HARDWARE INSTALLATION GUIDE

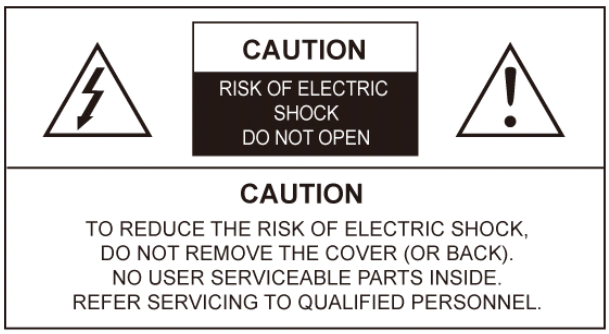
VN6XEHi-Standard D1 Outdoor IR Bullet IP Camera
VN6XSMi - 1.3 Megapixel **Outdoor IR Bullet IP Camera**
VN6XSM3Ti-3 Megapixel **Outdoor IR Bullet IP Camera**

Version 1. 0. 0
Released on 2nd of July., 2012

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;

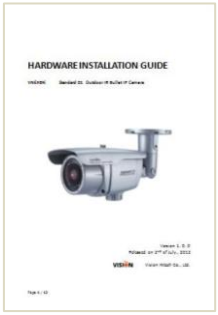
(4) Inconvenience or any loss arising when images are not displayed, due to any reason or cause including any failure or problem of the product;

(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 x 1



Hardware Installation Guide x 1

Crossover LAN Cable x 1

Tapping screws x 4

Plastic anchor x 4

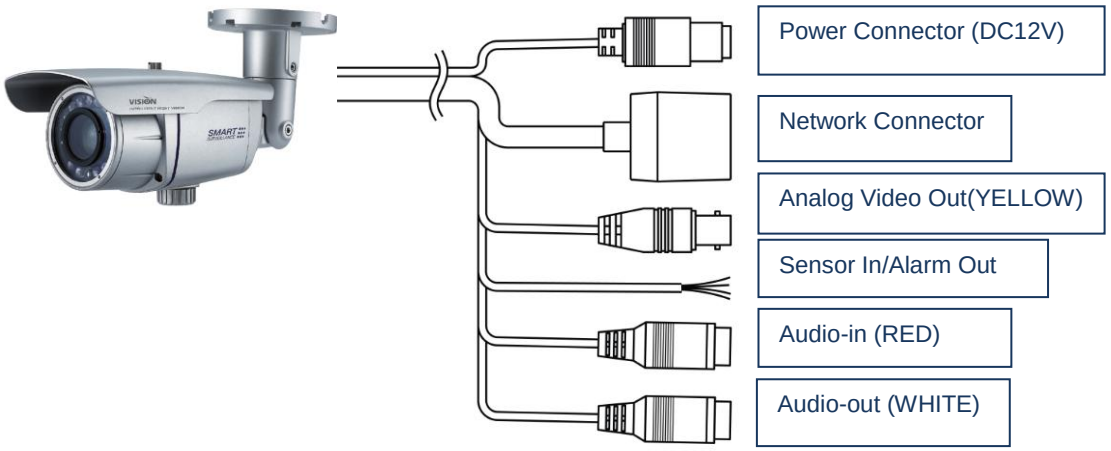
External Video Cable(VN6xEHi) x 1

L-Wrench (3.0mm) x 1

DC12V/1.5A (Option) x 1

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

5. Cable Connection



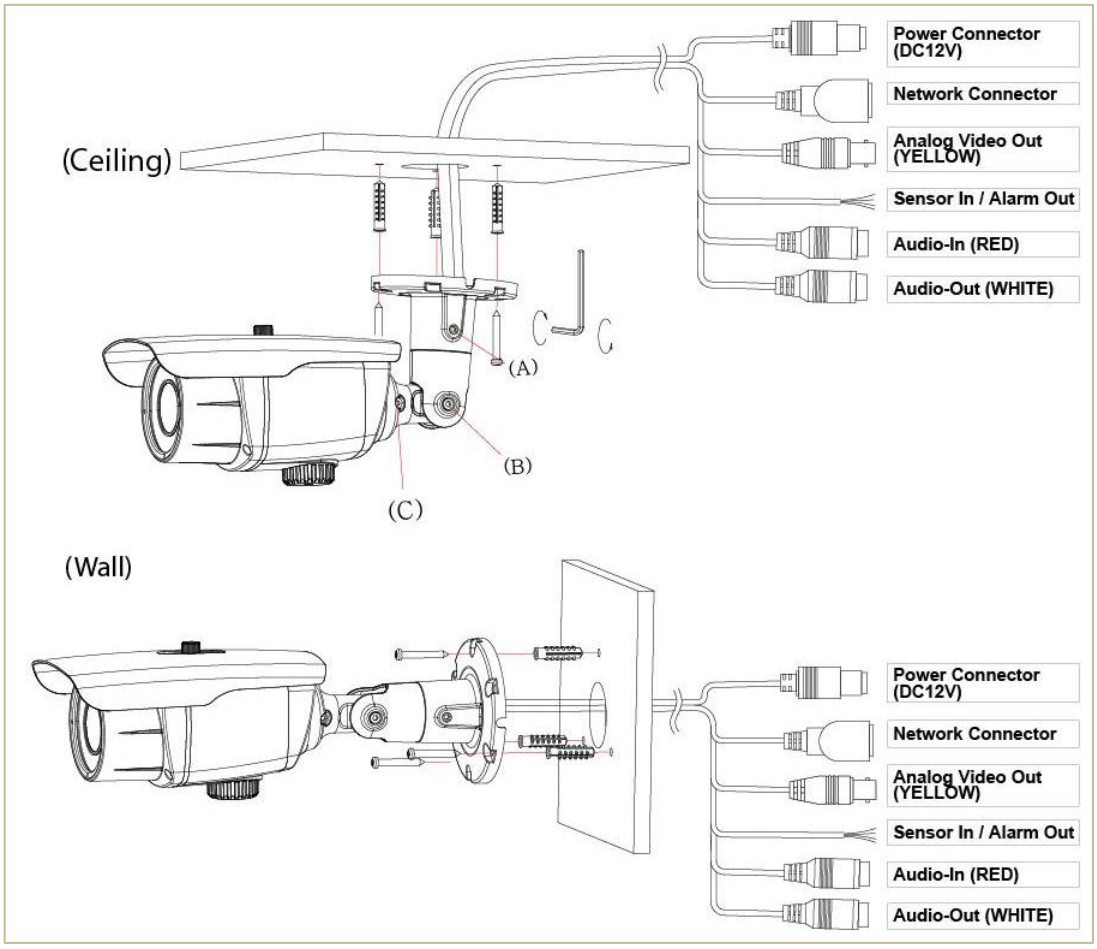
This IP camera uses 12VDC for power source. Please make sure to use a UL/CE approved and 12VDC regulated power supply for input power.

- **Alarm In/out Cable**

COLOR	DESCRIPTION
Sky Blue/Black	GND
Sky Blue	ALARM INPUT 1
Violet	ALARM OUT
Violet/White	COM

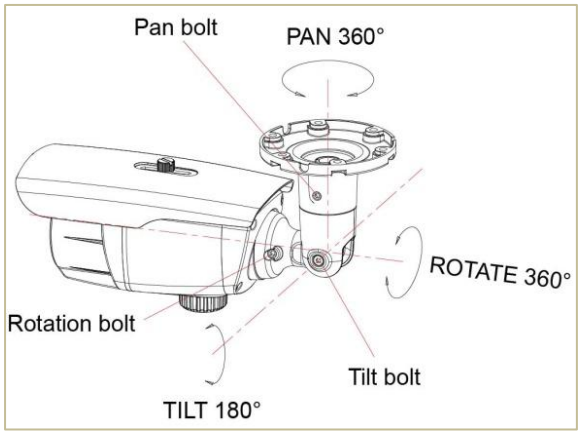
6. Installation

■ How to mount to ceiling / wall



① Drill three screw holes on the wall plate to fix three plastic anchors (supplied) in the holes.
② Fix the plastic anchors in the holes.
③ Position the mounting bracket on the screw points.
④ Fix the mounting bracket by tightening the screws.
⑤ Slightly loosen bolt (A) then adjust tilt(180˚) and rotation(360˚) of the camera using a serration on the bracket and tighten the bolt firmly.
⑥ Slightly loosen bolt (B) then adjust pan(360˚) of the camera and tighten the bolt firmly.

■ Axis Adjustment



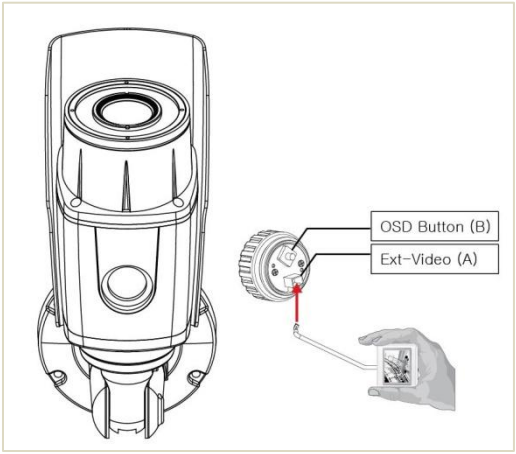
① Pan 360˚
Slightly loosen Pan bolt, then adjust pan of the camera using a serration on the bracket and tighten the bolt firmly again

② Tilt 180˚
Slightly loosen Tilt bolt, then adjust tilt of the camera using a serration on the bracket and tighten the bolt firmly again

③ Rotation 360˚
Slightly loosen Tilt bolt then adjust rotation of the camera using a serration on the bracket and tighten the bolt firmly again

■ Lens external adjustment, EXT-Video

Zoom & Focus External Adjustment with Lens Dial (Patent pending)



- How to use EXT-video

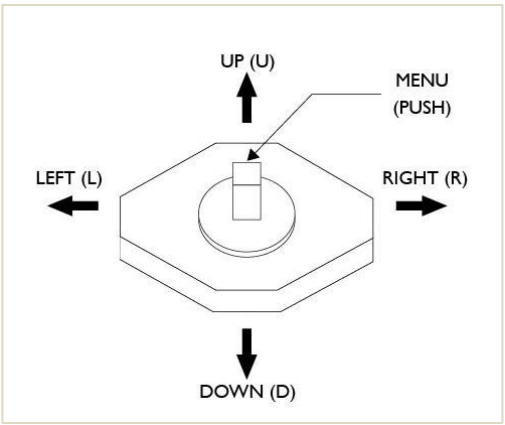
① Turn open the OSD cap counterclockwise. OSD cap is designed to be hanging from the camera even after opening it.

② Connect Extra video output connector (A) to camera tester or local monitor as shown in the above. Then, control the lens by using Zoom & Focus dial.

■ OSD Manual for functions control

- How to use tactile switch on the OSD control

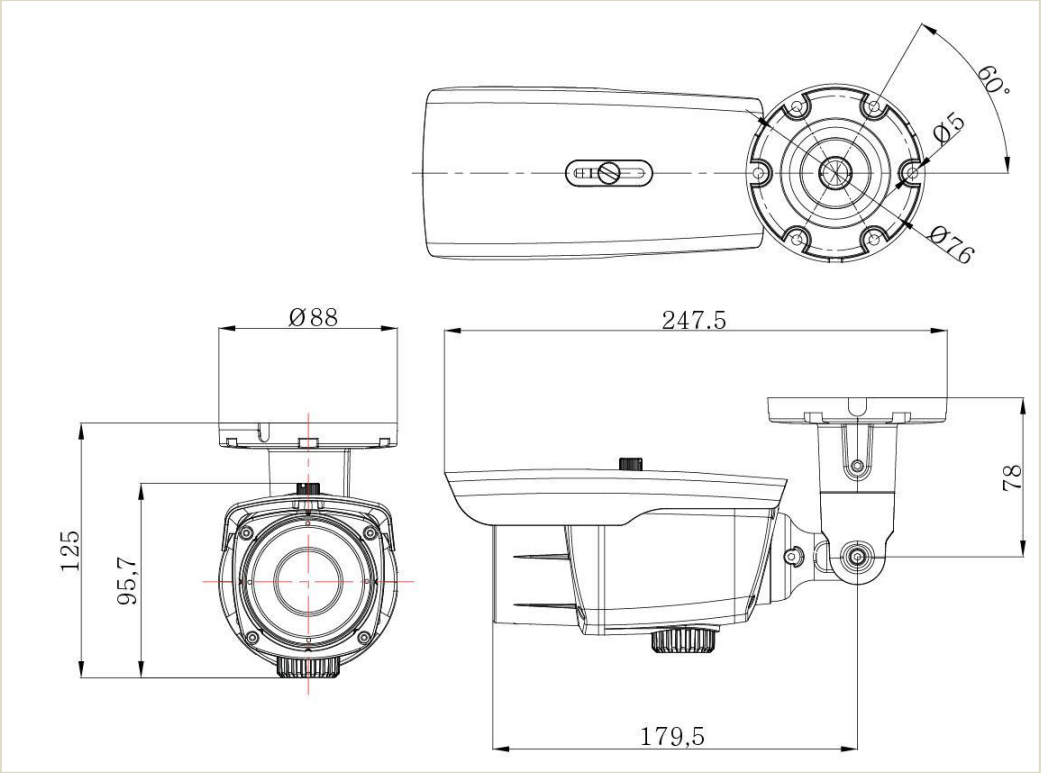
Push – to enter the menu or to save settings.
Push up or down – select functions.or zoom control
Push left or right – to adjust levels or focus control



- OSD MENU(VN6XEHi)

For detailed information regarding OSD menu, refer to 'OSD Manual for Effio-E Cameras'.
The grey colored menus are disabled for IR cameras because 'Smart IR' function is set as 'enabled' by default.

7. Dimension (mm)



8. Specification

8.1. VN6XEHi

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	0Lux (IR On)
	Shutter Speed	NTSC:1/60~1/100,000 sec. PAL:1/50~1/100,000 sec.
	Gamma Correction	Standard γ = 0.45
	Lens	2.8-12mm Motorized zoom lens
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
		Auto White Balance
		Auto Exposure
		Effect - Color, Sharpness, Mirror/V-Flip, etc.
		BNC x1, 1.0Vp-p, 75 ohm Composite Video, NTSC/PAL
		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 (Mono)
	Audio output	Line output/ 1 x Line-Out (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
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	
	Video buffer	16MB pre-alarm and post-alarm	
	Recording	Save to Micro SD 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(Option)	
	Power Consumption	Max. 5.5W	Max. 7.2W with IR On
	Net Weight	520g Appr.(Camera Only)	
	LED's	Power, Network Connection	
	Dimension	87.7mm(W) X 108.7mm(H) X 297mm(D) including Bracket	
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, Software CD	

8.2.VN6XSMi

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 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	0Lux (IR On)
	IR Distance	30M
	Day & Night	ICR
	Lens	3.7mm Mega Pixel Board Lens
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 30fps with VGA 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
		Auto White Balance
		Auto Exposure
		Effect - Color, Sharpness, Mirror/V-Flip, etc.
		BNC x1, 1.0Vp-p, 75 ohm Composite Video, NTSC/PAL
		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 (Mono)
	Audio output	Line output/ 1 x Line-Out (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
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
	Video buffer	16MB pre-alarm and post-alarm
	Recording	Save to Micro SD 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(Option)
	Power Consumption	Max. 5.5W | Max. 5.5W
	Net Weight	520g Appr.(Camera Only)
	LED's	Power, Network Connection
	Dimension	87.7mm(W) X 108.7mm(H) X 297mm(D) including Bracket
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, Software CD

8.3.VN6XSM3Ti

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 50dB
	Min. Illumination	0Lux (IR On)
	IR Distance	30M
	Day & Night	ICR
	Lens Control	Motorized Lens Control
	Lens	3~10mm Vari-focal Auto Iris Megapixel Lens
Video	Video compression	H.264 High profile, Motion JPEG

	Resolutions	Up to 2048 x 1536
	Frame rate	H.264 Up to 15fps with 2048x1536
		MJPEG Up to 30fps with 1080p 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
		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 (Option)	Audio streaming	Two-way, full duplex
	Audio compression	G.711
	Sample Rate	8KHZ
	Data Rate	64Kbps
	Audio input	Microphone input /1 x Line-In (Mono)
	Audio output	Line output/ 1 x Line-Out (Mono)
Serial	Port1	RS-485
	Data Rate	600bps~ 115200bps
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
System integration	Intelligent video	Motion detection up to 2048x1536 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
	Video buffer	16MB pre-alarm and post-alarm
	Firmware upgrade	Remote upgrade via network
	API	CGI Interface document
		ActiveX Interface(ocx(dll) + document)
Physical	Power Source	1 x Factory Reset Button
	Power Consumption	DC 12V/1.5A, PoE(Power over Ethernet): 802.3af(Option)
	Net Weight	Max. 5.5W
	LED's	520g Appr.(Camera Only)
	Dimension	Power, Network Connection
Environment	Operating Temperature	87.7mm(W) X 108.7mm(H) X 297mm(D) including Bracket
	Storage Temperature	-25 degree~50 degree Celsius (-13F~122F)
Software	Included Software	-25 degree~60 degree Celsius (-13F~140F)
Package	Package Contents	NVR Lite (16 Channel), IP Installer (Windows Only)