

HARDWARE INSTALLATION GUIDE

VC58SMi – 1.3 Megapixel Box Type IP Camera
VC58SM3i – 3.0 Megapixel Box Type IP Camera
VC58EHi – Standard D1 Box Type IP Camera

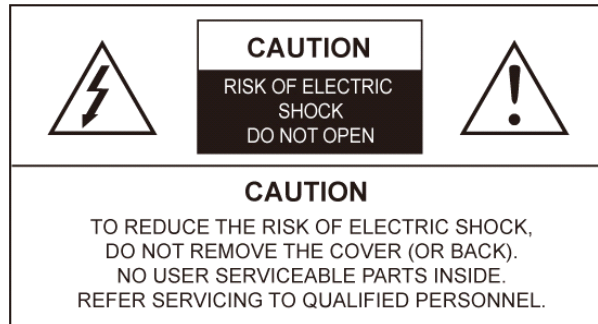


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VISION Vision Hitech Co., Ltd.

PRECAUTIONS

By selecting this product, you have decided to use a professional device that guarantees highest quality and reliability. We would like to thank you very much for your confidence and kindly ask you to read the following instructions carefully before installation and operation in order to take full advantage of all quality features regarding this product.



The lighting flash with an arrowhead symbol, within an equilateral triangle is intended to alert the user to the presence of non-insulated dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

INFORMATION

This equipment has been tested and found to comply with limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at its own expense.

WARNING

Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

CAUTION – To prevent electric shock and risk of the fire hazards

- Do NOT use power source other than that specified.
- Do NOT expose this appliance to rain or moisture.

Trademarks

All names used in this manual for hardware and software are probably registered trademarks of respective companies.

This installation should be made by a qualified service person and should conform to all local codes.

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1. Precautions

- Please read the manual carefully before the installation in order to set up the camera correctly and to obtain the best picture quality.
- Please keep the manual in good condition for your future reference and service application.
- Installation and services should be only carried out by an authorized personnel according to local safety regulations.
- If any liquid or solid matter gets into the housing, immediately disconnect the camera from power supply and have it checked by your authorized dealer before reusing.
- Avoid installing the camera at extremely hot or cold places.
- If you are not a certified person, never try to dismantle the camera. To avoid electric shock, never remove the screws or covers. There are no parts inside that need maintenance by the user. All maintenance should be carried out by qualified personnel.
- Avoid installing the camera at a place of high humidity.
- Avoid installing the camera at the place exposed to gas or oil.
- Keep the top glass of the lens always clean in order to obtain the best picture quality all the time. Be careful not to be stained by fingerprint.
- Don't face the camera directly toward sunlight or sunlight reflecting area. CCD may go defective at this condition.
- Please give a special attention to keep the unit from dangerous drop or external shock during the process of transportation or handling.
- Never try to touch the camera in wet hand. It may cause an electric shock.
- Do not expose the camera to radioactivity. It causes a serious damage on the CCD.

2. Limitation of liability

This publication is provided "AS IS" without warranty of any kind, either express or implied, including but not limited to, the implied warranties of merchantability, fitness for any particular purpose, or non-infringement of the third party's right. This publication could include technical inaccuracies or typographical errors. Changes are added to the information herein, at any time, for the improvements of this publication and/or the corresponding product(s).

3. Disclaimer of warranty

In no event shall seller be liable to any party or any person, except for replacement or reasonable maintenance of the product, for the cases, including but not limited to below:

- (1) Any damage and loss, including without limitation, direct or indirect, special, consequential or exemplary,

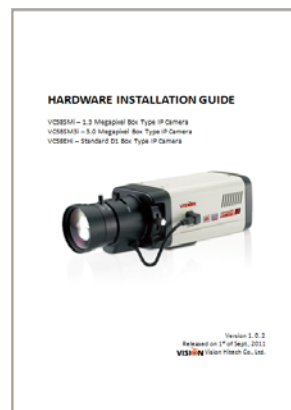
arising out of or relating to the product;

- (2) Personal injury or any damage caused by inappropriate use or negligent operation of the user;
- (3) Unauthorized disassemble, repair or modification of the product by the user;
- (4) Inconvenience or any loss arising when images are not displayed, due to any reason or cause including any failure or problem of the product;
- (5) Any problem, consequential inconvenience, or loss or damage, arising out of the system combined by the devices of third party.
- (6) Any claim or action for damages, brought by any person or organization being photogenic subject, due to violation of privacy with the result of that surveillance-camera's picture, including saved data, for some reason, becomes public or is used for the purpose other than surveillance.

4. Package Contents



IP Camera



Hardware Installation Guide



Auto Iris Lens Plug



C-Mount Adaptor



Power Adaptor (Option)

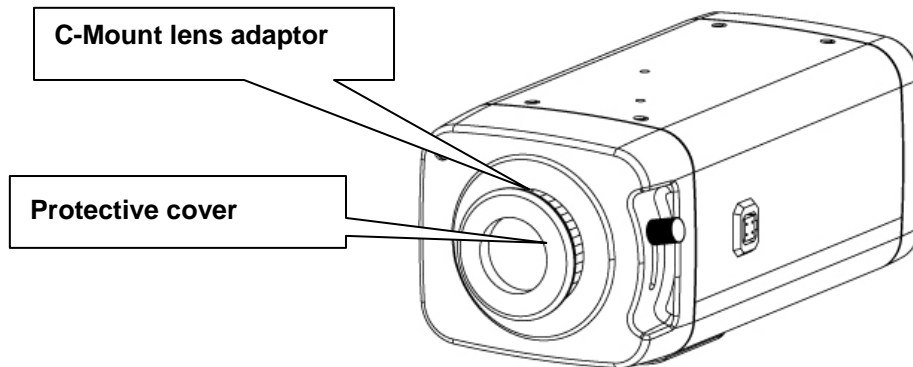


CD

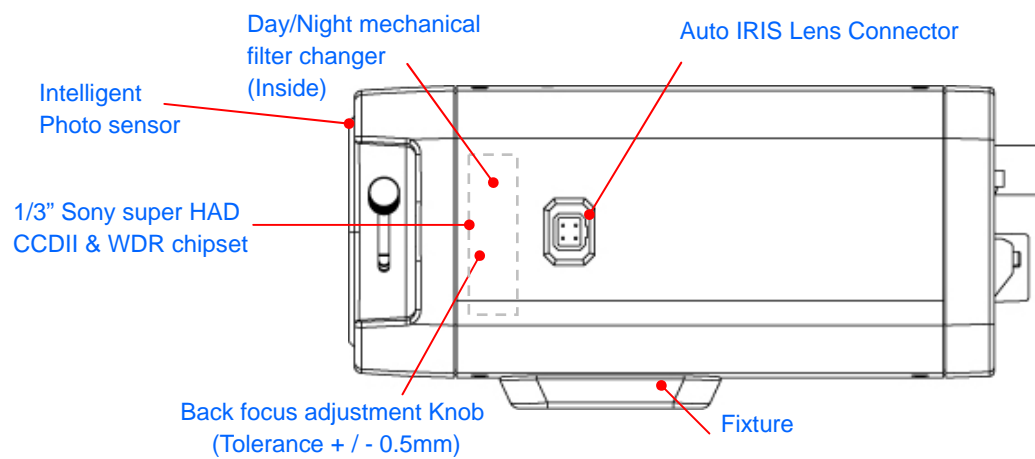
- Hardware Installation Guide (PDF)
- IP Camera Manual (PDF)
- NVR Pro Manual
- NVR Lite (16Ch) Program
- IPScan Utility Program (IP Installer)

5. Name and function of each part

5-1. Front

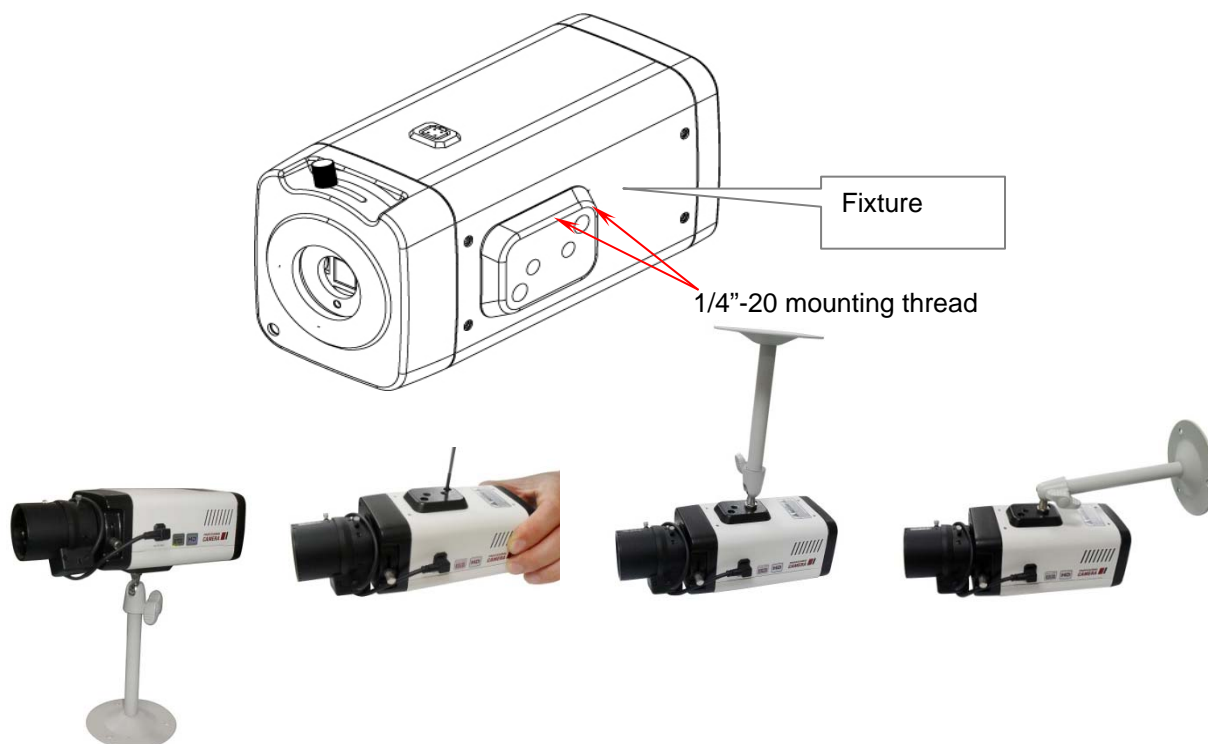


5-2. Right side



- Back focus adjustment Knob: Fine tuning of the Back Focal Length

5-3. Bottom



Fixture can be separated and attached on the top side as well.

Please use the supplied clamp screws only to change the position of the bracket.

Using screws more than 5mm depth can do a serious damage to the inside of this camera.

* Use an international standard 1/4"-20 mounting screw to install the camera.

5-4. Rear side



Power Connector: Only use the supplied AC adapter to avoid any possible damage from electric shock.

Network Connector: Connect 10Base-T Ethernet or 100Base-TX Fast Ethernet cable. When use PoE, connect Ethernet cable coming from PoE injector or switch.

Sensor/Alarm Connector: To connect external devices such as infrared sensors, alarms or motion detectors.

Audio-out: Use to connect to an external speaker for audio communication. The audio sent over the network from a connected client computer can be delivered through this externally connected speaker.

Audio-in: The external microphone for audio input. The live audio can be captured and transmitted to the connected camera client via the use of this MIC.

RESET: Restore the factory default settings.

Power LED (Green): Once power is supplied to the camera, the green LED will light.

Operating Status LED/Network Activity LED (Yellow): This LED indicates the camera's operating status. Once power is supplied and the camera is connected to network, the LED lights and then blinks very fast as long as the video is transmitted on the network during normal operation. When there is no video transmission, the LED stops blinking.

SD Card Insert Hole : Insert SD Card for local storage

Analog Video Out : Utilizes analog video by connecting to DVR or monitor, or can be connected to video tester when installing camera.

6. Installation

6-1. Lens

Lens is not supplied with the unit. C-Mount or CS-Mount type of lens is useable.

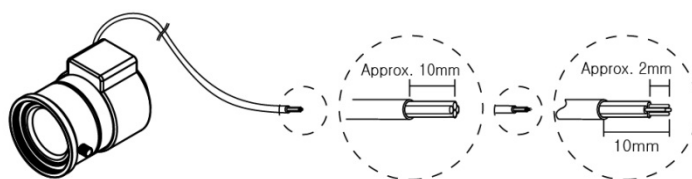
Please select a lens that has a good F-Stop number in order to get the best picture quality. Use of DC auto iris lens is recommended to achieve the best results for operating this product effectively.

Caution

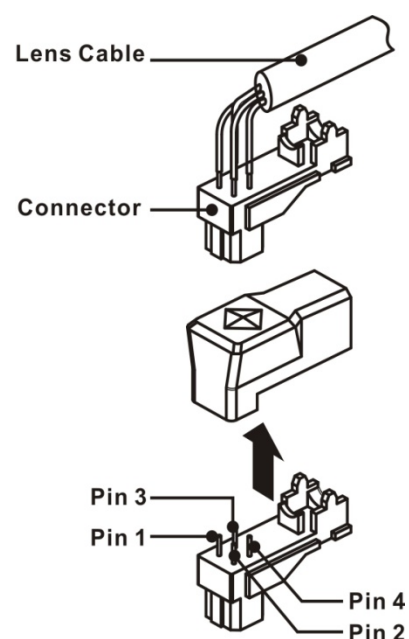
Please make sure the surface of the lens is always clear. Clean dirt or water drops with soft cloth in order to avoid the picture blooming or reflection.

6-2. When using an auto iris lens (DC-drive)

1. Please take off the sleeve outer cable of the lens by 10mm
2. Please take off the sleeve inner cable of the lens by 2mm.



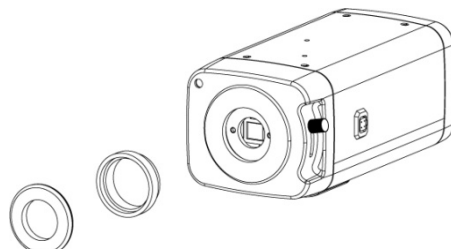
Pin No.	Lens
	DC
No.1 Pin	Damping -
No.1 Pin	Damping +
No.1 Pin	Drive +
No.1 Pin	Drive -



3. Solder the wires on the pin-connector (iris-jack) supplied with the lens according to the pin configuration as shown in the drawing.
4. Assemble the lens.
5. Connect the Auto Iris jack.
6. Adjust the DIP S/W to DC according to the type of lens.

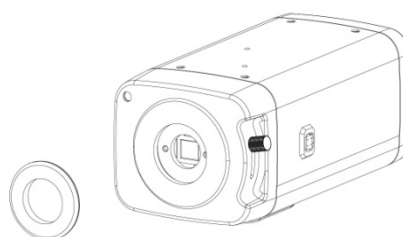
6-3. When using a C-mount Lens

- Please assemble C-Mount adaptor.
- C-Mount adaptor is included in the package.
- Fix the lens by turning it clockwise.



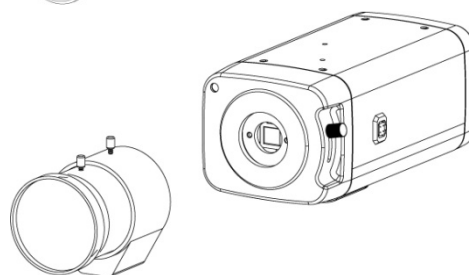
6-4. When using a CS-mount Lens

- Take off the Protection cover.
- Assemble the CS-MOUNT lens by turning it clockwise.



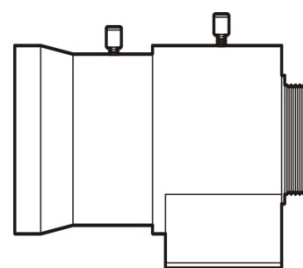
- When used with an Auto Iris lens, please insert the iris jack into the Iris socket which is located on the right side of the camera.

- Please set the lens selection to DC on the OSD setting.



Caution

- Use the lens as shown in the picture here.
- When the lens is out of the spec, it could damage the camera inside or may not be correctly fitted with the camera.
- Use the lens less than 450g. Heavier lens can damage the camera.



C-MOUNT Lens : Less than 11mm
CS-MOUNT Lens : Less than 6mm

6-5. Video Monitor

Connect Video cable with BNC-male connector to the monitor



6-6. 12V DC Power

This IP camera uses 12VDC or IEEE802.3af PoE for power source. Please make sure to use a UL/CE approved and 12VDC/500mA regulated power supply or standard PoE injector, mid- or end-span for input power.

PoE (Power over Ethernet) Support

Power over Ethernet, or PoE, technology describes a system to transmit electrical power, along with data, to remote devices over standard twisted-pair cable in an Ethernet network. This technology is useful for powering IP telephones, wireless LAN access points, network cameras, remote network switches, embedded computers, and other appliances where it would be inconvenient and expensive. (Main wiring must be done by qualified and/or licensed person.)



The standard IEEE 802.3af describes two types of devices: Power Sourcing Equipment (PSE) and Powered Devices (PD). Power sourcing equipment provides power to the powered devices. The network camera represents the powered device, whereas a PoE Injector is a PSE device. The VISION Network Camera models are IEEE 802.3af standard PoE compliant. They can be used with any IEEE 802.3af-compliant PoE injector, PoE switch, PoE mid-span and PoE end-span.

Various types of PoE equipments



Power over Ethernet (PoE) Injector

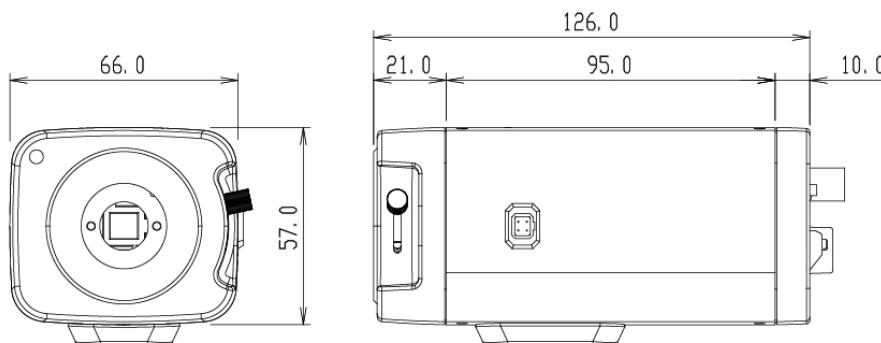


PoE Mid-span



PoE Office Switch

7. Dimension (mm)



8. Specification

8-1. VC58SMi : 1.3 Mega Pixel HD IP Camera

Classification		Specification
General	CPU	32-bit ARM9 RISC CPU up to 533MHz, 32KB I/D-Cache, MMU
	Video Buffer	16Mbyte Video Frame Buffer
	Flash	32 Mbyte Flash Memory
	SDRAM	256Mbyte
Image Pickup	Image sensor	1.3 Megapixel 1/3" SONY progressive scan CMOS image sensor
	Total Pixels	1384(H) x 1076(V) 1.49 Megapixel
	Effective Pixels	1329(H) x 1049(V) 1.39 Megapixel
	S/N Ratio	More than 50dB
	Min. Illumination	0.5 Lux with DSSX2 (F1.2, 30IRE, AGC On),
	Day & Night	D/N Output Port, ICR
	Lens (Not included)	C/CS Mount, DC Iris
Video	Video compression	H.264 baseline profile, Motion JPEG
	Resolutions	Up to 1280 x 720
	Frame rate	H.264 Up to 30fps with 1280x720
		MJPEG Up to 15fps with VGA (Simultaneous dual with H.264)
		MJPEG single stream up to 30 fps with 720p
	Video streaming	Support multi stream with H.264, MJPEG
		Adjustable frame rate
		VBR/CBR in H.264
	Pan/Tilt/Zoom	Digital PTZ
	Image setting	Day & Night
		Auto White Balance
		Auto Exposure
		Privacy Mask
		Effect - Color, Sharpness, Mirror/V-Flip, etc.
	Output	BNC x1, 1.0Vp-p, 75 ohm Composite Video, NTSC/PAL
Audio	Audio streaming	Two-way, full duplex
	Audio compression	G.711
	Sample Rate	8KHZ
	Data Rate	64Kbps
	Audio input	Microphone input /1 x Line-In (Single Mono)
	Audio output	Line output/ 1 x Line-Out (Single Mono)
Network	Security	Password protection
		User access log
		HTTPS encryption
	Supported protocol	HTTP, HTTPS, FTP, SMTP, UPnP, DNS, DynDNS, NTP
		RTSP, RTP, TCP, UDP, ICMP, DHCP
	Wireless LAN	IEEE 802.11 b/g/n (for VC58SMi-W)
System integration	Intelligent video	Motion detection up to 1280x720 with 32x24 blocks
	Alarm trigger	Motion detection
		External input/Normal Open/Close Type

	Alarm events	File upload via ftp, e-mail
		Notification via email, FTP and TCP
		External output activation/Normal Open/Close Type
	Video buffer	16MB pre-alarm and post-alarm
	Recording	Save to SD/SDHC card with event mode and continuous mode
	Firmware upgrade	Remote upgrade via network
	API	CGI Interface document
		ActiveX Interface(ocx(dll) + document)
Physical	RESET Button	1 x Factory Reset Button
	Power Source	DC 12V/1.5A, PoE(Power over Ethernet): 802.3af
	Power Consumption	Max. 5.5W
	Net Weight	580g (Camera Only, without Lens)
	LED's	Power, Network Connection
	Dimension	66mm(W) X 57mm(H) X 126mm(D)
Environment	Operating Temperature	-25 degree~50 degree Celsius (-13F~122F)
	Storage Temperature	-25 degree~60 degree Celsius (-13F~140F)
Software	Included Software	NVR Lite (16 Channel), IP Installer (Windows Only)
Package	Package Contents	Network Camera, Use Manual, External Power Adaptor, Bracket, Software CD

8-2. VC58SM3i : 3 Megapixel Full HD IP Camera

Classification		Specification
General	CPU	32-bit ARM9 RISC CPU up to 533MHz, 32KB I/D-Cache, MMU
	Video Buffer	16Mbyte Video Frame Buffer
	Flash	16 Mbyte Flash Memory
	SDRAM	256Mbyte
Image Pickup	Image sensor	3.0 Megapixel 1/2.8" SONY progressive scan CMOS image sensor
	Total Pixels	2144(H) x 1588(V) 3.4 Megapixel
	Effective Pixels	2096(H) x 1561(V) 3.27 Megapixel
	S/N Ratio	More than 52dB
	Min. Illumination	1 Lux with DSSX2 (F1.2, 30IRE, AGC On),
	Day & Night	D/N Output Port, ICR
	Lens (Not included)	C/CS Mount, DC Iris
Video	Video compression	H.264 baseline profile, Motion JPEG
	Resolutions	Up to 1920 x 1080
	Frame rate	H.264 Up to 15fps with 1920x1080
		MJPEG up to 15 fps with VGA (Simultaneous dual with H.264)
		MJPEG single stream Up to 30fps with 720P resolution
	Video streaming	Support multi stream with H.264, MJPEG
		Adjustable frame rate
		VBR/CBR in H.264
	Pan/Tilt/Zoom	Digital PTZ
	Image setting	Day & Night

		ATR (WDR)
		Auto White Balance
		Auto Exposure
		Privacy Mask
		Effect - Color, Sharpness, Mirror/V-Flip, etc.
	Output	BNC x1, 1.0Vp-p, 75 ohm Composite Video, NTSC/PAL
Audio	Audio streaming	Two-way, full duplex
	Audio compression	G.711
	Sample Rate	8KHZ
	Data Rate	64Kbps
	Audio input	Microphone input /1 x Line-In (Single Mono)
	Audio output	Line output/ 1 x Line-Out (Single Mono)
Network	Security	Password protection
		User access log
		HTTPS encryption
	Supported protocol	HTTP, HTTPS, FTP, SMTP, UPnP, DNS, DynDNS, NTP
		RTSP, RTP, TCP, UDP, ICMP, DHCP
	Wireless LAN	IEEE 802.11 b/g/n (for VC58SM3i-U)
System integration	Intelligent video	Motion detection up to 1920x1080 with 32x24 blocks
	Alarm trigger	Motion detection
		External input/Normal Open/Close Type
	Alarm events	File upload via ftp, e-mail
		Notification via email, FTP and TCP
		External output activation/Normal Open/Close Type
	Video buffer	16MB pre-alarm and post-alarm
	Recording	Save to SD/SDHC card with event mode and continuous mode
	Firmware upgrade	Remote upgrade via network
Physical	API	CGI Interface document
		ActiveX Interface(ocx(dll) + document)
	RESET Button	1 x Factory Reset Button
	Power Source	DC 12V/1.5A, PoE(Power over Ethernet): 802.3af
	Power Consumption	Max. 5.5W
	Net Weight	580g (Camera Only, without Lens)
Environment	LED's	Power, Network Connection
	Dimension	66mm(W) X 57mm(H) X 126mm(D)
	Operating Temperature	-25 degree~50 degree Celsius (-13F~122F)
Software	Storage Temperature	-25 degree~60 degree Celsius (-13F~140F)
	Included Software	NVR Lite (16 Channel), IP Installer (Windows Only)
Package	Package Contents	Network Camera, Use Manual, External Power Adaptor, Bracket, Software CD

8-3. VC58EHi : Standard D1 IP Camera

Classification		Specification
General	CPU	32-bit ARM9 RISC CPU up to 533MHz, 32KB I/D-Cache, MMU
	Video Buffer	16Mbyte Video Frame Buffer

	Flash	16 Mbyte Flash Memory
	SDRAM	256Mbyte
Image Pickup	Image sensor	1/3" Sony 960H Ex-view HAD CCD II
	Effective Pixels	NTSC : 976(H) x 494(V), PAL : 976(H) x 582(V)
	H. Resolution	650TV Lines(Color)/ 700TV Lines(B/W)
	Synchronizing system	Internal
	Scanning system	NTSC : 525 Lines PAL : 625 Lines 2:1 Interlaced
	S/N Ratio	More than 52dB (AGC Off)
	Min. Illumination	0.1 Lux (Color), 0.01Lux (B/W)
	Shutter Speed	NTSC:1/60~1/100,000 sec. PAL:1/50~1/100,000 sec.
	Gamma Correction	Standard $\gamma = 0.45$
	Iris Control	DC/ Manual
	Day & Night	D/N Output Port, ICR
	Lens (Not included)	C/CS Mount, DC Iris
Video	Video compression	H.264 baseline profile, Motion JPEG
	Resolutions	Up to D1(NTSC:720X480, PAL:720X576)
	Frame rate	H.264 Up to 30fps at D1
		MJPEG Up to 30fps at D1
	Video streaming	Support multi stream with H.264, MJPEG
		Adjustable frame rate
		VBR/CBR in H.264
	Pan/Tilt/Zoom	Digital PTZ
	Image setting	Day & Night
		ATR (WDR)
		Auto White Balance
		Auto Exposure
		Privacy Mask
		Effect - Color, Sharpness, Mirror/V-Flip, etc.
	Output	BNC x1, 1.0Vp-p, 75 ohm Composite Video, NTSC/PAL
Audio	Audio streaming	Two-way, full duplex
	Audio compression	G.711
	Sample Rate	8KHZ
	Data Rate	64Kbps
	Audio input	Microphone input /1 x Line-In (Single Mono)
	Audio output	Line output/ 1 x Line-Out (Single Mono)
Network	Security	Password protection
		User access log
		HTTPS encryption
	Supported protocol	HTTP, HTTPS, FTP, SMTP, UPnP, DNS, DynDNS, NTP
		RTSP, RTP, TCP, UDP, ICMP, DHCP
	Wireless LAN	IEEE 802.11 b/g/n (for VC58EH-W)
System integration	Intelligent video	Motion detection up to D1 with 32x24 blocks
	Alarm trigger	Motion detection
		External input/Normal Open/Close Type
	Alarm events	File upload via ftp, e-mail
		Notification via email, FTP and TCP

		External output activation/Normal Open/Close Type
	Video buffer	16MB pre-alarm and post-alarm
	Recording	Save to SD/SDHC card with event mode and continuous mode
	Firmware upgrade	Remote upgrade via network
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Physical	RESET Button	1 x Factory Reset Button
	Power Source	DC 12V/1.5A, PoE(Power over Ethernet): 802.3af
	Power Consumption	Max. 5.5W
	Net Weight	580g (Camera Only, without Lens)
	LED's	Power, Network Connection
	Dimension	66mm(W) X 57mm(H) X 126mm(D)
Environment	Operating Temperature	-25 degree~50 degree Celsius (-13F~122F)
	Storage Temperature	-25 degree~60 degree Celsius (-13F~140F)
Software	Included Software	NVR Lite (16 Channel), IP Installer (Windows Only)
Package	Package Contents	Network Camera, Use Manual, External Power Adaptor, Bracket, Software CD

■ Specifications are subject to change without prior notice to enhance performance and stability