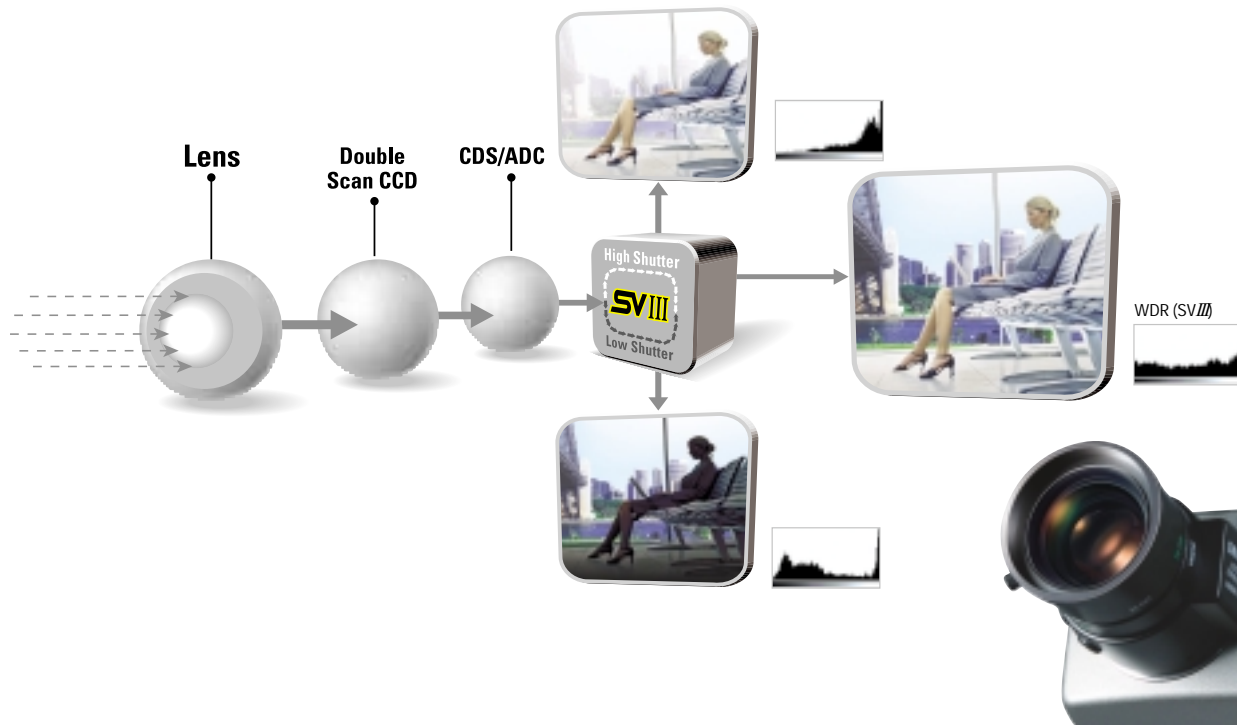


126X Outstanding Wide Dynamic Range



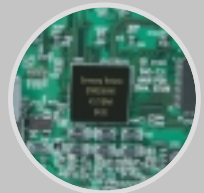
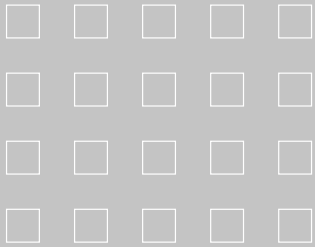
One of the common limitations of the cameras designed for low-light imaging is their inability to address the challenges of harsh backlight imaging situations owing to a relatively narrow dynamic range. The *SVIII* DSP technology employs multiple histogram-based image analysis in order to ensure the highest level of performance not only for ultra-low-light imaging, but for wide dynamic range applications. It carries out an precise analysis on different extreme light levels to get detailed information from the dark part without any saturation from the bright part. This realizes a 126 times extended dynamic range which is equivalent to an outstanding dynamic range of 52dB.

There is no limitation of zone area with the the perfect *SVIII* WDR solution, and the color image is crisper than any other WDR functions.



520

Resolution...



Super Vision **SVIII**

Superior Image Resolution of **520TV** Lines



The SHC-730 boasts an unusually fine horizontal resolution of 520TV lines to deliver sharp surveillance images. Its unique SVIII DSP chip offers all-time crisper pictures than normal resolution color cameras, which is perfect for low-light circumstances because it enables the camera to 'see' clearly in the dark and even peer through clouds or fog. In addition, the unit provides increased signal strength without additional noise, which ensures a high signal-to-noise ratio of 50dB.



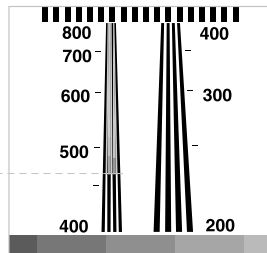
Conventional high-resolution camera



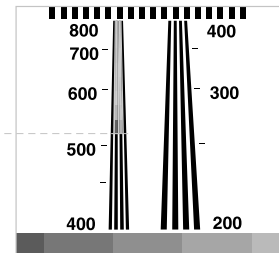
SVIII camera

EIAJ TEST CHART >>

470TV lines
(Conventional
high-resolution camera)



520TV lines
(SHC-730)



Multi-Functionality



It's a **Professional**



Day & Night Capability with ICR

Lighting conditions are no longer an issue for the new SHC-730. In low light, the camera converts the image from color to monochrome automatically with the function of ICR. The IR cut filter is on when the camera is operating as a color camera for precise color reproduction. And the filter is off for increasing light sensitivity in monochrome mode.



Day



Night

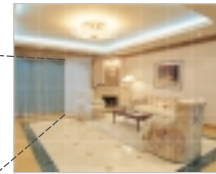


Motion Detection

The unit transmits alert signal when it detects a motion of an object on the screen. If the camera is connected with an external alarm, user can pay attention to the screen when it sounds alarm. This feature is useful when user has to monitor several screens simultaneously. The area zone can be assigned by OSD setting with the sensitivity control.



Motion Detected



Powerful Automatic White Balance

Samsung's automatic white balance technology makes a true color image without tending to be red or blue color. The unit provides wide powerful automatic white balance from 1,800K to 10,500K of color temperature.



Privacy Image Masking with Free Position

For the protection of privacy, users can set a masking area up to four areas not to be under surveillance. It is free to set up a area position and size.



Digital Zoom (Max. 8 Times)



2X digital zoom



Convenient OSD functions



OSD functions

SETUP	
→ CAMERA ID	OFF
BACKLIGHT	WDR ↓
WHITE BAL.	ATW
MOTION DET.	OFF
LENS	DC ↓
SHUTTER	ESC
AGC	MIDDLE
SENS UP	AUTO ↓
SSNR	MIDDLE
SPECIAL	
EXIT	

A P P L I C A T I O N S

Up until now in today's video security systems, quality performance of the high sensitivity and WDR functions has rarely been achieved in one camera. However, with the innovative **SVIII** technology, the unmatched low light sensitivity and exceptionally extended dynamic range are successfully integrated into one solution to make the SHC-730 the right choice for perfect 24-hour always-on surveillance.



The SHC-730 is a truly ultra-flexible and extremely cost-effective solution for a massive range of applications from residential and commercial locations to industrial and governmental areas. It is a new concept in security cameras that will set a new standard for the industry.

System Examples

FEATURES

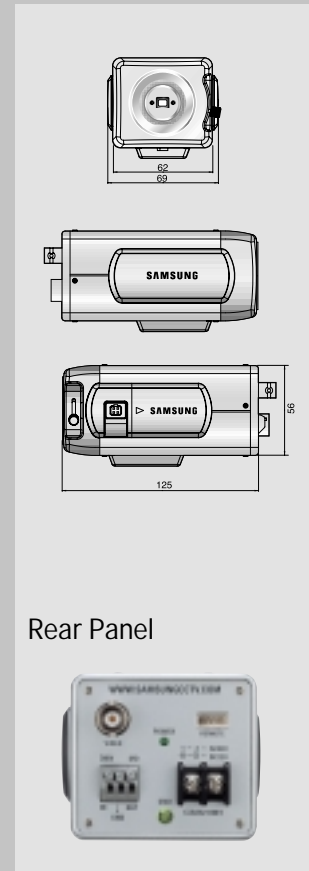
Super Vision **SVIII**

- 1/3" 410,000 Pixels Double Scan Color CCD (PAL : 470,000 Pixels)
- Min. Illumination
 - Color : 0.05 Lux @ F1.2 - normal color mode
 - 0.0004 Lux @ F1.2 - Sens-up mode
 - Monochrome : 0.01 Lux @ F1.2
- Removing Noise with Enhanced SSNR
- WDR : Max. 52dB (EIAJ standard)
- High Resolution. of 520TV Lines (Color), 570TV Lines (Monochrome)
- Day & Night with ICR (Infrared Cut filter Removal)
- Built-in Motion Detector
- Privacy Image Masking with Free Position
- OSD (On Screen Display)
- RS-232C Remote Control
- Signal to Noise Ratio of 50dB
- Dual Voltage : 24VAC / 12VDC

Specifications

Mode	SHC-730N	SHC-730P
POWER	24VAC / 12VDC (±10%), 4.5W	
C Total Pixels	811(H) x 508(V)	795(H) x 596(V)
C Effective Pixels	768(H) x 494(V)	752(H) x 582(V)
D Size	1/3 inch, Vertical double density interline CCD	
S Scanning System	2 : 1 Interlace	
y Synchronization	Internal / Line Lock	
n Frequency	Horizontal : 15.734 KHz Vertical : 59.94 Hz	Horizontal : 15.625 KHz Vertical : 50.00 Hz
c. Resolution	Color : 520TV Lines (Min.) / B/W : 570TV Lines (Min.)	
Video Output	1.0Vp-p / 75 Ω (Video 0.714Vp-p Sync 0.286Vp-p)	1.0Vp-p / 75 Ω (Video 0.7Vp-p Sync 0.3Vp-p)
S / N (Y signal)	50 dB (AGC Off, Weight On)	
E Min. Illumination	Color : 0.05 Lux @ F1.2 - normal color mode (0.13 Lux @ F1.2- EIAJ standard) 0.0004 Lux @ F1.2 - Sens-up mode (0.001Lux @ F1.2- EIAJ standard) Monochrome : 0.01 Lux @ F1.2	
E WDR	52 dB	
C Day & Night	OFF / AUTO (Filter Auto Change) (External Day/Night mode control capability via terminal at the back panel)	
R Gain Control	Low, Middle, High, OFF Selectable	
I White Balance	ATW / AWC / Manual (1800°K ~ 10,500°K)	
C Electronic shutter speed	AUTO / Manual (1/60 ~ 1/120,000sec)	AUTO / Manual (1/50 ~ 1/120,000sec)
A Sens-Up	ON / OFF (Selectable limit - X128)	
L O.S.D	Built-in	
Motion Detection	MD1 / MD2 / OFF (Built-in Alarm output connector)	
RS-232C	Built-in	
Enhanced SSNR	Low, Middle, High	
D. ZOOM	Built-in (Pan Tilt)	
Privacy Function	ON / OFF (4 Programmable Zone)	
IRIS Control	DC / Video	
Lens Mount	CS Mount (Easy Focus type) (C-Mount is mountable by using adaptor)	
Dimension	69(W) x 56(H) x 125(D)mm	
Operating Temperature	-10°C ~ +50°C	
Operating Humidity	~ 90% RH	
Weight	480g	

Dimensions



Rear Panel



Extra High Sensitivity & WDR
Premier Color Camera

SHC-730



SV III

www.samsungcctv.com



Design and specifications are subject to change without notice.

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