

# VB-M50B

Compact, lightweight and innovative PTZ camera with the ultra-low-light performance required in intelligence and evidence-gathering applications.

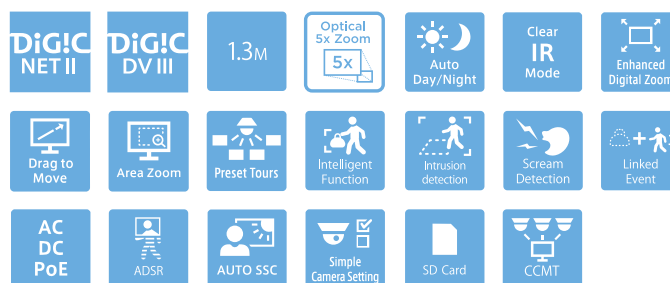
This lightweight 1.3MP PTZ camera boasts a large aperture Canon telephoto lens and a highly sensitive CMOS sensor that delivers exceptional detail in low-light conditions.



- Highly sensitive 1/3" 1.3MP CMOS sensor for exceptional low-light performance
- 5x optical wide aperture zoom lens with distortion-suppressing UD elements
- Unique Clear IR Mode and Motion-Adaptive Noise Reduction
- Enhanced Digital Zoom extends camera's zoom capabilities while maximising image quality
- 8 built-in analytics functions provide intelligent and efficient alarm detection
- Support for multiple web browsers and mobile devices
- Compact, lightweight PTZ design
- ONVIF® Profile S & G

## Product Range

VB-R11  
VB-H43  
VB-M42



# Technical Specifications

# VB-M50B

	VB-M50B
<b>CAMERA</b>	
<b>Image Sensor</b>	1/3 type CMOS (primary color filter)
<b>Number of Effective Pixels</b>	Approx. 1.3 million pixels
<b>Scanning Method</b>	Progressive
<b>Lens</b>	5x optical zoom (20x digital zoom) auto focus lens
<b>Focal Length</b>	17.7 (W) - 88.5 mm (T)
<b>F-number</b>	F1.8 (W) - F2.4 (T)
<b>Viewing Angle</b>	<b>For 16:9 aspect ratios:</b> Horizontal: 15.6° (W) - 3.2° (T) Vertical: 8.8° (W) - 1.8° (T) <b>For 4:3 aspect ratios:</b> Horizontal: 15.6° (W) - 3.2° (T) Vertical: 11.7° (W) - 2.4° (T)
<b>Day/Night Switch</b>	Auto/Day Mode/Night Mode
<b>Min. Subject Illumination</b>	Day Mode (colour): 0.04 lux Night Mode (monochrome): 0.002 lux - (F1.8, 1/30 sec., SSC off, 50IRE)
<b>Focus</b>	Auto/One-shot AF/Manual/Fixed at infinity
<b>Shooting Distance (from front of lens)</b>	Day Mode: 3.0 m (9.8 ft.) - infinity (W), 5.0 m (16.4 ft.) - infinity (T) Night Mode: 3.0 m (9.8 ft.) - infinity (W), 5.0 m (16.4 ft.) - infinity (T)
<b>Shutter Speed</b>	1, 1/2, 1/4, 1/8, 1/15, 1/30, 1/60, 1/100, 1/120, 1/250, 1/500, 1/1000, 1/2000, 1/4000, 1/8000, 1/10000, 1/16000 sec.
<b>Exposure</b>	Auto/Auto (Flickerless)/Auto (Shutter-priority AE)/Auto (Aperture-priority AE)/Manual (Shutter Speed, Aperture, Gain)
<b>White Balance</b>	Auto/Light Source/Manual Light Source: Daylight Fluorescent/White Fluorescent/Warm Fluorescent/Mercury Lamp/Sodium Lamp/Halogen Lamp Manual: One-shot WB/R Gain/B Gain
<b>Metering Mode</b>	Center-Weighted/Average/Spot
<b>Exposure Compensation</b>	9 levels
<b>Smart Shade Control</b>	Auto/Manual/Disable, Auto: 3 levels, Manual: 7 levels - Brightens shaded areas of a video
<b>Haze Compensation</b>	Auto/Manual/Disable, Auto: 3 levels, Manual: 7 levels
<b>AGC Limit</b>	6 levels
<b>Image Stabilizer</b>	2 levels (digital)
<b>Motion-Adaptive NR</b>	Available
<b>Clear IR Mode</b>	Available
<b>Pan Angle Range</b>	348° (±174°)
<b>Tilt Angle Range</b>	105° (ceiling-mounted position: -90° - +15°) - When the horizontal direction of the camera is 0°
<b>Moving Speed</b>	Pan: Max. 300°/sec. Tilt: Max. 300°/sec.
<b>SERVER</b>	
<b>Video Compression Method</b>	JPEG, H.264
<b>Video Size</b>	JPEG, H.264: 1280 x 720, 640 x 360, 320 x 180 1280 x 960, 640 x 480, 320 x 240
<b>Video Quality</b>	JPEG, H.264: 10 levels
<b>Frame Rate</b>	JPEG: 0.1 - 30 fps H.264: 1/2/3/5/6/10/15/30 fps - Values represent streaming performance from the camera. - The frame rate may be reduced due to Viewer computer's specs, the number of clients accessing at the same time, network loads, video quality setting, type or movement of the subject or other reasons. Maximum frame rate when streaming: H.264(1) (1280 x 720) and H.264(2) (1280 x 720) simultaneously: 15 fps H.264(1) (1280 x 960) and H.264(2) (1280 x 960) simultaneously: 15 fps
<b>I-Frame Interval</b>	0.5/1/1.5/2/3/4/5 sec.
<b>Simultaneous Client Access</b>	Max. 30 Clients + 1 Admin Client - H.264: Max. 10 Clients
<b>Bit Rate Control</b>	Target Bit Rate: 64/128/256/384/512/768/1024/2048/3072/4096/6144/8192/10240/12288/14336/16384 kbps
<b>ADSR: Area-specific Data Size Reduction</b>	Number of Specified Areas: Max. 8 areas Data Size Reduction Level: 3 levels
<b>Security</b>	Camera Control: Administrator, Authorized user, Guest user (level of control varies depending on user) Access Control: User authority (user name and password), Host Access Restrictions (IPv4, IPv6) IEEE802.1X: EAP-MD5, EAP-TLS, EAP-TTLS, EAP-PEAP Encrypted Communications: SSL/TLS, IPsec
<b>Protocol</b>	IPv4, IPv6, TCP/IP, UDP, HTTP, FTP, SNMPv1/v2c/v3 (MIB2), DHCP, DNS, AutoIP, mDNS, ARP, ICMP, POP3, NTP, SMTP, RTP/RTCP, RTSP, SSL/TLS, IPsec, ONVIF, WV-HTTP (Canon proprietary)
<b>Audio Compression Method</b>	G.711 $\mu$ -law (64 kbps)
<b>Audio Communication Method</b>	Full-duplex (two-way) - Echo cancellation function compliant RTP, Sound Transfer Protocol by Canon

<b>Audio File Playback</b>	Available (audio files can be played back when an event is triggered by the intelligent function or external device input) - A third-party amplifier speaker is necessary
<b>Privacy Mask</b>	Number of registration: Max. 8 places, Number of mask colors: 1 (select from 9 colors)
<b>Panorama</b>	Available
<b>View Restriction</b>	Available
<b>Preset</b>	Number of registers: Max. 64 positions (+Home Position) Number of Preset Tour Route: Max. 5
<b>Intelligent Function</b>	Detection Types: Moving Object Detection, Abandoned Object Detection, Removed Object Detection, Camera Tampering Detection, Passing Detection, and Intrusion Detection Detection Settings: Max. 15 Non-detection Area Settings: Available
<b>Intelligent Function</b>	Volume Detection, Scream Detection
<b>Event Trigger Type</b>	External Device Input, Intelligent Function (Video), Intelligent Function (Audio), Timer, Day/Night Switch Number of Linked Events: 2 Linked Event Conditions: OR, AND (whether or not there is a sequence to events)
<b>Image Upload</b>	FTP/HTTP/SMTP (e-mail)
<b>Event Notification</b>	HTTP/SMTP (e-mail)
<b>Log Notification</b>	SMTP (e-mail)
<b>Image Cropping Function</b>	Digital PTZ Cropping sizes: 640 x 360/512 x 288/384 x 216/256 x 144/128 x 72 640 x 480/512 x 384/384 x 288/256 x 192/128 x 96
<b>Enhanced Digital Zoom</b>	Available
<b>Maximum Digital Zoom</b>	5x/10x/15x/20x
<b>On-Screen Display</b>	Available English/Chinese (Simplified)/Japanese
<b>Daylight Saving Time</b>	Available
<b>INTERFACE</b>	
<b>Network Terminal</b>	LAN x 1 (RJ45, 100Base-TX (auto/full-duplex/half-duplex))
<b>Audio Input Terminal</b>	$\Phi$ 3.5 mm ( $\Phi$ 0.14 in.) mini-jack connector (monaural) LINE IN (connect to an amplifier microphone) or MIC IN (connect to a microphone w/o amplifier) - Switch LINE IN/MIC IN in the setting page.
<b>Audio Output Terminal (LINE OUT)</b>	$\Phi$ 3.5 mm ( $\Phi$ 0.14 in.) mini-jack connector (monaural) LINE OUT (connect to an amplifier speaker)
<b>External Device I/O Terminal</b>	Input x 2, Output x 2
<b>Memory Card</b>	SD Memory Card, SDHC Memory Card, SDXC Memory Card Compatible. Recorded Content: Log, Video (Event, Manual, ONVIF, Timer, Upload) Frame Rate: Max. 1 fps (JPEG) Max. 30 fps (H.264) - To insure reliability in the recording speed, it is recommended to use CLASS 10 rated products. Even when using CLASS 10 products, reliability cannot be guaranteed during heavy access loads (e.g., when recording and deleting data at the same time).
<b>OTHER</b>	
<b>Operating Environment</b>	Temperature AC, DC, PoE: -10°C - +50°C (+14°F - +122°F) Humidity 5% - 85% (without condensation)
<b>Storage Environment</b>	Temperature -30°C - +60°C (-22°F - +140°F) Humidity 5% - 90% (without condensation)
<b>Installation Method</b>	Ceiling mount - Canon will not guarantee proper operation if the cameras are installed on surfaces where the angle is more than $\pm$ 5° from horizontal or on walls, because this will put a heavy load onto sliding mechanical parts and may affect durability.
<b>Power Supply</b>	PoE: PoE power supply via LAN connector (IEEE802.3at TypeI compliant) AC Adapter: PA-V18 (100 - 240 V AC) (sold separately) External power source: 24 V AC/12 V DC
<b>Power Consumption</b>	PoE: Max. approx. 9.8 W* AC Adapter PA-V18: Max. approx. 11.2 W (100 V AC) Max. approx. 11.2 W (240 V AC) DC: Max. approx. 10 W AC: Max. approx. 9.6 W * Class 0 power sourcing equipment (requests 15.4 W)
<b>Dimensions</b>	( $\Phi$ x H) $\Phi$ 129 x 157 mm ( $\Phi$ 5.08 x 6.18 in.) - Camera only
<b>Weight</b>	Approx. 1170 g (2.58 lb.)

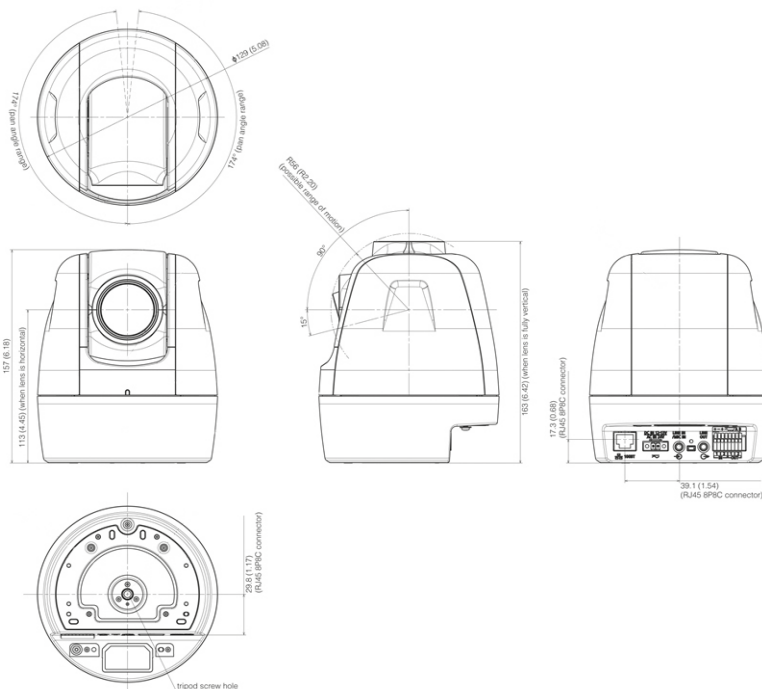
# Technical Specifications

# VB-M50B

APPLICATION	
<b>Viewer</b>	Camera Viewer Mobile Camera Viewer
<b>Included Software</b>	Camera Management Tool RM-Lite Recorded Video Utility
<b>Language</b>	German/English/Spanish/French/Italian/Russian/Thai/Turkish/Chinese (Simplified)/Japanese
<b>Operating Environment</b>	(Setting page, Viewer)
<b>PC</b>	CPU (Recommended): Intel Core i7-2600 or higher Graphics Board (Recommended): Not specified Memory (Recommended): 2 GB or higher Viewer Display (Recommended): 1920 x 1080 or higher
<b>Operating System</b>	Windows Vista Ultimate/Business/Enterprise/Home Premium SP2 32/64-bit Windows 7 Ultimate/Professional/Enterprise/Home Premium SP1 32/64-bit Windows 8/Windows 8 Pro/Windows 8 Enterprise 32/64-bit* Windows 8.1/Windows 8.1 Pro/Windows 8.1 Enterprise 32/64-bit* Windows 10 Pro/Windows 10 Enterprise/Windows 10 Education/Windows 10 Home 32/64-bit Windows Server 2008 Standard SP2 32/64-bit Windows Server 2008 R2 Standard SP1 64-bit Windows Server 2012 Standard 64-bit* Windows Server 2012 R2 Standard 64-bit* * Can not be started from the start screen
<b>Operating System Language</b>	German/English/Spanish/French/Italian/Russian/Thai/Turkish/Chinese (Simplified)/Japanese
<b>Compatible Browser</b>	Internet Explorer 9 32-bit Internet Explorer 10/11 Microsoft Edge* Chrome 45*  * Does not support playback of Video (H.264) and audio files, reception of audio  - Must be configured to allow use of JavaScript, IFRAME (html tag), and web storage. - For Camera Viewer only, cookies must be enabled - Does not support Mobile Camera Viewer
<b>Compatible Mobile Devices</b>	Surface, iPad, iPhone, Nexus, Galaxy
<b>Operating Environment</b>	Camera Management Tool, Recorded Video Utility
<b>PC</b>	CPU (Recommended): Intel Core i7-2600 or higher
<b>Operating System</b>	Windows Vista Ultimate/Business/Enterprise/Home Premium SP2 32/64-bit Windows 7 Ultimate/Professional/Enterprise/Home Premium SP1 32/64-bit Windows 8/Windows 8 Pro/Windows 8 Enterprise 32/64-bit* Windows 8.1/Windows 8.1 Pro/Windows 8.1 Enterprise 32/64-bit* Windows 10 Pro/Windows 10 Enterprise/Windows 10 Education/Windows 10 Home 32/64-bit

	Windows Server 2012 Standard 64-bit* Windows 10 Pro/Windows 10 Enterprise/Windows 10 Education/Windows 10 Home 32/64-bit Windows Server 2008 Standard SP2 32/64-bit Windows Server 2008 R2 Standard SP1 64-bit Windows Server 2012 R2 Standard 64-bit* * Can not be started from the start screen
<b>Software</b>	Runtime Library
<b>Camera Management Tool</b>	.NET Framework 3.5 SP1 (When using Internet Explorer 9) .NET Framework 4.5 (When using Internet Explorer 10/11) .NET Framework 4.6 (When using Internet Explorer 11) - One of the above must be installed
<b>Recorded Video Utility</b>	.NET Framework 3.5 SP1 .NET Framework 4.5 .NET Framework 4.6 - One of the above must be installed
<b>Surface 3</b>	Operating System Windows 8.1 Professional/Windows 8.1 Enterprise 64-bit* Windows 10 Pro/Windows 10 Enterprise/Windows 10 Education/Windows 10 Home 64-bit * Can not be started from the start screen  Compatible Browser Internet Explorer 11 Microsoft Edge* - Must be configured to allow use of JavaScript, and web storage - For Camera Viewer only, cookies must be enabled * Does not support playback of Video (H.264) and audio files, reception of audio
<b>iPad mini 3 / 4 iPad Air / Air 2 iPhone 6 / 6 Plus iPhone 6s / 6s Plus</b>	Operating System iOS 8.4.1 iOS 9.1  Compatible Browser Safari - Must be configured to allow use of JavaScript, IFRAME (html tag), and web storage - For Camera Viewer only, cookies must be enabled - Does not support playback of Video (H.264) and audio files, reception of audio - Settings page and Camera Viewer is not supported on the iPhone
<b>Android Devices</b>	Nexus 9, Android 6.0, Chrome 46 Galaxy Tab S 8.4, Android 4.4.2, Chrome 46 Galaxy Tab S 10.5, Android 4.4.2, Chrome 46 - Does not support playback of Video (H.264) and audio files, reception of audio  Nexus 6 Android 6.0, Chrome 46 Galaxy S6, Android 5.0.2, Chrome 46 - Does not support playback of Video (H.264) and audio files, reception of audio - Settings page and Camera Viewer is not supported

## Dimensions (mm)



## What's in the box?

- VB-M50B Main Unit
- Power Connector(L-type)
- Power Connector(Straight)
- Setup CD-ROM
- Installation Guide
- Warranty Card
- Leaflet of warranty card
- Packaging