

■ What is the Communication Camera VC-C50i/VC-C50iR?

The VC-C50i/VC-C50iR is a high-performance PTZ camera intended primarily for surveillance applications and is available in 2 models according to the installation mode. The VC-C50i is for normal upright mounting, while the VC-C50iR is for inverted (ceiling-mounted) installation.

In this product, the optical system has a higher magnification than used in the VC-C4/VC-C4R to give a wider surveillance range, and to give improved monitoring performance in low-light conditions, along with Night Mode (infrared imaging) for better low-light visibility.

The VC-C50i/VC-C50iR also features a multi-connector so that a large number of terminals for control signals, etc. can be installed in a limited space.

Other features have been carried over from previous models, including the pan and tilt mechanisms and the image processing technology, ranking this camera above the VC-C4/VC-C4R. The VC-C50i/VC-C50iR is available in NTSC and PAL models for different regions.



Communication Camera VC-C50i



Video or still images recorded using your VC-C50i/VC-C50iR cannot be used in ways that infringe copyright laws or without the consent of the owner, unless intended for personal use only.



If dust or rain adheres to the dome, focusing may occur on the dome wall. Please place the dome wall and the camera as closely together as possible when using.

The VC-C50i/VC-C50iR contains the following items.

VC-C50i camera or VC-C50iR camera, Multiconnector Plug, AC Adapter PA-V16 (NTSC model only), AC cable, Instruction Manual, Warranty Card (NTSC model only)

□ 26x optical zoom

The camera uses a zoom lens that is compact but still features the best zoom rate (26x at infinity) in its class, providing flexibility in installation and wide focusing range. The angle of view at the wide-angle zoom setting is 42° (1.5° at telephoto).

[▲ Top](#)

□ 1 lux minimum subject illumination

By employing an f/1.6 lens that is among the brightest in its class, the VC-C50i/VC-C50iR archives enhanced imaging performance in low-light conditions, making it more suitable for surveillance than current models.

[▲ Top](#)

□ Night Mode (Infrared imaging in 0 lux) and built-in infrared light

In addition to the Normal Mode used for ordinary operation, the VC-C50i/VC-C50iR features a Night Mode in which the infrared cut filter is removed and stowed to expand the camera's sensitivity into the infrared range. This makes it possible to make observations in low-light conditions where objects are not visible to the naked eye. The camera can also emit infrared illumination in Night Mode to assist low-light imaging function.

* Images on the screen are shown in black and white in Night Mode.

[▲ Top](#)

□ **Slow shutter**
(controlled via the RS-232C interface, not available via wireless control)

A slow shutter can be used which gives a CCD storage time that is longer than the time for 1 field. While the frame rate decreases when the slow shutter is used, it increases the extent of the support for low-light conditions.

[▲ Top](#)

□ **Noise reduction**
(controlled via the RS-232C interface, not available via wireless control)

A noise reduction function is provided using a processor and SDRAM to store the video data. This function reduces random noise on the screen to give crystal-clear images.

[▲ Top](#)

□ **12x digital zoom**

The VC-C50i/VC-C50iR is equipped with a new function that digital enlarges the displayed image by up to 12 times. This can be used with the optical zoom to further widen the focusing range.

* When zooming is used, the resolution declines in inverse proportion to the magnification.

[▲ Top](#)

□ **Multi-connector**

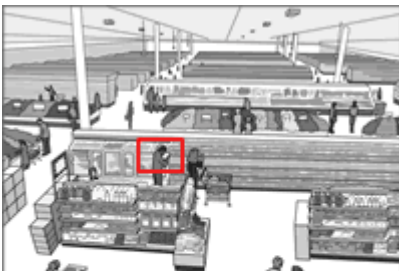
This is a 20-pin connector that will accommodate S video input/output, RS-232C input/output, etc. and allows users to customize their cable connections according to how the camera is used.

[▲ Top](#)

□ **Major functions carried over from previous models**

- ? Pan and tilt mechanism (pan angle: $\pm 100^\circ / \pm 170^\circ$, tilt angle: -30° to $+90^\circ / -90^\circ$ to $+10^\circ$)
- ? 9 presets (camera angle, zoom setting, AE setting)
- ? Up to 9 cameras connectable in cascade format via the RS-232C interface
- ? ID setting function for up to 9 cameras

□ **26x Zoom Lens**



Equipped with a genuine Canon 26x zoom lens, the VC-C50i/VC-C50iR boasts the industry's highest optical zoom magnification for a compact PTZ camera. This powerful zoom makes the VC-C50i/VC-C50iR ideal for monitoring large spaces.

What's more, thanks to Canon's expertise in optical technology, the lens delivers the further benefits of high resolution, high color fidelity, and fast auto focusing.

Monitoring images can be further magnified using PC-based digital zoom (2x, 4x, 8x, or 12x). Please note that image resolution decreases as digital zoom increases.

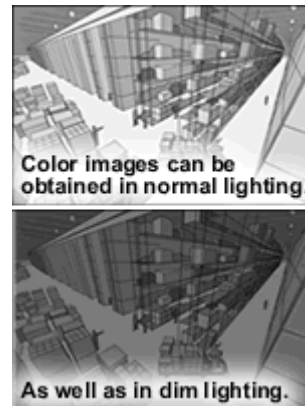
[▲ Top](#)

□ Great Low-light Performance

Even in dim conditions, the VC-C50i/VC-C50i provides top-class monitoring. The VC-C50i/VC-C50i can capture color images with only 1 lux of available light, thanks to the combination of a highly-sensitive CCD sensor, a bright F1.6 lens, and slow shutter capability.

Noise Reduction

Furthermore, whether the scene is bright or dark, the VC-C50i/VC-C50i offers high image quality through noise reduction. Newly-added SDRAM allows the camera to continuously compare frames and eliminate instances of random noise in the picture.



[▲ Top](#)

□ Night Mode

In low-light situations, Night Mode can be turned on to capture black & white images using infrared light. This feature enables the VC-C50i/VC-C50i to offer monitoring at night and in other conditions of limited visibility.

A built-in infrared light source supplies the illumination needed for Night Mode image capture. Canon technology ensures that this light is cast uniformly over the picture.



[▲ Top](#)

□ Multi-connector



This convenient 20-pin connector has S-video, RS-232C, and other input/output terminals, allowing one-plug connection to external devices such as lights, alarms, and sensors. The multi-connector makes it extremely easy to adapt the VC-C50i/VC-C50i to diverse system configurations.



Example: The VC-C50i/VC-C50i is connected to a window sensor, an infrared lamp, and a PC in another room. The VC-C50i/VC-C50i is initially facing the doorway; however, when the window sensor is triggered the VC-C50i/VC-C50i turns on the lamp and swiftly moves the camera head to a preset viewing angle. Images are then transmitted to the remote PC for security personnel to see and record.

[▲ Top](#)

□ Cascade Connection

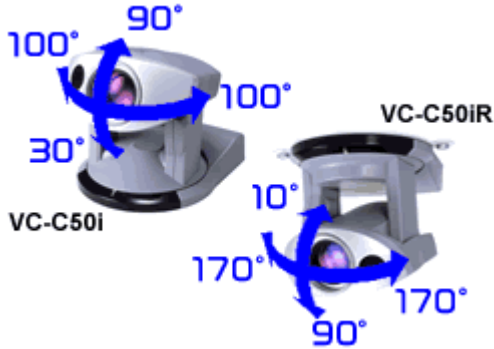
As many as nine VC-C50i/VC-C50i camera units can be connected in a daisy chain and controlled by a single PC or a network camera server. What's more, the VC-C50i/VC-C50i can be added to an existing system comprised of Canon VC-C4 cameras and operated with the same control software.*



* Features exclusive to the VC-C50i/VC-C50i cannot be accessed by VC-C4 control software. Use of these functions will require separate control software.

□ Pan & Tilt Performance

In terms of movement range and speed, the VC-C50i/VC-C50iR is among the finest compact PTZ camera on the market. Its center-mounted pan/tilt mechanism is smooth, precise, and quiet.



VC-C50i:

Pan Mechanism:

Rotation angle Left 100°, Right 100 °;

Rotation speed: 1 - 90° per sec.

Tilt Mechanism: Tilt angle Up 90° (factory default 30°), Down 30°;

Tilt speed : 1° - 70° per sec.*

VC-C50iR:

Pan Mechanism:

Rotation angle Left 170°, Right 170 °;

Rotation speed: 1 - 90° per sec.

Tilt Mechanism: Tilt angle Up 10°, Down 90°;

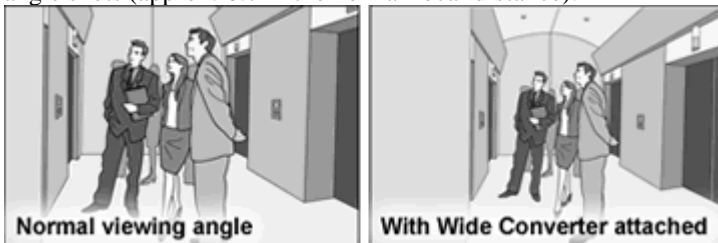
Tilt speed : 1° - 70° per sec.*

* If you are using computer to control the camera, the image on the screen may appear shaky then the camera head is being moved slowly.

[Top](#)

□ Wide Converter WL-37 (Optional)

The optional Wide Converter WL-37 can be used to provide wide-angle shots (approx. 0.74x the normal focal distance).



Wide Converter WL-37



The Wide Converter WL-37 cannot be used on the VC-C50iR. If the converter is used on the VC-C50iR, the mount will gradually loosen and the converter will fall off the camera.

The VC-C50i may not operate correctly if a converter other than the Wide Converter WL-37 is used.

The permissible range of camera installation angles with the Wide Converter WL-37 mounted on the camera is ±15° from the horizontal.

The Wide Converter WL-37 cannot be used in night mode.

□ Preset Viewing Angles



To facilitate monitoring of a large area, each VC-C50i/VC-C50iR camera unit can be assigned up to nine preset viewing angles. This enables users to change views quickly and easily. When a preset is selected, the camera quickly adjusts itself to show that viewing angle.

A preset viewing angle is comprised of specifications for pan, tilt, and zoom. The remote control offers programming of up to 9 preset viewing angles.

[⬆ Top](#)

□ Image Adjustment

The VC-C50i/VC-C50iR includes numerous image adjustment features: automatic and manual exposure control, manual focusing, noise reduction, backlight compensation, white balance, and more. Many different areas of Canon expertise have been applied to deliver a flexible, high-quality solution for monitoring needs.



Backlight compensation OFF



Backlight compensation ON

[⬆ Top](#)

□ Time/Date/Text Display

Users can choose to display the date and time within the monitor picture. Text strings can be specified as well, to make it clear to the person viewing the monitor which camera the images are being sent from.

If camera output is being recorded, time/date/text can be recorded along with the images.



[⬆ Top](#)

□ Two Control Methods

Once configured, the VC-C50i/VC-C50iR is operated primarily through a connected PC. The VC-C50i/VC-C50iR Controller software is available as an option through regional sales companies.

Also, as an aid to installation procedures, a remote control is available as an optional accessory. One wireless control can be used to make settings for several camera units.

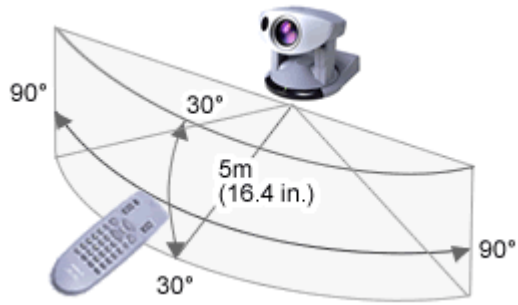
Some functions (such as shutter speed and noise reduction) cannot be accessed with the Wireless Controller WL-V5.



Wireless Controller WL-V5

Operable Range of the Wireless Controller WL-V5

Use the Wireless Controller WL-V5 within the range described below, facing it toward the sensor for the Wireless Controller WL-V5. The operable range of the Wireless Controller WL-V5 varies depending on the amount of charge remaining in the batteries and interference from other objects. (This applies equally to the VC-C50i.)



Communication Camera VC-C50i/VC-C50iR - Specifications

Video Signal	NTSC model for USA, Canada PAL model for Europe, Asia, Oceania
Image Sensor	1/4-inch CCD
Total number of pixels	NTSC: 340,000 effective pixels PAL: 400,000 effective pixels
Synchronization	Internal
Horizontal Resolution	NTSC: 460 TV lines PAL: 420 TV lines
Vertical Resolution	350 TV lines
S/N Ratio	48 dB
Scanning Method	2:1 interlaced
Min. subject illumination	Normal mode: 1 lux (at 1/30 sec.) Night mode: 0 lux
Imaging Modes	Normal mode, Night mode
Drive Mechanism	VC-C50i: Pan Mechanism: Rotation angle Left 100°, Right 100°; Rotation speed: 1 - 90° per sec. Tilt Mechanism: Tilt angle Up 90° (factory default 30°), Down 30°; Tilt speed : 1° - 70° per sec.* VC-C50iR: Pan Mechanism: Rotation angle Left 170°, Right 170°; Rotation speed: 1 - 90° per sec. Tilt Mechanism: Tilt angle Up 10°, Down 90°; Tilt speed : 1° - 70° per sec.*
Connectors / Output	VIDEO OUT: BNC composite video output
Connectors / Multiconnector	S-Video output, RS-232C control (input/output), sensor input, alarm output, external lighting control
Connectors / Power	DC IN (rated at 13 V)
Cascade control	Up to 9 cameras
Focusing	<p style="text-align: right;">⬆️ Top</p> <p>Auto/Manual Wide-angle: 0.01 m (0.03 ft.) to inf.; Telephoto: 1.6 m (5.25 ft.) to inf. (In night mode, Wide-angle 0.02 m (0.07 ft.) to inf.; Telephoto: 2.3 m (7.55 ft.) to inf.)</p> <p style="text-align: center;">Changes in the distance from the camera to the subject</p> <p>Wide end of zoom Down to approx. 1 cm (0.39 in.) In night mode, down to approx. 2 cm (0.79 in.)</p> <p>Tele end of zoom UP to approx. 1.6 m (63.0 in.) In night mode, Up to approx. 2.3 m (90.55 in.)</p>
Aperture	Auto iris servo system
Lens	Focal length 3.5 to 91.0 mm, f/1.6 to f/4.0, 26x power zoom (shooting at infinity)

Infrared cut filter	Power-driven insertion/removal (normal mode/night mode)
Night mode	Infrared lighting: LEDs (4) Effective lighting range: 3 m (9.8 ft.)
Lens filter diameter	37 mm, pitch: 0.75 mm
White Balance	TTL system, Auto/Manual/One-touch
Max. Power Consumption	Approx. 12.5 W (including AC power adapter)
Operating Environment	Temp.: 0°C to 40°C (32°F to 104°F); Humidity: 20 - 85% RH (no condensation)
Installation Angle	±20° from horizontal (±15° with the optional Wide Converter WL-37 installed)
Dimensions	VC-C50i: 100 x 117 x 96 mm (3.9 x 4.6 x 3.8 in.) (W x D x H) (excluding attachments) VC-C50iR: 100 x 117 x 97.6 mm (3.9 x 4.6 x 3.8 in.)(W x D x H) (excluding attachments)
Weight	VC-C50i: Approx. 420 g (Approx. 0.9 lb.) VC-C50iR: Approx. 490 g (Approx. 1.1 lb.)

* If you are using computer to control the camera, the image on the screen may appear shaky then the camera head is being moved slowly.



Wireless Controller (Optional)	
Model	WL-V5
System	Infrared pulse system
Power Supply	3 V DC (2 AA-type batteries)
Dimensions	50 x 175 x 24.5 mm (1.97 x 6.89 x 0.96 in.) (W x D x H) (excluding attachment)
Weight	Approx. 79g (Approx. 0.17 lb.) (excluding batteries)
AC Adapter (PAL model optional)	
Model	PA-V16
Input	100-240 V AC, 50/60 Hz, 50-65 VA
Output	13 V DC, 1.8 A (max.)
Polarity	External (-), Internal (+)
Dimensions	58 x 118 x 25 mm (2.28 x 4.65x 0.98 in.) (W x D x H) (excluding attachment)
Weight	Approx. 205g (Approx. 0.45 lb.) (excluding cable)

These specifications are subject to change without notice.

For the AC adapter, use the PA-V16 dedicated unit. Also, do not use the PA-V16 AC adapter with any other product.