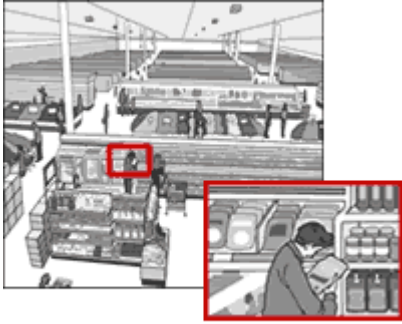## □ 26x Zoom Lens

26x optical zoom (simulation)

The VB-C50i features a Genuine Canon zoom lens with 26x optical zoom, the highest optical zoom magnification in the industry.
This high magnification makes the VB-C50i the perfect choice for monitoring large facilities.

Lens specifications
Focal length: 3.5 mm to 91 mm
Aperture: F1.6 to F4.0
Focus range (wide): 0.01 m to infinity
Focus range (tele): 1.6 m to infinity
Horizontal field of view: 1.7° (tele) to 42° (wide)

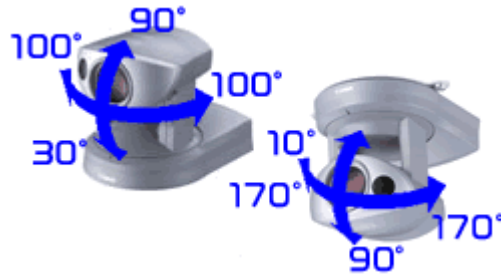### Digital zoom
Four settings are available: 2x, 4x, 8x, 12x.
Note that image quality decreases with each step up in digital zoom magnification.

□ Pan & Tilt Movement

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

Pan speed: 1 to 90 degrees/second
Tilt speed: 1 to 70 degrees/second

□ Exceptional Low-light Performance

Clear images even in very dim conditions

Color video with only 1 lux illumination
Offering class-leading low-light performance, the VB-C50i is able to capture color video with as little as 1 lu x of illumination. Noise reduction keeps the image clear at any level of lighting.

Infrared video capture (Night Mode)
In addition, the VB-C50i can capture black & white images using infrared light. The camera's built-in infrared light provides illumination in complete darkness.
You can also attach an optional (commercially available) IR lamp that can be turned on using the camera's alarm contacts.

NOTE If you have selected "Enable Slow Shutter", exposure will be manual, and aperture and gain will be at maximum. Change the shutter speed and adjust brightness according to your operating environment and photographic subject.
If you specify a shutter speed of 1/15 seconds or slower, auto focus will not operate.

☐ Image Adjustment Controls

Video capture can be optimized for many different situations thanks to a wide range of automatic and manual settings.
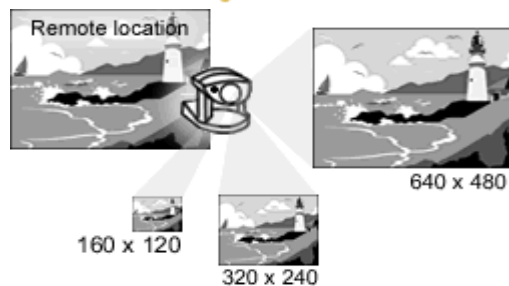
Available settings

- ? Backlight compensation (3 levels)
- ? Automatic exposure control
- ? Manual exposure control: shutter speed, aperture, and gain
- ? Manual focusing
- ? Noise reduction
- ? Automatic white balance

Backlight compensation makes subjects more visible.

☐ What Is Multistreaming?

Remote location

640 x 480

160 x 120

320 x 240

The VB-C50i captures high-quality video (640 x 480 pixels, 30 fps). However, not all viewers may want or be able to receive such high-resolution video. A smaller-sized image may be just fine for viewers with slow network connections or video-enabled PDAs, for example.

To better handle a diverse range of user needs, the VB-C50i is able to broadcast the same video in three different sizes. Viewers can request which size they want.

☐ Audio Input Capability

A new feature allows voice data to be sent over networks to the VB-C50i. Monitoring personnel can thus talk into a microphone connected to their PC and have themselves heard through a speaker connected to the VB-C50i camera. Audio input is provided in Admin Viewer Ver. 3.50, which includes VAD (Voice Activity Detection) and CNG (Comfort Noise Generator) to ensure high audio quality.

Audio sent from a PC to external speaker

LAN Internet

The Multi-Terminal Module VB-EX50 (optional) is required to connect an external speaker to the VB-C50i camera/server unit.

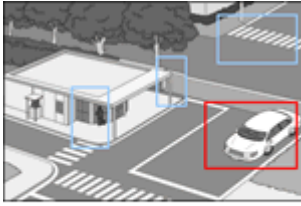## ☐ Motion Detection & Auto Tracking

Motion Detection Setting Tool

Motion detection

Four areas can be selected for motion detection. (Areas may overlap.) When movement is detected in an area, the VB-C50i will start a specified action, such as auto-tracking and/or picture recording.

Sensitivity, area ratio, and duration required to detect motion can be independently set for each of the four areas.

Independent settings for each area

Four areas specified
for motion detection

In a single monitoring scene, some types of movement may be more common to one area than another. This is why the VB-C50i lets users set different values in each area for how much motion is required to trigger the VB-C50i.

(Example)
The red area could be set so that it's only sensitive to unusual car movement. Therefore, a person walking through this area will not be detected because he or she is too small. Also, a car moving at a speed normal to this area will not be detected. Instead, the VB-C50i will be triggered only if something as large as a car moves faster than normal through this area.

Auto tracking
If motion is detected, the VB-C50i will pan and tilt automatically to capture this movement. It will center the picture on the area in which motion is detected.

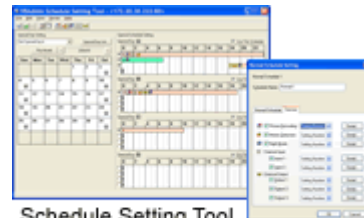## ☐ Preset Viewing Angles & Preset Tour

20 presets
A preset viewing angle is composed of settings for pan, tilt, and zoom. Up to 20 preset viewing angles can be programmed to enable smooth monitoring of a broad area. By using presets, viewers can quickly move the camera to check specific locations.

Preset tour
A "tour" can be programmed so that the VB-C50i automatically moves from one preset viewing angle to another at specified intervals. A tour can be ongoing continuously or conducted only when needed.

☐ Advanced Scheduling Functions

With the Schedule Setting Tool, you can set up Timer Recording, Motion Detection, Night Mode, External Device Input and External Device Output services to perform automatically on a specified day of the week or time of the day. You can set a start and end time and the content of the service on the calendar in the Schedules Setting screen.

Schedule Setting Tool
(from the VB Administration Tools)

Timer Recording	Photographs still images at the times specified and records them in the VB-C50i/VB-C50iR.
Motion Detection	Where there is a variation in part of a picture caused by the movement of an object, the VB-C50i/VB-C50iR performs picture recording and automatic tracking.
Night Mode	Takes shots in dark conditions.
External Device Input	Sets camera operation for external device.
External Device Output	Sets the output time to external devices and the repetition interval, etc.

Multi-Terminal Module VB-EX50 (optional)

A cable is used to connect the module to this terminal.

Front View   Back View

The optional Multi-Terminal Module VB-EX50 enables connection of various types of external devices to the VB-C50i.
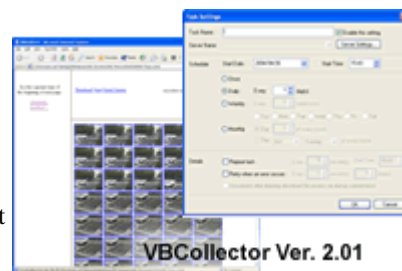
Connector types

Audio Out for speakers
Video In/Out (BNC) for analog video cameras already in use
External Sensor In/Out for sensors and alarms

Image Storage Functions

The VB-C50i has approximately 15MB of internal memory for temporary storage of captured images, and several functions related to image storage.

Available functions
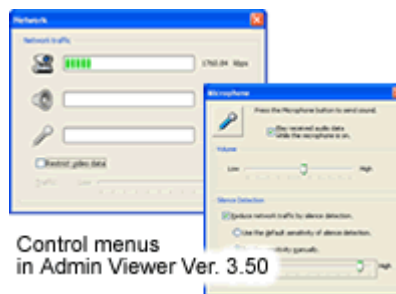

VBCollector Ver. 2.01

- ? Minimum storage intervals: 10 fps on contact with an external sensor or motion detection, 1 fps continuous capture.
- ? Email notification if a sensor is triggered or if motion is detected (text-only email or email with an image attached).
- ? When the VB-C50i approaches its storage limit, it sends a warning message to a designated PC. Captured images are then automatically downloaded to this PC.

Other Features

Camera

Control menus in Admin Viewer Ver. 3.50

- ? 1/4-inch CCD: [NTSC] use: 340,000 (effective 630,000)
- ? 1/4-inch CCD: [PAL] use: 4000,000 (effective 740,000)

Network

- ? Automatic IP settings using DHCP
- ? Registration of DDNS and host name
- ? Specify maximum packet size

Other

- ? Audio output with VAD (Voice Activity Detection) and CNG (Comfort Noise Generator) for high audio quality
- ? Control of network bandwidth in viewer software
- ? Auto setting of HTTP proxy

- ? Web page generation
- ? Host access restriction
- ? Restriction on video transmission from 1 to 10 Mbps

Network Camera VB-C50i/VB-C50iR - Specifications

VB-C50i/VB-C50iR		
Video signal	Conforms to NTSC/ PAL	
Image Sensor	1/4-inch CCD	
Total number of pixels	[NTSC] use: 340,000 (effective 630,000) [PAL] use: 400,000 (effective 740,000)	
Synchronization	Internal	
Scanning Method	2:0 interlaced	
Min. subject illumination	Normal mode: 1 lux (at 1/30 sec.) / Night mode: 0 lux	
Imaging modes	Normal mode, Night mode	
Focusing	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.)	
Aperture	Auto iris servo system	
Lens	Focal length 3.5 to 91.0 mm, f/1.6 to f/4.0, 26 x 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	
Operating System	Linux	
Protocol	TCP/IP, HTTP, BOOTP, FTP, NTP, DDNS, WebView (from Canon)	
Video compression method	Motion-JPEG (video quality variable), JPEG (for still pictures)	
Video compression rate	NTSC: 0.1 fps to 30 fps (variable) PAL: 0.1 fps to 25 fps (variable)	
Output image sizes	NTSC: 160x120, 320x240, 640x480 PAL: 192x144, 384x288, 768x576	
Display image sizes	NTSC: 80x60, 160x120, 320x240, 640x480 PAL: 96x72, 192x144, 384x288, 768x576	
Server	HTTP, FTP, WebView Livescope	
Log management	Syslog format	
Camera control	Pan, tilt, zoom, brightness, shutter speed, focus speed, view restriction, control time restriction	

Connection restrictions	Access control (password), video connection time, service period, number of concurrent connections (maximum of 50)
Network	Ethernetx1 (RJ45, 10/100 auto-negotiation)
Display LED	Status display of network
Multi-connector	Video IN/OUT: NTSC/PAL composite, BNC terminal (1 each) Audio OUT: monaural, mini-jack(1) External Device I/O: Input=2, Output=3 RS-232C (It will not be used) *Connector for using the Multi-Terminal Module (VB-EX50, sold separately).
Dimensions	VB-C50i: 104.6 x 130.3 x 109.7 mm (4 7/64 x 5 1/8 x 4 5/16 in.) (W x D x H) VB-C50iR: 136.0 x 130.3 x 110.6 mm (5 11/32 x 5 1/8 x 4 11/32in.) (W x D x H) (Excludes protruding parts. Includes the mounting plate for the VB-C50iR)
Weight	VB-C50i: Approx. 620 g (Approx. 1.4 lb) VB-C50iR: Approx. 700 g (Approx. 1.5 lb)
Operating environment	Temperature 0 - 40 ° C, humidity 20 - 85 %, RH (condensation free)
Power	AC adapter, power consumption 25W or less
AC Adapter	
Model	PA-V16
Input	100-240 V AC 50/60 Hz
Output	13 V DC, 1.8 A (max.)
Polarity	Exterior (-) interior (+)
Dimensions	58 x 118 x 25 mm (2.28 x 4.65 x 0.98 in.) (W x D x H) (excluding attachment)
Weight	Approx. 205 g (Approx. 0.45 lb.) (excluding cable)