JVC®

The Perfect Experience

PTZ NETWORK DOME CAMERA
VN-V685U/V686BU

OUTDOOR PTZ NETWORK DOME CAMERA
VN-V686WPBU

Dual Stream Network Cameras with 36x/27x Optical Zoom
and Accurate Direct Drive Motor Mechanism

VN-V686WPBU

V.NETWORKS

36x/27x Zoom

Direct Drive Motor

Full-Frame DUAL STREAM

IR Cut filter Day | Night

PoE Power over Ethernet

■ **Direct Drive Motor for Extra Precision and Silence**
- Super Accurate Positioning (±0.03° precision)
- Super Fast & Super Slow Pan/Tilt (400°/sec to 0.04°/sec variable)
- Super Silent Operation (Ideal for hospitals, libraries, and museums)

■ **Day/Night Function with IR Cut Filter**
Automatic switching between day and night modes for reliable round-the-clock surveillance

■ **Effective Backlight Compensation**
Easy Wide-D Function provides clear images even in backlit situations

■ **Progressive Output Capability**
Can output clear, smooth images without jaggy even for moving objects

■ **MPEG-4/Motion JPEG Full-Frame Dual Stream**
Simultaneous distribution of MPEG-4 and Motion JPEG VGA images at full frame rate (30fps for each stream)

■ **Super LoLux™ Sensitivity**
0.04 lx at B&W mode (25 % video level, F1.6, AGC SUPER)
0.5 lx at color mode (25 % video level, F1.6, AGC SUPER)

■ **PoE for Saving Installation and Cable Costs**
Built-in PoE (Power over Ethernet) allows the camera to be activated through a LAN cable connection.

■ **Quick and Easy Installation**
One-touch lock mechanism for quick and easy installation and maintenance

■ **Dust- and Waterproof Design (VN-V686WPBU)**
P66-standard robust design suitable for outdoor monitoring system

All the Precision and Quality to Capture the Crucial Moment

JVC's new Network Camera offers a Direct Drive Motor and Full-Frame Dual Stream Capability for an Advanced Monitoring System with Maximum Reliability and Versatility.

36x/27x Optical Zoom

0.03° Super Accuracy

MPEG-4 Motion JPEG Dual Stream

Fast/Slow Variable Pan Tilt Speed

Silent Operation

0.04lx* Super LoLux™

Easy Installation

* at B&W mode

VN-V685U/VN-V686BU

Internal Dome Design

Normally recessed into a false ceiling to provide minimal intrusion in any indoor location. Or, when surface-mounted the sleek design will let it blend into a variety of environments for inconspicuously effective surveillance.

Indoor Model

VN-V686WPBU

External Dome Design

Made to IP66 standards, the housing provides complete protection from the elements but still provides crisp, clear images of its surroundings. Materials used will provide long-lasting service over years of harsh weather conditions.

Outdoor Model

● **Quick Comparison**

	VN-V686BU	VN-V685U	VN-V686WPBU
Type	Indoor	Indoor	Outdoor
PoE	●	●	●
Zoom Ratio	36x Optical	27x Optical	36x Optical
Direct Drive Motor	●	●	●
Dust & Waterproof			●

Direct Drive Motor – Breakthrough mechanism for more accurate and reliable camera movement

The VN-V686/V685 Series incorporates a newly-developed Direct Drive Motor for Pan/Tilt operation. Instead of a conventional belt-type mechanism, it can provide monitoring with more precision, less operation noise, and superior durability.

■ See what's good about Direct Drive Motor Mechanism!

Super Fast (400°/sec) & Super Slow (0.04°/sec) Pan/Tilt Performance

With a maximum 400°/sec. movement, you won't miss a crucial scene. Even when pan/tilting manually, the mechanism is very responsive allowing stress-free joystick operation. Furthermore, extremely slow movement of 0.04°/sec. is possible, so you can take a good look at the scene even at high zoom rates, thanks to the slow and smooth movement.

Super Accuracy of ±0.03° for Preset Positions

With an accuracy of 0.03°, it can precisely maintain preset camera positions even after frequent panning and tilting, which becomes especially important at high zoom magnifications. With an ordinary camera (with low accuracy such as 0.1°), the camera position gradually shifts each time the camera is panned or tilted, so that after frequent usage the position becomes totally different from the initial correct position.

■ Conventional belt-type unit with low accuracy

Position A

Camera positions rotate as preset
▶ B ▶ C ▶ D ▶ E ···

Back to Position A

Becomes different from initial position.

■ Direct Drive Motor with 0.03° accuracy

Position A

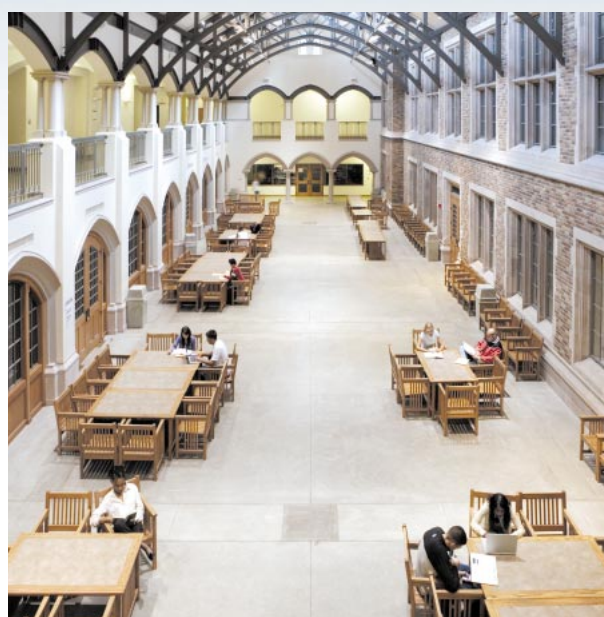Camera positions rotate as preset
▶ B ▶ C ▶ D ▶ E ···

Back to Position A

Maintains almost the same position.

Super Silent Operation of 37dB or lower

The mechanical noises of a belt-driven PTZ camera are absent. In fact, the operating noise as measured from a mere 1m away from our camera amounted to a quiet approx. 37dB. This makes it ideal for usage in locations where noise should be avoided, such as hospitals, museums, libraries and offices.
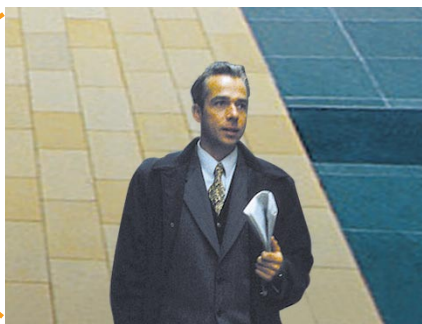
Super Durability and Reliability

Direct Drive is a very simple mechanism. The number of parts in the Direct Drive is far less than that of the belt-driven PTZ, so one can expect the durability to be approximately 160%. And since the Direct Drive is completely belt-less, there is no possibility of malfunction due to belts that will break on a regular basis. The simplified mechanism greatly reduces the chances of malfunction and increases reliability.

Images are explanatory purposes and are not actual images attained using this product.

36x Optical Zoom for Incredible Magnification (VN-V686BU/V686WPBU)

36x

The VN-V686BU and VN-V686WPBU come with a powerful 36x optical zoom to provide incredible magnification with full optical quality. It is powerful enough to allow identification of a face or a license plate located far away. (27x zoom for the VN-V685U)

Quick and Easy Installation and Maintenance

Thanks to its "One-touch lock" mechanism, installation is extremely easy. Simply insert the camera unit to the bracket, and that's all, greatly reducing time and cost for installation and maintenance.
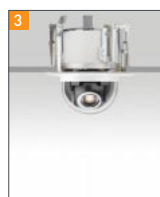
● **VN-V686BU/V685U** (Eg.: Ceiling recessed installation with WB-S685U*) *Note: WB-S685U ceiling recessed bracket is not available on the US market due to specific building code regulations.

1 Install the ceiling a bracket (option) on the ceiling, and screw the camera's ceiling mount section onto it at 3 points.	**2** Push the camera straight up into the ceiling mount section. If done correctly, you will hear a click as it locks into place.	**3** Cover the unit with the Ceiling Panel (option), and you're finished.	**4** To remove, press the Lock buttons located on both sides of the camera to release the locks, then pull the camera straight down.

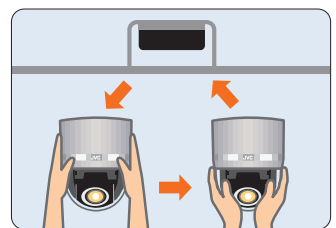● **VN-V686WPBU** (Eg.: Wall mount installation)

1 Insert the camera's mounting hole over the wall's anchor bolt, and tighten the nut to affix. (Bolt in 4 locations to secure the camera.)

2 Run the cable through the inside of the arm and then cap it, and you're finished.

● **Easy Maintenance and Replacement**

VN-V686/V685's plug-and-play design makes maintenance easy too. You can replace only the camera unit with the base unit remaining attached. All preset settings will resume so that you can minimize operation downtime due to maintenance.

Plug-and-Play !

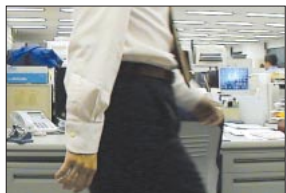## Ecology-Conscious PoE for Saving Power and Costs

Built-in PoE (Power over Ethernet) allows the camera to be activated through a LAN cable connection. Both power supply and video transmission are covered by a single cable, reducing costs for cables, installation, and power. With a power consumption XX% lower than conventional models, the VN-V686/V685 Series can minimize impact on the environment.

■ Full-featured intelligent security camera for a variety of environments

Progressive Output for Clearer Images

The VN-V686/V685 series progressive output images are optimal for monitoring on LCD or TFT monitors. You can obtain jaggy-free noiseless images even for moving objects.

Progressive Output

Interlaced Output

Easy Wide-D Function for backlight compensation

This function is equivalent to the conventional Wide Dynamic Range function, allowing pictures to be adjusted to identify details of the subject by adjusting gamma curve even in difficult backlit conditions.

Normal picture

Adjusted with Easy Wide-D

IR Cut Filter for Round-the-Clock Surveillance

The IR cut filter automatically switches between ON and OFF according to the level of ambient light. In daytime it outputs a high-quality colour image, and at night the filter mechanism removes the IR filter to output black-and-white images with greater sensitivity.

(When utilising IR lamps, an external trigger for night mode is recommended.)

Privacy Mask for Protecting Intrusive Monitoring

Up to 8 masked areas can be set as hidden areas to protect subjects from invasion of their privacy.

Without Privacy mask

With Privacy mask

Proven Reliability with JVC Standard

Assurance of reliability comes not only from JVC's long years of experience and solid track record, but also by inspecting every single product at our QC facility based on our strict quality standards. For all models, this includes grueling tests for Pan/Tilt and Zoom in/out movement accuracy, and for the outdoor model, severe tests against water, dust, and shocks are applied to ensure stable performance that conforms to the IP66 Standard.

● **Tests like these are applied to each and every model. Count on durability.**
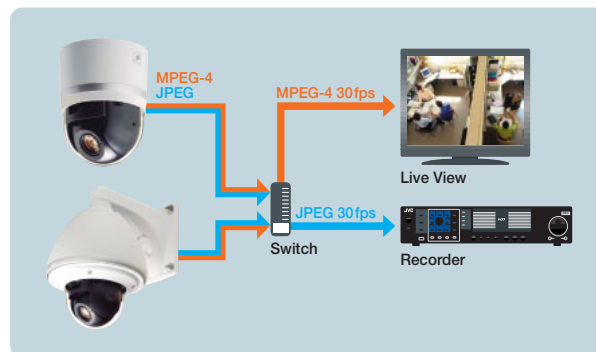
2 million times of zooming	4 million times of focusing	5 million times of panning

Numbers are guides and vary depending on the usage conditions.

MPEG-4/Motion JPEG Full-Frame Dual Stream

The VN-V686/V685 series can stream both MPEG-4 and Motion JPEG VGA images simultaneously at the full frame rate (30fps for each stream). MPEG-4 distribution is ideal where monitoring with smooth, high frame rate images is required within a limited bandwidth. Motion JPEG images are useful when you need to record images as evidence data, because of the high quality still pictures it can provide.

MPEG-4 JPEG — MPEG-4 30fps — Live View
JPEG 30fps — Switch — Recorder

Electronic Sense-Up for Low-Light Situations

Electronic sense up function provides higher sensitivity level for monitoring in dark locations by lengthening the exposure time automatically.

CRT/LCD Selectable Display Mode

By choosing the display mode that matches the monitor being used, you'll get images with optimal brightness regardless of whether you are using a CRT or LCD monitor.

Image Stabilizer

Even in cases where the camera is shook by the wind or vibrations coming from its surroundings, the Image Stabilizer function helps reduce image blur. This function is invaluable in outdoor setups, such as Pendant mount style installations which are especially susceptible to the effects of vibrations.

Motion Detection and Tracking

This function outputs an alarm whenever movement is detected within a pre-specified area of the image. It can also be used to automatically track a moving object or person.
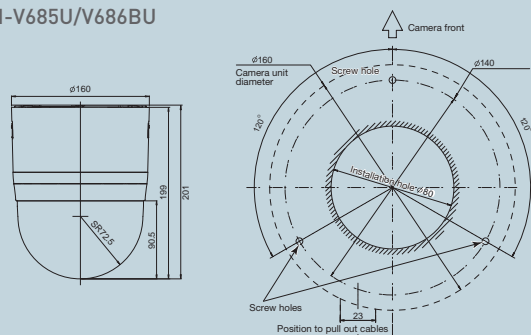
(The blue frame of the detected subject is shown only in Demonstration Mode.)
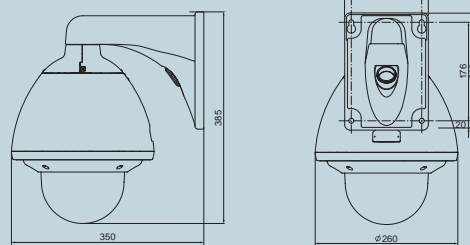
● Dimensions

VN-V685U/V686BU

ø160
Camera unit diameter
Screw hole
ø160
ø140
Camera front
120°
120°
Installation hole ø80
Screw holes
23
22.5
Position to pull out cables

ø160
199
201
90.5
SR72.5

Unit: mm

VN-V686WPBU

152
126
176
213
20
385
350
ø260

Unit: mm

● Specifications

		VN-V685U	VN-V686BU	VN-V686WPBU
Image device		1/4" IT CCD		
Lens	Zoom ratio	27x optical and 32x digital	36x optical and 32x digital	
	Focal length	f=3.43mm to F=92.6mm	f=3.43mm to f=122mm	
	Max. aperture ratio	F1.6 (WIDE) to F3.5 (TELE)	F1.6 (WIDE) to F4.5 (TELE)	
	Max. close-range	Approx. 1.8m (TELE), Approx. 0.6m (WIDE)		
	Focus	Manual/Easy AF/One push AF		
Day/Night		Automatic Day/Night IR cut filter		
Minimum illumination	Color	1.0 lx (50%, AGC SUPER) 0.5 lx (25%, AGC SUPER)		
	B&W	0.08 lx (50%, AGC SUPER) 0.04 lx (25%, AGC SUPER)		
Pan/Tilt range		Pan: 360° endless / Tilt: -5° to 185°		
Pan/Tilt speed		0.04° to 400°/sec		
Picture compression		Motion JPEG MPEG-4: Part2 (ISO/IEC 14496-2), Profile: SP		
Picture resolutions		640x480, 320x240		
Frame rate and streaming		Up to 30 fps per each stream of Motion JPEG and MPEG-4 in 640x480 resolution simultaneously (Full frame dual stream)		
Compression levels		JPEG: Variable (VFS) 7 levels / Average (AFS) VGA (10KB–100KB), QVGA (3KB – 33KB) MPEG-4: Constant (CBR) / Variable (VBR), Bit rate adjustable 64kbps – 8000kbps		
Image settings		Configurable AGC, Sens-up, Day/Night, Shutter speed, BLC, ALC, White balance (ATW/AWC), Gamma curve, Black level, Enhance range, Color level, Exposure value, Noise reduction, Monitor type, Privacy mask (8 areas), Image stabilizer		
PTZ function		100 preset positions, Auto flip, Auto pan, Auto trace, Auto patrol, Auto return, Motion detect, Auto tracking		
Shutter speed		2.1sec (Sens-up) to 1/10000 sec		
Security		3 levels password, IP address filtering, HTTPS encryption (for setting)		
Max. clients		20 simultaneous users, Unlimited users by multicast		
Alarm/Event management		Trigger: Built-in motion detection, External alarm input x 2 or Schedule Event: Pre/post recording , FTP sending, Notification over TCP/UDP, E-mail, External output x 2, Periodic FTP and Preset position, Pre/Post alarm buffer of 8MB		
Connectors		RJ-45 for Ethernet 10Base-T/100Base-TX Terminal block for 2 alarm imput, 2 output Alternative power connection		
Dust and water protection		–		IP66
Power		24 VAC (50Hz/60Hz), 1.2A 48 VDC (PoE, IEEE802.3af class0), 12.95W		24 VAC (50Hz/60Hz), 2.2A (With heater) 48 VDC (PoE, IEEE802.3af class0), 12.95W (Without heater)
Operating temperature		-10°C to 50°C/14°F to 122°F (0°C to 40°C /32°F to 104°F recommended)		-40°C to 50°C /14°F to 122°F, always power on (0°C to 40°C/32°F to 104°F recommended)
Installation and maintenance		Web based setting tool, Camera search tool, Firmware update over HTTP		
Recommended operating environment		OS: Windows Vista Business (SP1), Windows XP Pro (SP2)/Home (SP2) CPU: Pentium4 2GHz, Memory: 1GB, HDD space: 512MB Display and video card: 1024x768 True color (24bit or 32 bit), VRAM 8MB Browser: IE7.0 for Windows Vista, IE6.0 for Windows XP		
System integration support		Open API for application integration, ActiveX Viewer, QoS, Embedded Linux operating system		
Supported protocols		TCP/IP, UDP/IP, HTTP, FTP, ICMP, ARP, RTP, DHCP, SNTP, SMTP, DSCP, IGMP, IPv6, VSIP		
Video management software/hardware (Not included)		VR-N900U/1600U/1600E: JVC Network video recorder for viewing, recording and archiving up to 9/16 cameras VN-RS800U: JVC free video management software for viewing, recording and archiving up to 32 cameras (JPEG stream only)		
Dimensions (WxHxD)		ø160mm x 201mm (H)		ø260mm (incl. housing) x 385mm (H: incl. bracket) x 350 (D: incl. bracket)
Weight		1.9kg (4.2lbs)		5.5kg (12.2lbs)

● Optional Accessories

For VN-V685U/V686BU

• WB-S682U Wall mount

• WB-S681U Pendant mount pole

• WB-S685U Ceiling recessed bracket

For VN-V686WPBU

• WB-S684U Outdoor pendant mount pole

Note: For more information on optional brackets, please consult your local JVC dealer.

Design and specifications subject to change without notice.

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UKAS QUALITY MANAGEMENT 091-A

■ Hachioji Business Centre of Victor Company of Japan, Ltd. has received ISO14001 Certification for environmental management and ISO9001 Certification for quality assurance management.