4 Megapixels Full HD Network
10x AF Zoom Camera

1080p FULL HD NETWORK CAMERA

VCC-HD4000P
1080p Full HD, 25 IPS with High-Quality Images

**Dual Codec for Full HD with H.264 / 2288x1712 with JPEG**

The VCC-HD4000P achieves 1080p (Full HD) 25 IPS with the H.264 high-performance compression codec optimized for network transmission. It also has a fine JPEG format resolution of 2288 x 1712 pixels. Monitoring can be conducted simultaneously in H.264 and JPEG formats by minimizing network traffic.

- **H.264 ActiveX Plug-in required (bundled).**

**4 Megapixels resolution**

Compared to conventional VGA cameras having a 640 x 480 pixel resolution, the 4 megapixels (2288 x 1712) CMOS newly employed in the SANYO VCC-HD4000P achieves a resolution approximately 9 times that of a conventional camera. This makes it possible to cover 9 times the monitoring area, the image quality being the same. In addition, image capture of detailed parts are clearer when these images are enlarged, provided shooting angles are the same.

- No focus adjustment required for built-in 10x AF zoom lens
  - The VCC-HD4000P also incorporates a high-performance, high-resolution optical 10x AF lens that is Full HD compatible. Intensive focusing becomes unnecessary as the camera has been pre-optimized for best performance under actual use conditions, allowing highly detailed, sharp target capture. In addition, a separate digital 16x zoom-in function, along with the optical 10x zoom, can zoom up to 160x (max.).

**Progressive scan CMOS sensor for image clarity**

Most sensors utilize the interlace system which tends to make moving images jagged or blurred due to processing time differences. The VCC-HD4000P is equipped with a progressive scan system that ensures clear, smooth images are output.

**Progressive image Interlace image**

**HD image recording on SD memory card or external 2.5” HDD**

The VCC-HD4000P is equipped with an SD card slot for saving HD images to an SD memory card. If an external HDD is connected, important data can be stored over a longer period and in more quantity without having to use a PC. The camera is designed to ensure the integrity of stored data.

- SD Memory Card (sold separately)
- SD Card Slot

**Because of the higher quality of recorded images, areas that conventional cameras with a smaller pixel count cannot cover or confirm can be identified (if stored as local data).**

- SD memory cards and 2.5” hard disk drives are separately sold. HDD requires a dedicated case (separately sold).
- The HDD can also be installed above the main unit.
**Human face detection**

The VCC-HD4000P evaluates portions of human faces in order to automatically detect human faces. The AF function activates when human faces are detected. In addition, for images backlit by the sun, appropriate Backlight Compensation is performed. This unit is capable of detecting up to 32 human faces (max.).

**Clipping Function**

When image data is output on a conventional SD output (composite) terminal, up to 4 VGA-sized sections (max.) of the displayed image can be selected, clipped and continuously monitored in sequence.

**Privacy Masking**

Addressing privacy issues, 5 masks (max.) are available for designated areas to prevent unauthorized display of anything that involves privacy on the display screen. Masking patterns are easily set with drag and drop.

**(True Day/Night**

A color camera, which captures objects in vivid colors in daylight, becomes a high-sensitivity B/W camera during the night and provides tiny details even in dark corners. A day/night camera is a two-in-one solution.

**Alteration Detection**

VCC-HD4000P verifies by itself whether or not an electronic alteration was made to original images.

**Cable cover**

System expandability has been designed into the versatile VCC-HD4000P which incorporates connections for HDTV, LAN, HDD, among others. The rear panel has a cable-cover for neat storage of external connection cables.

**Recording time collation table based on the memory capacity and recording conditions**

<table>
<thead>
<tr>
<th>Codec</th>
<th>Resolution</th>
<th>Picture Quality</th>
<th>Recording Rate (max.)</th>
<th>Bit Rate (approx.)</th>
<th>Capacity for 1 hr rec</th>
</tr>
</thead>
<tbody>
<tr>
<td>H.264</td>
<td>1920 x 1080</td>
<td>SuperFine</td>
<td>25 ips</td>
<td>8.0Mbps</td>
<td>5.6GB</td>
</tr>
<tr>
<td></td>
<td>1280 x 720</td>
<td>SuperFine</td>
<td>25 ips</td>
<td>6.6Mbps</td>
<td>4.7GB</td>
</tr>
<tr>
<td></td>
<td>640 x 360</td>
<td>SuperFine</td>
<td>25 ips</td>
<td>1.8Mbps</td>
<td>1.5GB</td>
</tr>
<tr>
<td></td>
<td>1920 x 1080</td>
<td>Basic</td>
<td>25 ips</td>
<td>4.0Mbps</td>
<td>2.9GB</td>
</tr>
<tr>
<td></td>
<td>1280 x 720</td>
<td>Basic</td>
<td>25 ips</td>
<td>2.5Mbps</td>
<td>2.0GB</td>
</tr>
<tr>
<td></td>
<td>640 x 360</td>
<td>Basic</td>
<td>25 ips</td>
<td>0.55Mbps</td>
<td>0.64GB</td>
</tr>
<tr>
<td>JPEG</td>
<td>2288 x 1712</td>
<td>SuperFine</td>
<td>25 ips</td>
<td>13.6Mbps</td>
<td>5.0GB</td>
</tr>
<tr>
<td></td>
<td>1920 x 1080</td>
<td>SuperFine</td>
<td>5 ips</td>
<td>12.4Mbps</td>
<td>5.7GB</td>
</tr>
<tr>
<td></td>
<td>2288 x 1712</td>
<td>SuperFine</td>
<td>25 ips</td>
<td>11.2Mbps</td>
<td>5.2GB</td>
</tr>
<tr>
<td></td>
<td>1920 x 1080</td>
<td>Basic</td>
<td>3 ips</td>
<td>4.8Mbps</td>
<td>2.1GB</td>
</tr>
<tr>
<td></td>
<td>640 x 360</td>
<td>Basic</td>
<td>25 ips</td>
<td>5.4Mbps</td>
<td>2.7GB</td>
</tr>
</tbody>
</table>

*Bit rate and 1 hr. rec. data are approximate.*

**Smearless**

The detection function offers two different advantages:

Conventional CCD units are known to generate vertical noise (smears) associated with bright spots. The new sensor diminishes these smears and offers a clear and bright picture.

**Equipped with HDMI terminal**

An HD monitor connects to the VCC-HD4000P with a single HDMI cable, allowing non-compressed digital images to be transferred without any loss of image quality.
Transmission using 2 types of codecs (H.264 and JPEG) is possible.

For video compression, H.264, optimized for transmission of moving images over a network with low bit transfer rates, is used to enable real-time high image quality monitoring, and for still images JPEG is used to offer high image quality in a common image format. Monitoring can be performed according to the user’s application, so that any important scene is not missed.

Network recording software VA-SW3050S

The VCC-HD4000P is bundled with VA-SW3050LITE viewer software allowing live video streams sent from cameras to be monitored on a PC. The network recording software VA-SW3050S / VA-SW3050C (sold separately) is an application program that extends the network operation of the camera. By installing this software, it is possible to monitor images from multiple cameras on a split screen and access and operate up to 128 cameras over a network. VA-SW3050S further offers the convenience of recording live images and alarm/timer functions. It is an exclusive software package for the VCC-HD4000P.

Feature Comparison

<table>
<thead>
<tr>
<th>Feature</th>
<th>VA-SW3050C (VA-SW3050 Series)</th>
<th>Video Management Software (VA-SW50)</th>
</tr>
</thead>
<tbody>
<tr>
<td>System Requirements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PC</td>
<td>IBM PC/AT and compatibles</td>
<td></td>
</tr>
<tr>
<td>OS</td>
<td>Windows® XP Professional SP2, Windows Vista, Windows® Server 2003 SP2 (SW-3050 only)</td>
<td></td>
</tr>
<tr>
<td>CPU</td>
<td>Intel Celeron D 346, 1,600GHz or higher</td>
<td>Intel Pentium D 3,000MHz or higher</td>
</tr>
<tr>
<td>Memory</td>
<td>1GB (Windows® XP) 2GB (Windows® Vista)</td>
<td>1GB RAM</td>
</tr>
<tr>
<td>Network Interface</td>
<td>100Base-TX / 1000Base-TX</td>
<td>100Base-TX</td>
</tr>
<tr>
<td>Display Card</td>
<td>1280 x 1024 pixels or higher</td>
<td>1280 x 800 pixels or higher</td>
</tr>
<tr>
<td>Graphic Chip</td>
<td>HD: ATI Radeon HD3000 series or higher</td>
<td>quadro FX9800 series or higher</td>
</tr>
<tr>
<td>Audio</td>
<td>-</td>
<td>Soundcard with 100% Direct-X compatibility and speakers*2</td>
</tr>
</tbody>
</table>
| SANYO Software Development Kits (SDK) SANYO now offers two types of SDKs to help the user develop applications suitable for particular needs or for more compatibility with network devices and software from different vendors. * For further information of the SDK, please contact the nearest SANYO representative.

Note: Depending on your computer’s performance or network environment, the system may enter the busy state if the PC is connected to many H.264 video channels. If a warning message appears in the dialog box, decrease the number of the connected H.264 video channels.

SANYO Video Management Software (VMS) VA-SW50 (Advanced) / VA-SW60 (Enterprise)

“SANYO Video Management Software” is a software management platform for SANYO’s VCC-HD4000P and IP cameras, most of the industry’s standard IP and megapixel cameras and encoders, several of the major video capture card codecs, and SANYO’s embedded DVRs. Video Management Software is an NVR, PC DVR and embedded DVR control platform with total integration all under one software application.

Live images from a single camera can be viewed on a PC using Internet Explorer* (ver. 6.0 or higher). To view live images from multiple cameras, install the included VA-SW3050LITE viewer software. * ActiveX installation is required.
Six reasons for recommending the VCC-HD4000P

(1) Since the number of pixels is approximately 9 times that of a conventional camera (VGA), it will cover 9 times the monitoring area, the image quality being the same.
(2) Zooming the display during playback offers higher quality with clearer print output.
(3) Costs less. The number of cameras used can be fewer because a high pixel count camera can cover a more expanded area. In addition, costs for camera main unit, cables, housing and installation can also be reduced.
(4) Also compatible with PoE, which does not require power-supply installations.
(5) Built-in zoom lens incorporates AF so that additional lens purchases are not required while installation and set-up are simple.
(6) Also equipped with an optical zoom lens.

Application: BANKS

Applications/Advantages:
- Monitoring and assured recording of fraudulent acts on premises
- 24/7 operations for crime prevention systems coordinated by monitoring centers
- Contributes to improved service and enhanced levels of customer confidence
- Applicable to staff training and customer service improvement
- Flexible expandability to cope with future change and expansion

Application: SMALL STORES

Applications/Advantages:
- Low-cost setup of a high-performance, easy-to-operate surveillance system
- Readiness against trouble and incident, deterrent to illicit behavior
- Reduced inventory loss due to product damage and theft
- Verification of customer traffic flows for effective product displays
- Improvement of in-store staff conduct and attitude

Examples of System Introduced

Bank  Parking  Traffic control center  Casino  Factory
Specifications

Model No. VCC-HD4000P

Lens

Image sensor 1/2.8” CMOS sensor
Effective picture elements 2320 (H) x 1728 (V) approx. 3.92 Megapixels
Recording picture elements 2288 (H) x 1712 (V) approx. 3.92 Megapixels
Focal length: f = 6.3 – 63.0mm (Optical 10x)
F: number: F1.8 – 2.5
Digital zoom: 16x

CAMERA

Image size H.264
16:9 HD: 1920 x 1080p 25fps
HD: 1280 x 720p 25fps, 960 x 540p 25fps, 640 x 360p 25fps, 320 x 180p 25fps
4:3 HD: 1280 x 720, 720 x 576p 25fps, 360 x 288p 25fps
JPEG
16:9: 2320 x 1752, 2M 1600 x 1200, 1280 x 960, 1024 x 768, 800 x 600,
640 x 480, 320 x 240

Synchronizing system
Internal synchronization

Minimum illumination
2 lx (F1.8, color, gain: High)
0.1 lx (F1.8, b/w, gain: High)

Video S/N ratio
50dB (AGC OFF)

Day/Night
Auto/Color/Black and White

Auto focus
AUTO/MANUAL/ONE PUSH: Selectable focus area

White balance
Auto (AWB), CW (7300K), Outdoor (7500K), Fluorescent

Backlight compensation
Multi spot metering, Center zone metering, Face OFF: Mask settings possible

Electronic shutter
1/26, 1/50, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000
LONG shutter: x1, x2, x4, x8, x16, x32

Iris control
AUTO/MANUAL: Selectable electronic iris in manual mode

AGC
Normal (Middle), High, Off

Gamma
0.45 – 1.0: other settings available

Aperture compensation
ON/OFF

Electronic sensitive boost
AUTO/OFF: Max. 32x

Privacy masking
ON/OFF: Mask settings possible

Motion detector
ON/OFF: Selectable area detection, Selectable sensitivity level, Human face detection,
Motion alarm zoom function: Selectable magnified ratio and duration time

Menu language
English/Spanish/German/French/Japanese

Camera title
16 characters

Recording and Playback

Recording quality
Selectable

Recording rate
Selectable

Recording mode
Alarm recording (Pre/Post setting, Selectable recording rate)
Suspension recording (Selecting recording rate), Timer recording

Input/Output

SD card slot
1 ISHHC supported

USB port
Supported HDD

Video output
HD output HDMI port
SD output composite (BNC terminal, PAL)

Network
RJ-45 port (10BASE-T/100BASE-TX)

Alarm input
2 (NO/NC setting. This output is also used for daylight control of color, B/W and auto mode)

Alarm output
1 selectable NO/NC, open collector

External lens control
Zoom, Focus, Common (Voltage control: ± 12V)

Operation button
SET button and Cursor buttons (These are used for MENU and Zoom/Focus)

Network

Image compression
H.264/JPEG

Picture quality
Selectable

Bandwidth
No limitation and selectable bandwidth limitation

Interface
10BASE-T/100BASE-TX, P2E (IEEE802.3af) compatible

Protocols
TCP, UDP, HTTP, HTTPS, SMTP, NTP, DHCP, FTP, UPnP, DDNS

Simultaneous access
Max. 16

Security
Basic authentication (ID/password)
SSL supported (JPEG only)

Others

Environmental conditions
-10°C to 55°C / Less than 90% RH

Power supply
24V AC, ± 10%, 50 Hz or 12 V to 15 V DC

Power consumption
12.3 W

Dimensions
95 (W) x 67 (H) x 159 (D) mm

Weight
710g (25.0 oz.)

Notes:
- Comparative images are representations only.
- Screen images are simulated.
- Because products and software described in this brochure are subject to continuous improvement; SANYO reserves the right to modify product specifications, functions and design without notice.
- Screen images are simulated.
- If a 2.5” HDD is used, a dedicated case (sold separately) is required.
- Please consult the instruction manual to ensure safe and proper operation of the product.
- Frame rates are variable dependent upon network line conditions and PC performance.
- Please use the HDD by a combination with VAD-HDC4000.
- VAD-HDC4000 has protection of special circuit for the data.

Dimensions

Rear panel

Slide panel

Optional Accessories (sold separately)

Network Recorder
VA-SW3050S for server PC
VA-SW3050C for client PCs

Hard Disk Case
VA-HDC4000

Wipe
Conversion Lens
VCP-L07W

Video Management Software (VMS)
VA-SW50 (Advanced)
VA-SW60 (Enterprise)

SD Memory Card
2.5” HDD (Hard Disk Drive)

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- Please visit “sanyosecurity.com” for further details.
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Caution: Please consult the instruction manual to ensure safe and proper operation of the product.

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