

Specifications

Camera type	36x, Day/Night Camera	36x, Color Camera	30x, Day/Night Camera	30x, Color Camera
Model No.	VCC 98 P E	VCC-97 P E	VCC-96 P E	VCC-95 P E
Scanning system	PAL standard 625 lines, 50 fields/sec.			
Image sensor	1/4" (approx. 3.6 x 2.7 mm) interline transfer method CCD			
Picture elements	Total: 795(H) x 596(V), Effective: 752(H) x 582(V)			
Horizontal resolution	540 TV lines			
Minimum illumination (approx.)	50 IRE: 1.0 lx (at F1.6, GAIN: HIGH, color mode) 0.05 lx, (at F1.6, B/W mode) 20 IRE: 0.4 lx (at F1.6, GAIN: HIGH, color mode) 0.02 lx, (at F1.6, B/W mode)	1.0 lx (at F1.6, GAIN: HIGH, color mode) 0.4 lx (at F1.6 GAIN: HIGH, color mode)	0.8 lx (at F1.4, GAIN: HIGH, color mode) 0.04 lx, (at F1.6, B/W mode) 0.32 lx (at F1.4, GAIN: HIGH, color mode) 0.016 lx, (at F1.6, B/W mode)	0.8 lx (at F1.4, GAIN: HIGH, color mode) 0.32 lx (at F1.4, GAIN: HIGH, color mode)
Electronic sensitivity boost	Auto (interlocked with auto iris), up to 32x / OFF			
Video S/N ratio	More than 50 dB (AGC OFF)			
Backlight compensation	ON / OFF, slide SW, ON = Multi-spot photometry (48-section) / 5-section photometry / Multi-spot masking (48-section)			
White balance	ATW / AWC / Manual / Outdoor / Indoor / Fluorescent			
Gain control	LOW / NORMAL / MID / HIGH / OFF			
Electronic shutter	High-speed mode: 8 steps: 1/50, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/10000 Low-speed mode: 5 steps: 2x, 4x, 8x, 16x, 32x (1/25, 1/12, 1/6, 1/3, 1/1.5)			
Zoom lens	36x optical zoom, f = 3.4 to 122.4 mm (F1.6 to 4.5) ON / OFF, up to 16x electronic zoom (Max. 576x combined with optical zoom)		30x optical zoom, f = 3.5 to 105 mm (F1.4 to 3.7) ON / OFF, up to 16x electronic zoom (Max. 480x combined with optical zoom)	
Auto focus	Auto / One-push / Manual			
Iris control	Auto / Manual			
Backlight compensation	Centerweighted average metering/multi-spot evaluative metering			
Day/night operation	Auto / Color / B/W settings		Auto / Color / B/W settings	
Electronic sensitivity boosting	Auto / OFF, works with auto iris, settings up to 32x setting possible			
Aperture	H/V setting possible			
Privacy masking	ON / OFF, max. of 24 masked locations (Wide view screen; 1 screen max. 4 masks) All-around privacy masking			
Alarm input/output	External inputs: 8, External outputs: 2, NO (Normal Open)/NC (Normal Closed) switch, Motion detection with external alarm AND/OR output options			
Preset positions	256		128	
Movement range	Panning: 360° endless Tilting: -5 to 185° (digital auto flip ON)			
Movement speed	Panning: Preset: 435°/sec., Manual: 0.1 to 120°/sec. Tilting: Preset: 400°/sec., Manual: 0.1 to 120°/sec.			
Motion detection	ON (PRESET, ZONE) / OFF: Motion zoom function			
Synchronizing system	Internal sync. / Line lock (LINE PHASE)			
Communication	RS-485 / Coaxial control			
Protocols	SANYO (SSP/H-SSP), Pelco-C/D/P, Kalatel, AD, BBV, Ultrak, Bosch			
Environmental conditions	Temperature: -10 to 50°C (+14 to 122°F), -30 to 50°C (-22 to 122°F) when the outdoor housing, VA-80EX is used Humidity: 35 to 90% RH			
Power requirement	24 V AC, 50Hz or 230 V AC, 50Hz			
Power consumption (approx.)	Camera unit + Power supply base 21 W: VCC-MC800P E + VA-84SA 22 W: VCC-MC800P E + VA-80SA	21 W: VCC-MC700P E + VA-84SA 22 W: VCC-MC700P E + VA-80SA	21 W: VCC-MC600P E + VA-84SA 22 W: VCC-MC600P E + VA-80SA	21 W: VCC-MC500P E + VA-84SA 22 W: VCC-MC500P E + VA-80SA
Outdoor housing	35W: VA-80EX			
Weight (approx.)	Outdoor types: 5.1 kg = VCC-9800EXCP E/9800EXSP E VCC-9830EXCP E/9830EXSP E	5.1 kg = VCC-9700EXCP E/9700EXSP E VCC-9730EXCP E/9730EXSP E	5.1 kg = VCC-9600EXCP E/9600EXSP E VCC-9630EXCP E/9630EXSP E	5.1 kg = VCC-9500EXCP E/9500EXSP E VCC-9530EXCP E/9530EXSP E
	Surface types: 2.4 kg = VCC-9800INCP E/9800INSP E VCC-9830INCP E/9830INSP E	2.4 kg = VCC-9700INCP E/9700INSP E VCC-9730INCP E/9730INSP E	2.4 kg = VCC-9600INCP E/9600INSP E VCC-9630INCP E/9630INSP E	2.4 kg = VCC-9500INCP E/9500INSP E VCC-9530INCP E/9530INSP E
	In-ceiling types: 3.4 kg = VCC-9800EMCP E/9800EMSP E VCC-9830EMCP E/9830EMSP E	3.4 kg = VCC-9700EMCP E/9700EMSP E VCC-9730EMCP E/9730EMSP E	3.4 kg = VCC-9600EMCP E/9600EMSP E VCC-9630EMCP E/9630EMSP E	3.4 kg = VCC-9500EMCP E/9500EMSP E VCC-9530EMCP E/9530EMSP E

Network Board (option)	VA-82LAN	VA-80LAN
Image compression	H.264/JPEG (simultaneous transmission available)	JPEG
Resolution	H.264: 720 x 576, 352 x 288, 176 x 144 JPEG: 720 x 576, 720 x 288, 640 x 480, 360 x 288, 176 x 144	720 x 576, 720 x 288, 640 x 480, 360 x 286, 176 x 143
Picture quality	Super Fine, Fine, Enhanced, Normal Basic	
Frame rate	Max. 25 IPS (720 x 576)	Max. 25 IPS (720 x 286)
Microphone input	-62 to -32 dB (monaural microphone) Ø 3.5 mm mini jack	
Audio output	LINE OUT monaural voice output, Maximum -8 dBs, Ø 3.5 mm mini jack	
Bandwidth	128, 256, 512 Kbps, 1, 2, 3, 4 Mbps, no limitation	
Audio	Bi-directional audio G.711 (192 Kbps) 16 bit 12 KHz	
DDNS	✓	
Alarm buffer	8 MB	
Interface	10 BASE-T / 100 BASE-TX (RJ-45 connector)	
Protocols	TCP/IP, UDP, HTTP, HTTPS, SMTP, NTP, DHCP, FTP, UPnP, DDNS	
Simultaneous access capacity	Image: max. 16, Voice: max. 16 (admin: 1)	
Security	BASIC authentication (ID/password), SSL supported (image only)	
Bundled software	VA-SW3050 LITE	

*DFCC: Dynamic Field/Frame Conversion
Motion detection and field/frame conversion are performed to produce images with no movement and reduce blurring of moving objects in images with movement.

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Note:
• Frame rates are variable dependant upon network line conditions and PC performance.
• 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.
• Comparative images are representations only.

Caution: Please consult the instruction manual to ensure safe and proper operation of the product.



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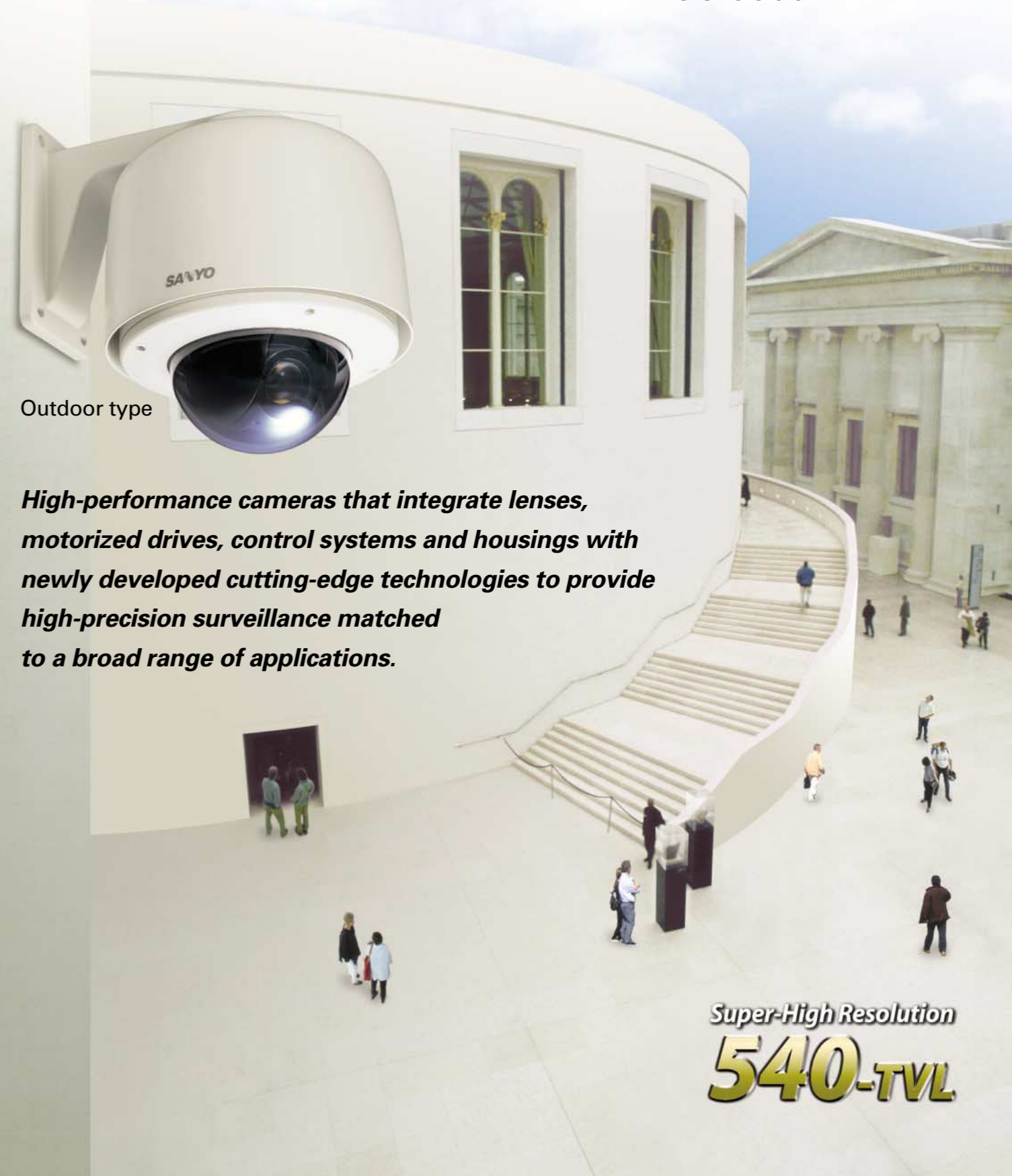
Think GAIA

For Life and the Earth

SANYO

High-Performance Speed Dome Camera Systems

VCC-9800P E PAL 36x Optical zoom DAY NIGHT
VCC-9700P E PAL 36x Optical zoom
VCC-9600P E PAL 30x Optical zoom DAY NIGHT
VCC-9500P E PAL 30x Optical zoom



Outdoor type

High-performance cameras that integrate lenses, motorized drives, control systems and housings with newly developed cutting-edge technologies to provide high-precision surveillance matched to a broad range of applications.

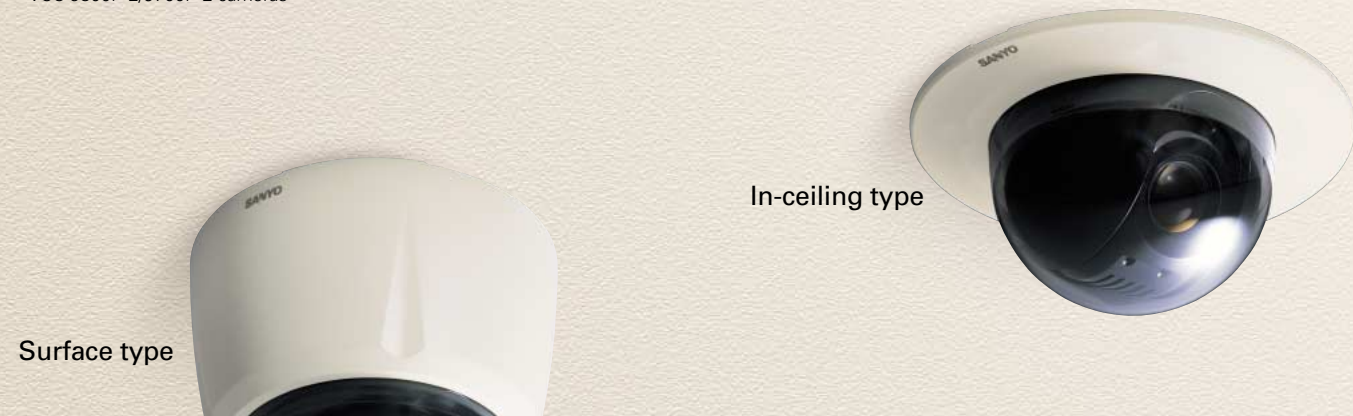
Super-High Resolution
540-TVL

Time-tested technology and know-how combine to provide both high-performance surveillance and ease of use.

Cameras that introduce an array of new technologies for surveillance with a motorized drive system for high-speed, 435°/sec panning and pinpoint accuracy, high-power magnification with a 36x optical* and a 16x digital zoom, and a host of features that include image stabilization, automatic tracking* and optimum auto focus.

Production of power supply bases and camera units—with integrated lens, motor and pan/tilt mechanism—starts and ends in Japan to ensure the highest build quality, while release levers on camera housings make installation and on-site maintenance as simple as can be.

*VCC-9800P E/9700P E cameras



Featuring industry-leading mechanisms newly developed for high performance.

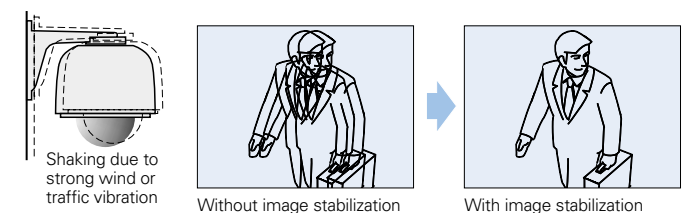
High-Speed Panning at 435° per Second

The camera makes it possible to capture images at exact points during surveillance with high-speed panning at 435°/sec. between preset positions. The motor is several times more precise with movement in 0.009 of a degree increments. This precise mechanism allows capture of quickly moving objects and objects approaching the camera when it is zoomed in.

Pan/tilt speed	Pan	Max. 435°/sec.
	Tilt	Max. 400°/sec.
	Manual pan/tilt	0.1 to 120°/sec.

Image Stabilization (VCC-9800P E/9700P E)

Blurring due to vibration of the camera can be electronically removed. It is also possible to correct for blurring only while continuing camera movement such as pan and tilt.



Preset Accuracy to ±0.014 (typical) of a Degree

In the case of a speed dome camera, the motorized drive's performance is vital in order to capture numerous points of surveillance during lens movement and zoom-ratio changes. SANYO's new series of speed dome cameras keeps the accuracy of the camera's return to preset points to within 0.014 (typical) of a degree for precision capture of images from surveillance.



Designated point set using preset position function



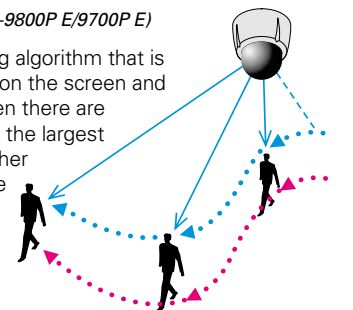
Image from conventional camera* with error margin as large as 0.2°
*VCC-9400P/9300P cameras



Error margin of designated point is a mere 0.014° (typical) with VCC-9800P E/9700P E/9600P E/9500P E cameras

Automatic Tracking (VCC-9800P E/9700P E)

Cameras feature an image processing algorithm that is capable of detecting moving objects on the screen and tracking an object automatically. When there are multiple movements, the object with the largest degree of movement is tracked. Further settings are available according to the pattern of movement.



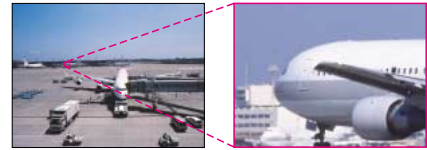
Optimum Auto Focus

Further development of conventional auto-focus functions has resulted in not only shorter focus times, but also the added capability of remaining clearly focused on a targeted subject in front of the field of view. And with optimum focus, images remain in focus, even when the lens is in motion during pan/tilt operation.

Features

Max. 576x Zoom Combined with 36x Optical and 16x Digital Zooms (VCC-9800P E/9700P E)

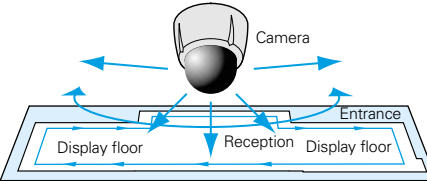
The 36x optical zoom and 16x digital zoom can be combined for a close-up at a magnification power of 576x. This allows even distant subjects to be checked in detail, allowing one camera to monitor a wider area.



36x Optical zoom

Up to 256 Preset Positions

The user can set up to 256 preset positions with VCC-9800P E/9700P E cameras and up to 128 preset positions with VCC-9600P E/9500P E cameras. Preset positions can be set to any angle—from directly below the camera to 5° higher than the horizontal position—to allow capture of any image in the area under surveillance by facing any direction in the adjustable range of the lens. When manually operated, the lens can be moved at the speed of 0.1 to 120°/sec for accurate tracking of moving objects.



Store display floor example

3 Types of Auto Mode Settings

Sequence: Automatic viewing of up to 256 presets (36x models) or 128 presets (30x models), with selectable switching order and pause times for up to 4 different sequences.

Auto pan: Up to 4 different settings for automatic panning between two points at selectable speeds.

Tour: Up to 4 different settings capable of storing up to 1,000 commands of manual pan/tilt/zoom operation in memory and recreating the same movement pattern.

Auto return: Enables automatic return to the mode set in "auto return" when manual operation is not performed within a specified amount of time.

Upward Surveillance Enabled PTZ Operation

In addition to endless 360°/sec panning, the camera's lens section enables 185°/sec tilting in the vertical plane for an area of surveillance expanded by 5° (indoor applications only) compared to previous models.



No dead areas with new speed dome cameras

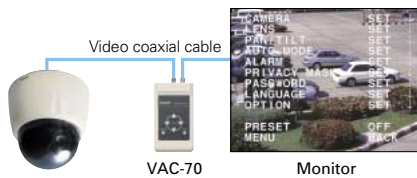


Image from conventional camera * at 0° tilt
*VCC-9400P/9300P cameras

Upward tilt to 5° past zero for an expanded area of surveillance with VCC-9800P E/9700P E/9600P E/9500P E cameras

Adjustment via VAC-70 Control Unit (Sold separately)

Connection of the VAC-70 control unit allows adjustment of pan/tilt/zoom and setup directly from an on-screen menu.



Flexible Motion Detection

The built-in motion sensing function can be used to detect movement by a target object such as an intruder.

The following two settings can be used for this function.

PRESET:

Detects motion at a preset position. Allows setting of motion detection within the whole picture or setting of mask patterns to exclude certain elements from detection.

The camera can be set to zoom in and out automatically when motion is detected.

Surveillance of a detected object can be conducted at the following zoom magnifications.

IN: 1.4x, 2x, 2.8x, 4x, 5.6x, 8x, FULL (zooming in to the TELE end)

OUT: 1/1.4x, 1/2x, 1/2.8x, 1/4x, 1/5.6x, 1/8x, FULL (zooming out to the WIDE end)

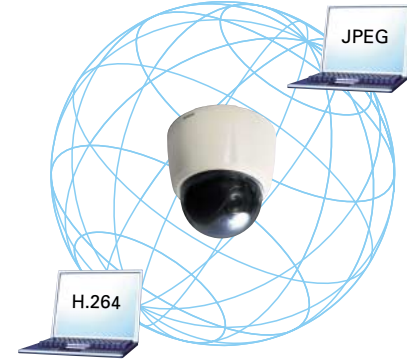
ZONE:

Detects motion in detection areas (from one to four areas) set within the whole space for which surveillance is possible during a pan/tilt operation. Sensing is performed by splitting the field of view into 48 areas. Movement and brightness levels within the picture are analyzed to accurately detect surveillance targets. When motion is detected, the camera can be set to output alarm detection to ALARM OUT or LINE OUT, etc.

With ZONE setting, sensing occurs in areas set within the picture of the zone targeted by the camera. No sensing occurs outside the camera's target zone.

Setting of both modes, PRESET and ZONE, cannot be performed at the same time.

Network



Dual Codec for H.264 and JPEG

Monitoring can be conducted simultaneously in H.264 and JPEG formats by minimizing network traffic.

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

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.

Newest H.264 high-compression technology

H.264 compression enables distribution of images at approximately 1/10 the file size of JPEG compression (according to our comparisons) while maintaining the same image quality.

For customers, this means a major reduction to approximately 1/10 compared to the storage capacity required for the JPEG compression previously used, resulting in cost savings due to the smaller required capacity. In addition, if the same capacity is used, the previously limited resolution and refresh frequency can be increased, which can contribute to both high image quality and high recording speed.

E-mail function

A setting for automatic sending of mail (up to 5 addresses can be set) is provided. By using this setting, an alarm notification e-mail can be set when an alarm is detected. Or, e-mails can be sent at regular intervals. In either case, an image can be attached to the e-mail.

Access log

Simultaneous access is possible for up to 16 people. When the camera is accessed via the network, the most recent date, time, and IP address are recorded in the log, making management and analysis more convenient.

Schedule setting

Timer sending or alarm notification can be performed during a specified time period. The following 5 functions are provided: TIMER (SMTP) for timer sending of e-mail, TIMER (FTP) for timer sending of images via FTP mode, ALARM (SMTP) for e-mail notification of an alarm, ALARM (FTP) for sending of alarm images via FTP mode, and REMOTE ALARM "ACTIVE" for enabling camera alarm output 2 by remote operation.

Security

Access can be controlled with 2 ID levels, ADMIN and GUEST, both requiring their own passwords. SSL compatibility is also provided, enabling a safe, comfortable solution.

Dual Codec (JPEG/H.264) Network Board VA-82LAN (Sold separately)



• H.264 high quality images streaming

H.264 standard video compression is used to provide transmission of movies at low bit rates to enable high image quality monitoring in real time. Movies can be viewed using the standard web browser Internet Explorer*1 or the Network Recording Software VA-SW3050*2.

*1 ActiveX installation is required.

*2 VA-SW3050LITE which enables monitoring only is included with VA-82LAN

• Transmission using 2 types of codecs (H.264 and JPEG) is possible.

• Streaming multi protocol compatible. Compatible with UDP unicast, multicast, and HTTP to enable use in a variety of network environments.

• Uses combing noise reduction FPGA for higher image quality.

• DDNS service compatible

• JPEG buffering alarm function

• JPEG alarm data can be received in the background while receiving live H.264 video.

• Two-way voice communications function

• Various network application functions (SMTP, FTP, NTP, ...)

• Accommodates Full D1 for High-Resolution

• DFFC Function

*DFFC: Dynamic Field/Frame Conversion
Motion detection and field/frame conversion are performed to produce images with no movement and reduce blurring of moving objects in images with movement.

• Scheduling Function

Network Board VA-80LAN (JPEG) (Sold separately)

This optional board for network connection enables SANYO VCC-9800P E/9700P E/9600P E/9500P E cameras to connect to a network. The user can operate a network connected camera using a web browser (Internet Explorer). Included with the board is the VA-SW3050LITE viewer software for viewing feeds from multiple cameras.

Software

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

"SANYO Video Management Software" is a software management platform for SANYO VCC-9800P E/9700P E/9600P E/9500P E 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.

Network recording software VA-SW3050S (for server)/VA-SW3050C (for client)

The VCC-9800P E/9700P E/9600P E/9500P E 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-9800P E/9700P E/9600P E/9500P E.



VMS capture display image

Please visit "sanyosecurity.com" for further details.

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.



Main window (Internet Explorer)

16-screen display (VA-SW3050LITE / VA-SW3050C)

Feature Comparison

	Internet Explorer ¹	VA-SW3050 Series			Video Management Software	
		Lite VA-SW3050Lite Bundled	Server VA-SW3050S Sold separately	Client VA-SW3050C Sold separately	Advanced VA-SW50 Sold separately	Enterprise VA-SW60 Sold separately
No. of cameras supported	1	Max. 128			16	unlimited
Live Monitor	✓	✓	—	✓	✓	
Camera Control	✓	✓	—	✓	✓	
Video Recording	—	—	✓ (JPEG only)	—	✓	
Playback	—	—	—	✓	✓	
Video Search	—	—	—	✓	✓	
Download from PC/Print	—/—	—/✓	—/—	✓/✓	✓/—	
Camera Setting	✓	—	—	—	—	
MegaPixel Camera	✓	✓	✓	✓	✓	
DVR Connection	—	—	—	—	✓	

System Requirements

PC	IBM PC/AT and compatibles			
OS	Windows® XP Professional SP2, Windows® Vista, Windows® Server 2003 SP2 (SW3050S only)			
CPU	Core2Duo E6700, 2.66GHz or higher	Core2Duo E6700, 2.66GHz or higher*2 Core2Duo E8500, 3.16GHz or higher*3	Pentium IV, 3.0GHz or higher	Core2Duo E6700, 2.66GHz or higher*2 Core2Duo E8500, 3.16GHz or higher*3
Memory	1GB (Windows® XP) 2GB (Windows® Vista)	1GB (Windows® XP) 2GB (Windows® Vista)*2 2GB or more	1GB or more	1GB (Windows® XP) 2GB (Windows® Vista)*2 2GB or more
Network Interface	100Base-TX			
Display Card	1920 x 1200 pixels or higher		1024 x 768 pixels or higher, 16m color	
Graphic Chip	ATI: Radeon X1000 series or higher		nVidia: GeForce 6000 series or higher Quadro4 series or higher	
SD (Compo)	—			
Audio	— Sound card with 100% Direct-X compatibility and speakers*4			

*1 Ver. 6.0 or higher

*2 When the number of cameras connected is 4 or fewer

*3 When the number of cameras connected is between 5 and 16

*4 The camera main unit is not equipped with audio functions.

*For Full-HD display

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.

Applications

A wide selection of options is available — covering camera performance, housings, mounting brackets and more — for a match to the application of your choice. Installation work and maintenance is now easier than ever before.

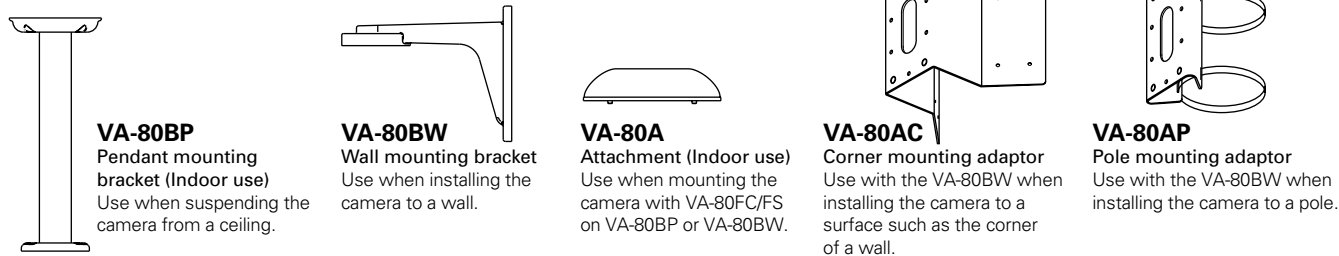
Available in Three Types: Outdoor, Surface or In-Ceiling

The camera is available in three different styles. Assemble them with different fittings and covers to make the camera most suitable for your surveillance needs.



Mounting Brackets

Options (Sold separately)



Model number codes

Camera type

- 8 36x, Day/night
- 7 36x, Color
- 6 30x, Day/night
- 5 30x, Color

Housing type

- I N Surface cover
- E M In-ceiling (closed)
- E X Outdoor housing

VCC-9

- 3 0 230 V AC
- 0 0 24 V AC
- P Scanning system
- P PAL
- C Dome cover
- S Smoked cover

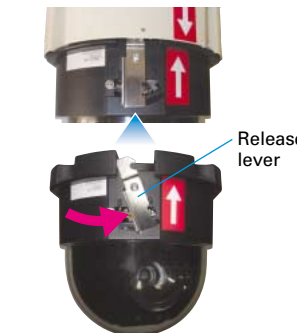
Model configurations example

Model name	Camera unit	Power base	Housing	Dome cover
VCC-9800EXCP E	VCC-MC800P E	VA-84SA	VA-80EX	VA-CM8C
VCC-9700INSP E	VCC-MC700P E	VA-84SA	VA-80F	VA-CZ80

Easy-to-Manage Installation, Setup and Adjustment

Enclosed within the housing are an integrated lens, a motor and a pan/tilt mechanism. Attachment to the power supply base by simply sliding the release levers simplifies installation at the point of surveillance. The settings circuit board is detachable for access to protocol, address and other switch settings, and the VAC-70 controller (sold separately) and can be connected after installation to allow adjustment of PTZ control and other settings from an on-screen menu.

Detachable without disconnecting power cable



Slide the camera unit's two release levers and lock the power supply base into position. No special tools required for camera unit installation or removal.

Detachable Settings Circuit Board



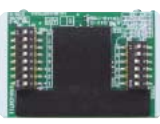
Basic camera settings can be made while holding the settings circuit board in hand, as the board is detachable from the power supply base. The I/O side of the board features 8 input and 2 output terminals for alarm signals.

Terminal side (Side-A)



Alarm inputs (8)
Alarm outputs (2)
RS-485A/RS-485B

DIP switch side (Side-B)



Address setting
Baud rate setting
RS-485/Coax setting
SSP/Pelco setting
Termination setting



Safety Cable
Equipped with a safety cable that connects the housing and power supply base to prevent the camera unit from falling.

Dimensions Unit: mm (inch)

