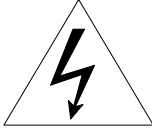
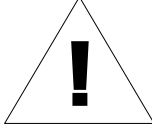
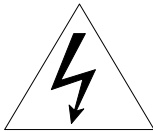


VI-3100

Installation Guide

INFORMATION TO USER

	<div>CAUTION</div> <div>RISK OF ELECTRIC SHOCK, DO NOT OPEN</div>	
<p>CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SEERIVCE PERSONEL.</p>		



This symbol is intended to alert the user to the presence of un-insulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

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1. FEATURES

Camera

- Indoor/Outdoor IR Bullet IP Camera
- 1/2.7" 1080p CMOS
- ICR type true day & night
- ONVIF Support

Streaming

- Dual streaming mode (such as different codec/resolution/bit rate and so on.)
- Burnt-in text supported
- Unicast/Multicast supported

Video/Audio

- Video compression: H.264/MJPEG, 25/30FPS@1080p(PAL/NTSC)
- Analog video out for external monitors
- Video Motion Detection supported

Network

- RTSP/ HTTP protocol supported
- 10/100 Base-T Ethernet

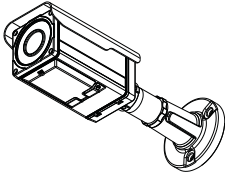
Additional Features

- OSD for camera control supported
- VCA presence

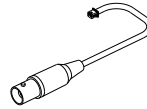
2. PACKAGE CONTENTS

Unpack carefully and handle the equipment with care. The packaging contains:

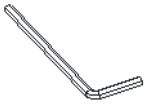
Camera



Video out cable



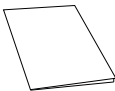
Hex wrench driver



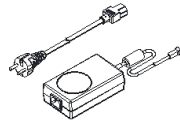
Screws



Quick installation Guide



DC power adaptor



Screw anchors



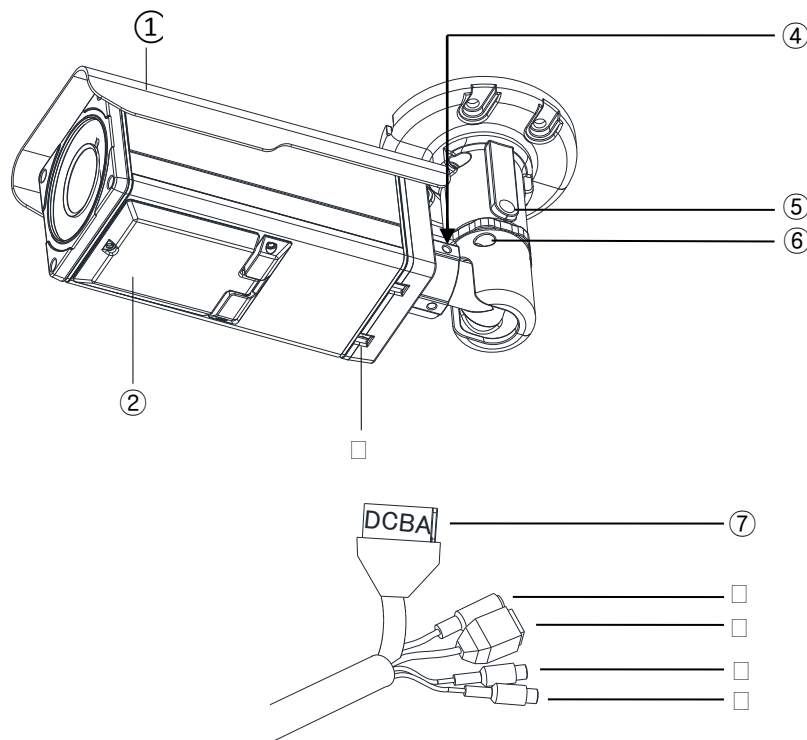
Terminal block



Note

The above contents are subject to change without prior notice.

3. PART NAMES



* Models herein and their appearance are subject to change without any prior notice.

① Sunshield

Position the sunshield to prevent direct sunshine.

② Control panel

Open the control panel to control LEDs, OSD menus, extra video output, and reset button. To learn how to reset your device, refer to **6.3. Reset**.

③ Ventilation hole

The ventilation holes help to reduce the temperature difference between inside and outside and prevent water from being condensate.

④ Joint for 3 axis

Use this part to adjust the camera to the desired position. Refer to **4. Installation** for more details.

⑤ Panning joint

Use this part for panning adjustment. Refer to **4. Installation** for more details.

⑥ Tilting adjustment

Use this part for tilting adjustment. Refer to **4. Installation** for more details.

⑦ 4 Pin Connector

A: DO,- B: DO+, C: DI+, D: DI-

⑧ Power Adaptor Connector

The camera needs DC 12V for power supply.

⑨ Network Port

Use this RJ45 LAN connector for connecting the camera to network.

⑩ Audio In

Connect to the audio input device such as a mike.

⑪ Audio Out

Connect to the audio output device such as the amplifier speaker.

**Caution**

The control panel always should be facing down to the ground when the camera has been installed. Inverting the camera body will cause mechanical failure due to water or particles permeating into inverted air vent holes in open area.

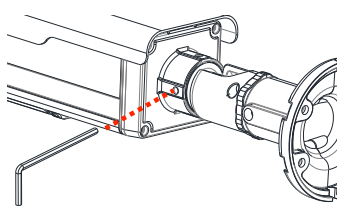
4. INSTALLATION



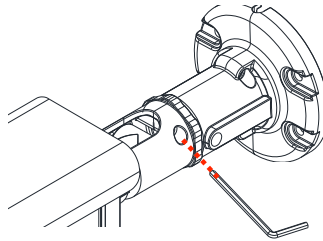
Caution

While installing the camera, do not invert the camera body in any circumstances. The camera features air vent holes on the bottom of the device, and inverting the camera position may cause water to permeate inside the device, resulting in mechanical failures.

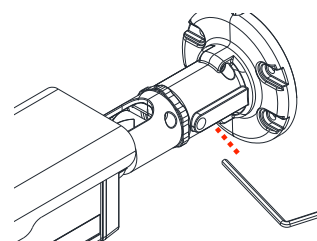
- 1) Place the installation template that is provided in the package on the desired position of installation.
- 2) Drill four holes on the template and insert anchor blocks into the holes. Fasten the camera with screws.
- 3) Make sure the cables are properly connected to the camera.
- 4) Adjust the camera to the desired angle by unscrew the joints by referring to the following pictures.



Adjust this joint to
install it on the wall



Tiling adjustment



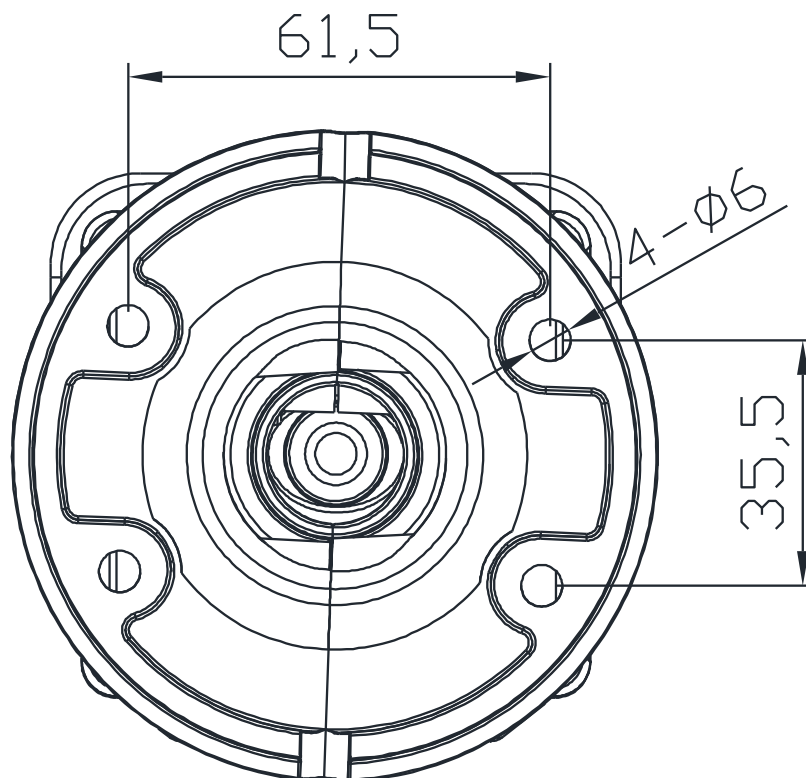
Panning adjustment



Caution

To prevent products from damaging, place the camera on stable and non-vibrating surfaces. If the stability is in doubt, consult with safety personnel for reinforcements, and then proceed with the installation.

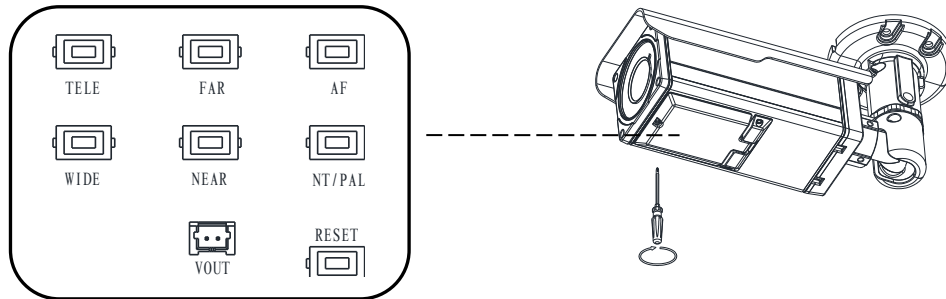
4.1. Installation Template



(Unit: mm)

4.2. Adjusting LED options and lens focus

Adjust the zoom and focus of the lens with the lever of ① and ② on the following picture.



TELE/WIDE: Uses for zoom

FAR/NEAR: Uses for focus

AF: Auto focus

NT/PAL: NTSC, PAL button

Vout: Uses only for installation



Note

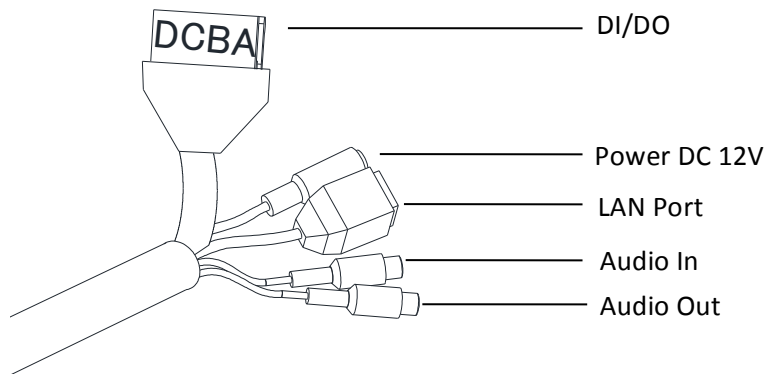
Do not invert the camera body to position the control panel on top of the camera.

4.3. Setting the Image Attribute

You can set the image attribute of camera through the webpage.

The menu of image attribute can be seen under **Setup > Video & Audio > Camera**. Brightness, contrast, saturation and sharpness can be adjusted.

5. CABLE CONNECTIONS



DI/DO Connection

A: DO-, B: DO+ , C: DI+ , D: DI-

Sensor (DI) connection

The camera provides 1 channel D/I. It can be connected to either a voltage type sensor or a relay type sensor as the following figures. It can be selected by software.

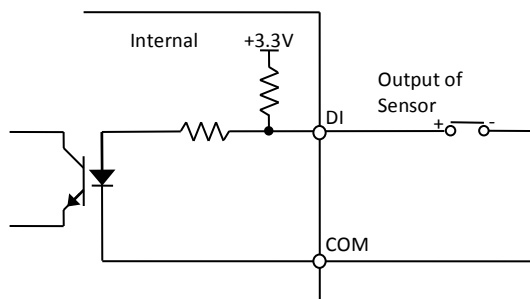
Input voltage range: 0VDC minimum to 5VDC maximum, Max 50mA

Input voltage threshold: 1.5V

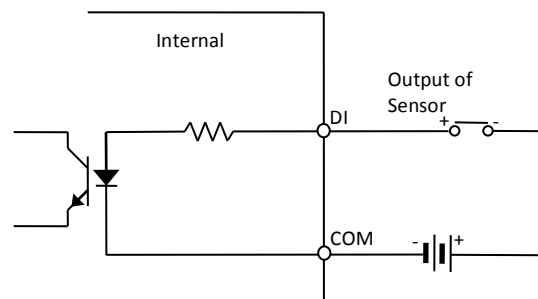


Caution

Do not exceed the maximum input voltage or relay rate.



Relay Type



Voltage Type

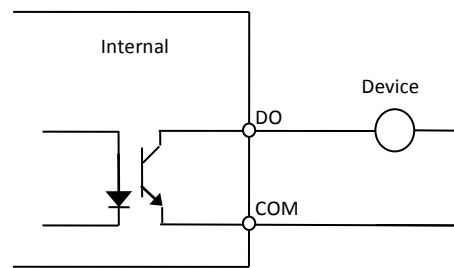
Alarm (DO) connection

Only the relay type is supported.

Relay Rating: Max 24VDC 50mA



Do not exceed the maximum relay rating.



Relay Type

Power Connection

A 12 DC power connector is required for this device.

Network Connection

This is a RJ45 LAN connector for 10/100 Base-T Ethernet. Connect a LAN cable.

Audio Input/Output Connection

Connect the audio input device such as a mike to the audio input port and the audio output device such as the amplifier speaker to the audio output port.

Audio Input : Linein, 1.43Vp-p(M in 1.35Vp-p, max 1.49 Vp-p), 39 K Ω

Audio Output : Lineout, 46mW Power, 16 Ω



Do not connect the speaker without amplifier.

6. CONFIGURATION

6.1. Set up network environment

The default IP address of the device is 192.168.XXX.XXX. Users can identify the IP address of the device from converting the MAC address's hexadecimal numbers, which is attached to the device. Be sure that the device and PC are on a same area network before running the installation.

IP address : **192.168.xxx.xxx**

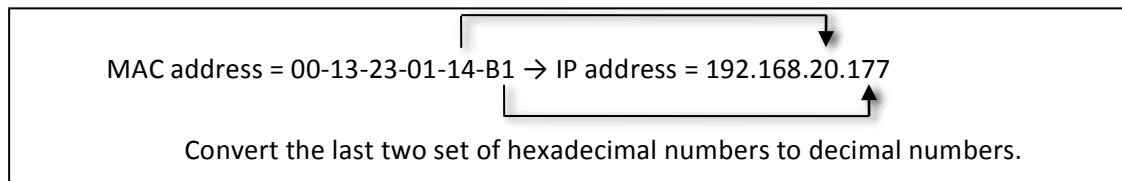
Subnet mask: **255.255.0.0**

6.1.1. Generic IP Environment

In case of generic private network environment where IP address 192.168.XXX.XXX are used, users may view the live streaming images on a web page using the device's default IP address:

1. Convert the device's MAC address to the IP address. Refer to the Hexadecimal-Decimal Conversion Chart at the end of the manual.

(The MAC address of the device is attached on the side or bottom of the device.)

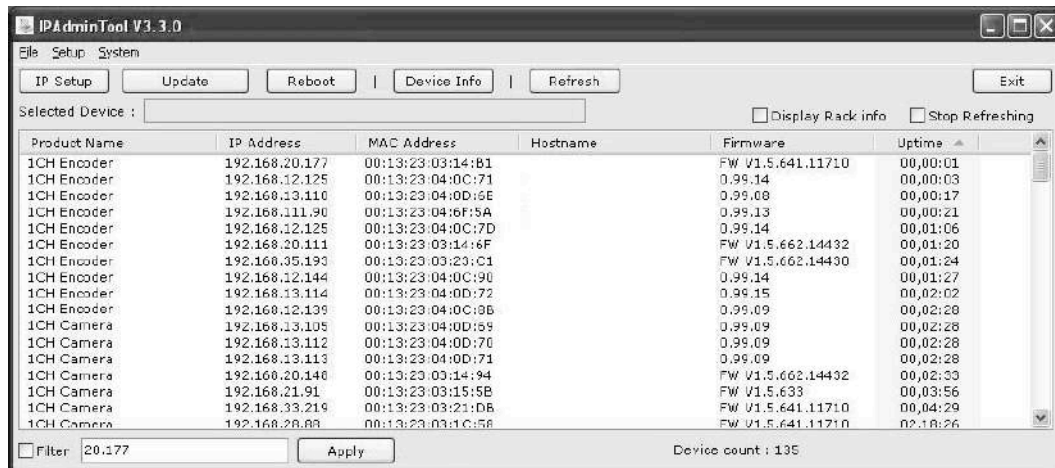


2. Start the Microsoft® Internet Explorer web browser and enter the address of the device.
3. Web streaming and device configurations are supported through ActiveX program. When the ActiveX installation window appears, authorize and install the ActiveX.

6.1.2. Custom IP Environment

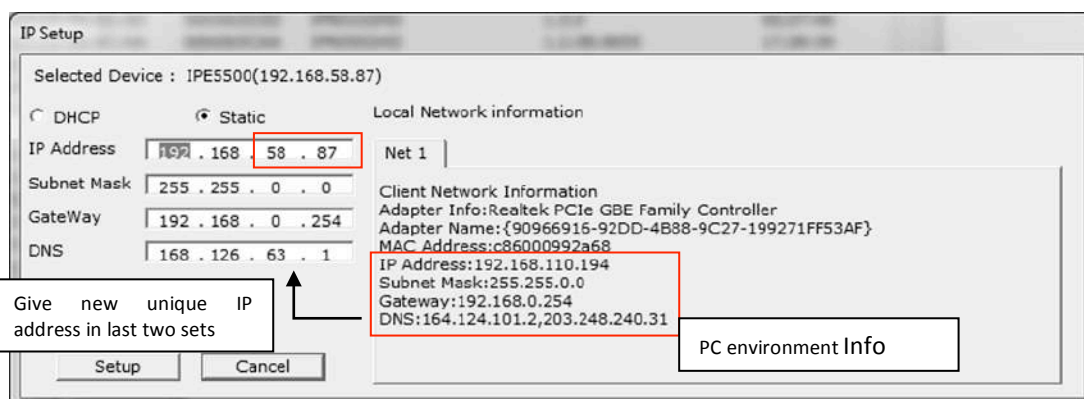
IPAdminTool is provided in Dealer Portal

IPAdminTool is a management tool, which automatically scans all of the network products for users to perform administrative tasks, which includes network configurations, firmware update, device reboot, and device organizations.



To modify the device's default IP address for customized network area;

1. Find the device from the IPAdminTool's list and highlight the device's name.
2. Right-click the mouse and select "IP Address"; IP Setup window appears.



3. In the IP Setup's window, information under 'Local Network information' displays the user/PC's network area information. Those information need to be incorporated to the IP Address, Subnet Mask, Gateway, and DNS boxes, except the last 2 sets of IP Address, which are to be the unique numbers for the device. Refer to the image above for the setting
4. Click 'Setup' to complete the modification.

6.2. View video on web page

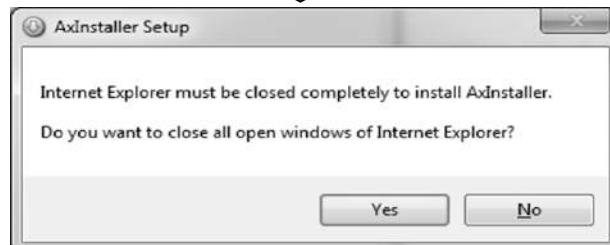
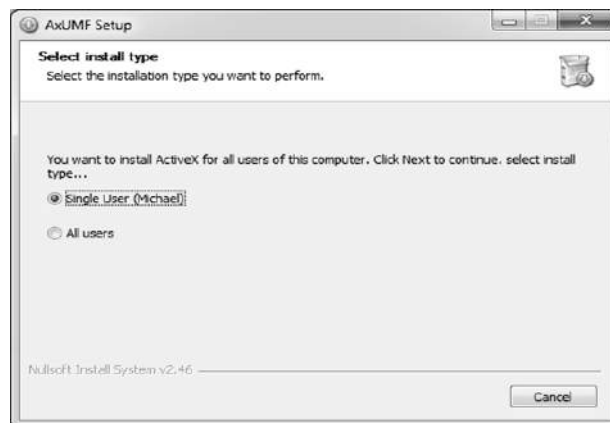
Type the proper IP address to view the live streaming images through a web browser.
The default username and password is *root / pass*.



1. The browser asks to install the ActiveX. Click Allow.

Please download and install the configuration utility by clicking the following link. [\[setup.exe\]](#)

2. Setup.exe installation link or pop-up window appears, depends on Microsoft® Internet Explorer version. Proceed with rest of setup installation.



- Follow the instructions of the dialog boxes and complete the installation. Once the installation is complete, start the web browser again and check if video stream is displayed in the main view frame.



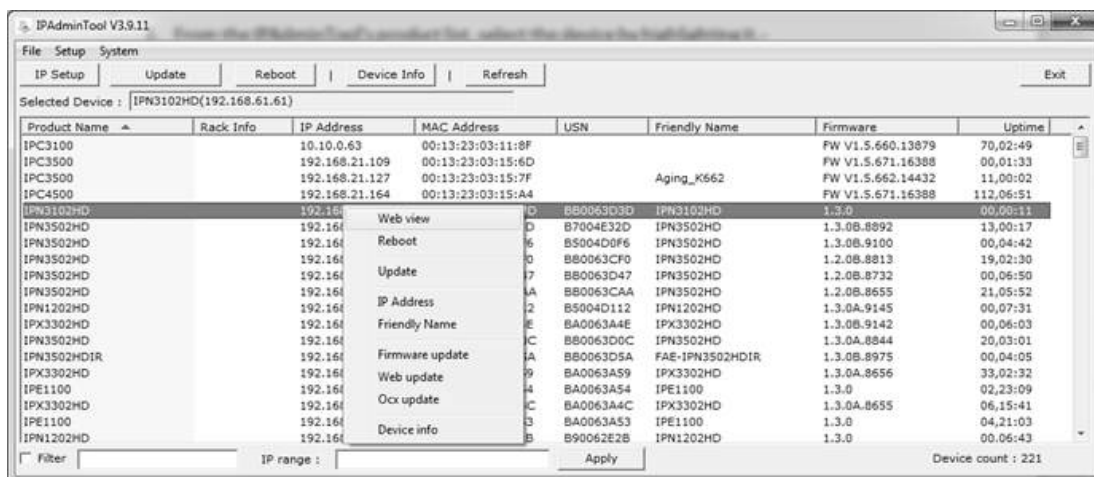
Caution

If “This software requires the Microsoft XML Parser V6 or higher. Please download MSXML6 from the Microsoft website to continue. Error code: Cannot create XMLDOMDocument.” message appears, download and install the Microsoft Core XML Services (MSXML) 6.0.

6.2.1. Access through IPAdmin Tool

IPAdminTool automatically searches all activated network encoders and IP cameras and shows the product name, IP address, MAC address and etc.

- From the IPAdminTool’s product list, select the device by highlighting it.
- Right-click the mouse and select **web-view**



- The system’s default web browser opens the device’s address.



Caution

Whether directly accessing the streaming video through typing IP address on a web page or taking steps through IPAdminTool, the ActiveX is needed to be installed for the Microsoft® Internet Explorer to have the complete configuration privileges.

6.3. Reset

1. While the device is in use, press the Reset button.
2. Wait for the system to reboot.

6.4. Factory Default

1. Press reset button and hold.
2. Release the Reset button after 5 seconds until LED blinks.
3. Wait for the system to reboot.

The factory default settings can be inferred as follows:

IP address:	192.168.xx.yy
Network mask:	255.255.0.0
Gateway:	192.168.0.1
User ID:	root
Password:	pass

APPENDIX (A): SPECIFICATIONS

Summary

Camera Module	
Image Sensor	OV2715 CMOS
Effective Pixels	768 x 494 (NTSC) / 752 x 582 (PAL)
TV System	NTSC / PAL
Horizontal Resolution	TBD
Zoom	X16 Digital Zoom
White Balance	ATW / AWC / Manual / Outdoor / Indoor
Scanning System	2:1 Interlace
Sync System	Internal
Min. Illumination	TBD
Lens	3.0 – 9.0mm Vari-Focal F1.2 Motorized Focus & Zoom
Focus	Motorized
Iris	Auto
Day & Night	COLOR / B/W / AUTO
Shutter Speed	1/60s ~ 1/120,000s
S / N Ratio	52 dB (AGC off)
AGC	Low / High / Off (Selectable)
BLC	BLC / HLC / Off
DNR	On/Off (1~32 Level Adjustable)
Video	
Compression	H.264, MPEG-4, MJPEG Selectable per Stream
Number of Streams	Dual stream, Configurable
Resolution	1920x1080, 1280x720, 800x450, 480x270, 320x180
Compression FPS	25/30 fps @ D1 (PAL/NTSC)
De-interlacing	Supported (DSP)
Motion Detection	Supported
Burnt-in Text(digital)	Supported (DSP)
Analog Video Output	PAL/NTSC (Auto off)
Audio	
Input / Output	1/1
Compression	PCM, G.711
Function	
IR Range	Internal Use: 30M External Use: 20M
Network	10/100 Base-T

Power over Ethernet	802.3af (Normal)
DI / DO	1 / 1 ch
RS-232C/RS-485	Not available
Protocol	TCP/IP, UDP/IP, HTTP, RTSP, RTCP, RTP/UDP, RTP/TCP, SNTP, mDNS, UPnP, SMTP, IGMP, DHCP, FTP, DDNS, SSL v2/v3, IEEE 802.1X, SNMP v2/v3
Local Storage	Not available

Electrical Characteristics

Poser source	DC 12V
Power consumption	1200mA (Heater ON)
Analog Video Output	1 Vp-p, 75Ω, Composite
Audio Input	Linein, 1.43Vp-p (Min 1.35Vp-p, max 1.49 Vp-p), 39 KΩ
Audio Output	Lineout, 46mW Power, 16 Ω
Sensor(D/I)	Max 50mA@5VDC, TTL level 1.5V threshold
Alarm(D/O)	Max 50mA@24VDC or 1A@12VDC On-state resistance: 50 Ω (max continuous)

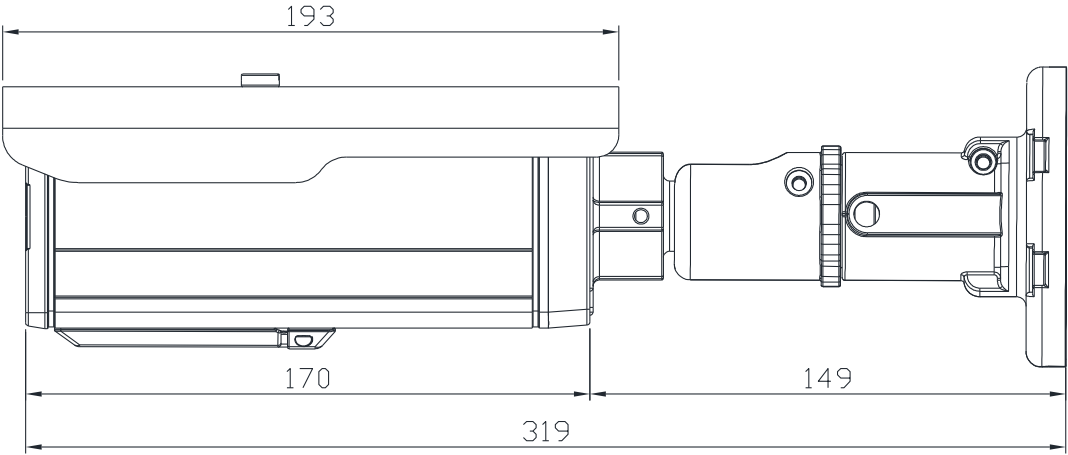
Environment Condition

Operating Temperature	Operating Range DC12V : -40°C ~ 50°C (-40°F ~ 122°F) PoE : 0 °C ~ 50 °C (32°F ~ 122°F) Cold Start DC12V : -20°C (-4°F) PoE: 0 °C (32°F)
Operating Humidity	Up to 85% RH

Environment Condition

Dimensions	83mm x 82mm x 194mm (Without bracket)
Color	Ivory
Weight	Net: 1.5Kg

APPENDIX (B): DIMENSIONS



(Unit: mm)

APPENDIX (C): HEXADECIMAL-DECIMAL CONVERSION TABLE

Refer to the following table when you convert the MAC address of your device to IP address.

Hex	Dec	Hex	Dec	Hex	Dec	Hex	Dec	Hex	Dec	Hex	Dec	Hex	Dec
0	0	25	37	4A	74	6F	111	94	148	B9	185	DE	222
1	1	26	38	4B	75	70	112	95	149	BA	186	DF	223
2	2	27	39	4C	76	71	113	96	150	BB	187	E0	224
3	3	28	40	4D	77	72	114	97	151	BC	188	E1	225
4	4	29	41	4E	78	73	115	98	152	BD	189	E2	226
5	5	2A	42	4F	79	74	116	99	153	BE	190	E3	227
6	6	2B	43	50	80	75	117	9A	154	BF	191	E4	228
7	7	2C	44	51	81	76	118	9B	155	C0	192	E5	229
8	8	2D	45	52	82	77	119	9C	156	C1	193	E6	230
9	9	2E	46	53	83	78	120	9D	157	C2	194	E7	231
0A	10	2F	47	54	84	79	121	9E	158	C3	195	E8	232
0B	11	30	48	55	85	7A	122	9F	159	C4	196	E9	233
0C	12	31	49	56	86	7B	123	A0	160	C5	197	EA	234
0D	13	32	50	57	87	7C	124	A1	161	C6	198	EB	235
0E	14	33	51	58	88	7D	125	A2	162	C7	199	EC	236
0F	15	34	52	59	89	7E	126	A3	163	C8	200	ED	237
10	16	35	53	5A	90	7F	127	A4	164	C9	201	EE	238
11	17	36	54	5B	91	80	128	A5	165	CA	202	EF	239
12	18	37	55	5C	92	81	129	A6	166	CB	203	F0	240
13	19	38	56	5D	93	82	130	A7	167	CC	204	F1	241
14	20	39	57	5E	94	83	131	A8	168	CD	205	F2	242
15	21	3A	58	5F	95	84	132	A9	169	CE	206	F3	243
16	22	3B	59	60	96	85	133	AA	170	CF	207	F4	244
17	23	3C	60	61	97	86	134	AB	171	D0	208	F5	245
18	24	3D	61	62	98	87	135	AC	172	D1	209	F6	246
19	25	3E	62	63	99	88	136	AD	173	D2	210	F7	247
1A	26	3F	63	64	100	89	137	AE	174	D3	211	F8	248
1B	27	40	64	65	101	8A	138	AF	175	D4	212	F9	249
1C	28	41	65	66	102	8B	139	B0	176	D5	213	FA	250
1D	29	42	66	67	103	8C	140	B1	177	D6	214	FB	251
1E	30	43	67	68	104	8D	141	B2	178	D7	215	FC	252
1F	31	44	68	69	105	8E	142	B3	179	D8	216	FD	253
20	32	45	69	6A	106	8F	143	B4	180	D9	217	FE	254
21	33	46	70	6B	107	90	144	B5	181	DA	218	FF	255
22	34	47	71	6C	108	91	145	B6	182	DB	219		
23	35	48	72	6D	109	92	146	B7	183	DC	220		
24	36	49	73	6E	110	93	147	B8	184	DD	221		

REVISION HISTORY

MAN#	DATE(M/D/Y)	Comments
D1A.01	04/20/2012	Preliminary version
01A.01	05/02/2012	Power consumption revise
01A.02	06/28/2012	DI/DO power update
01A.03	07/03/2012	Supporting protocol revised. (removed SOCK and SSH)
01A.04	08/31/2012	Camera invert-install warning and Chapter 6 update
01A.05	09/05/2012	Audio Input & Output spec revised