



AVer Box type Camera

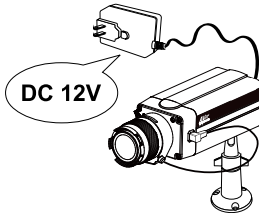
Installation Guide



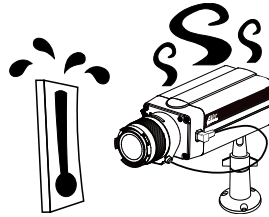
Table of Contents

IMPORTANT SAFEGUARD.....	1
PACKAGE CONTENTS	2
OPTIONAL ACCESSORIES	2
IP CAMERA PARTS.....	3
FRONT PANEL	3
REAR PANEL	3
CS-MOUNT LENS	3
IP CAMERA INSTALLATION.....	4
CONNECTING THE LENS.....	4
DEPLOYING NETWORK	5
Network Connection via Ethernet Switch	5
Connect the power adapter to DC12V port of camera	5
Power over Ethernet Connection	6
RJ45 LED	6
CONNECTING EXTERNAL DEVICES TO I/O TERMINAL BLOCK	7
POWER LED.....	7
INTERNAL CONNECTION DIAGRAM OF DI/DO	7
ADJUSTING THE CS-MOUNT RING.....	8
FOCUSING THE IP CAMERA WITH BNC MONITOR	10
TECHNICAL SPECIFICATIONS	11
SF2121H-R/FX2000.....	11
FX3000-R.....	14
FCC NOTICE (CLASS B)	17
NOTICE.....	17
WARNING	17
GOVERNING LAW AND YOUR RIGHTS	19

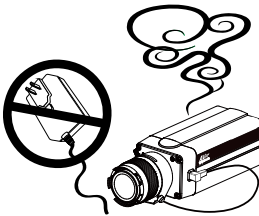
Important Safeguard



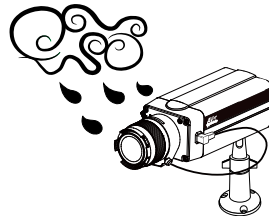
Do not use power supply with different voltage other than DC 12V / PoE.



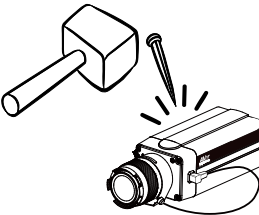
Keep this unit away from direct heat or sunlight.



Unplug the power of this unit as soon as smoke or unusual odor is detected.



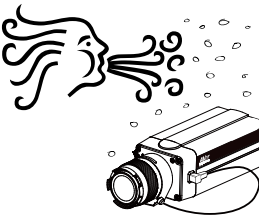
Do not expose this unit to rain or high humidity environment.



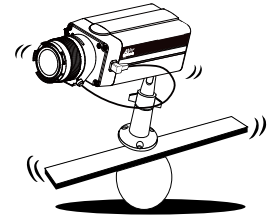
Do not attempt to service this unit by yourself. Always refer all servicing to qualified service personnel.



Unplug the power supply before cleaning. Use only a lens cleaning cloth and never use benzene, thinner, or other solvent for cleaning.



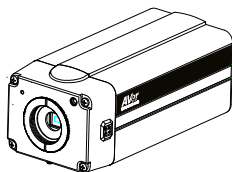
Keep the IP camera housing close and prevent the dust from getting in the housing.



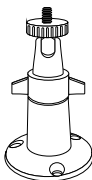
Do not place the unit on unsteady surface and also do not drop the unit.

Package Contents

The following items are included in the package.



Aver Vandal Dome type
Camera



Camera stand



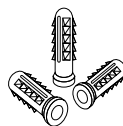
Software & Manual CD



L-type Hex Wrench



3 Screws

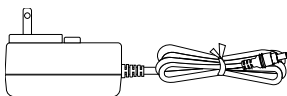


3 Plastic Anchors



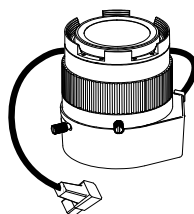
3 Lens Ring Pad

Optional Accessories



Power Adapter (12V, 2A)

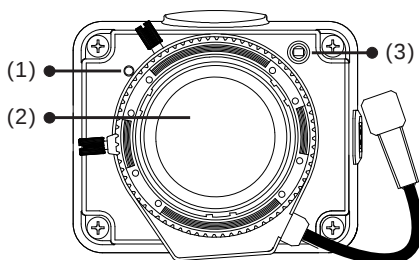
* The power adapter will vary depending on the standard power outlet of the country where it is sold. Depending on your package the power adapter maybe included.



CS-mount Lens

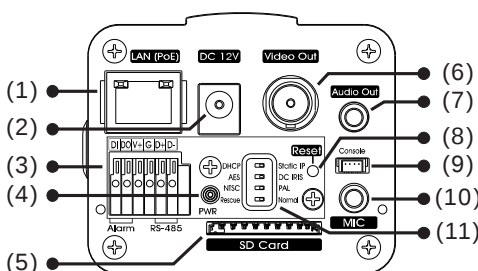
BOX IP Camera Parts

Front Panel



- (1) Built-in MIC
- (2) Lens
- (3) Light Sensor

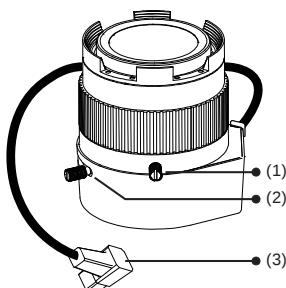
Rear Panel



- (1) RJ45 Ethernet Port
- (2) DC 12V
- (3) I/O Terminal Block
- (4) Power LED Indicator
- (5) SD card slot
- (6) Video Out
- (7) Audio Out
- (8) Reset button
- (9) Console
- (10) MIC
- (11) DIP switch

[Note] The reset button will set all the configuration settings back to factory default.

CS-Mount Lens



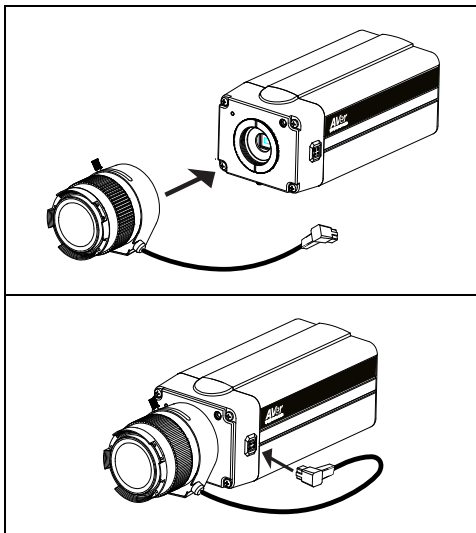
- (1) Zoom controller
- (2) Focus controller
- (3) DC-Iris control cable

IP Camera Installation

This section provides useful tips on how to adjust the IP camera to meet your needs.

Connecting the Lens

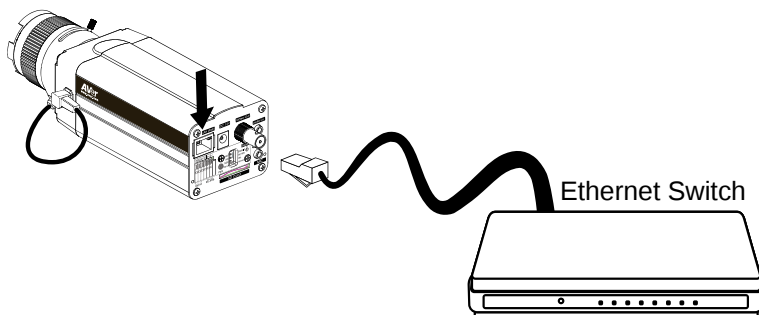
1. Screw in the CS-mount lens clockwise to the CS-mounting ring. Make sure the lens adhesive cover is removed when using it for the first time.
2. Connect the CS-mount lens cable to the socket.



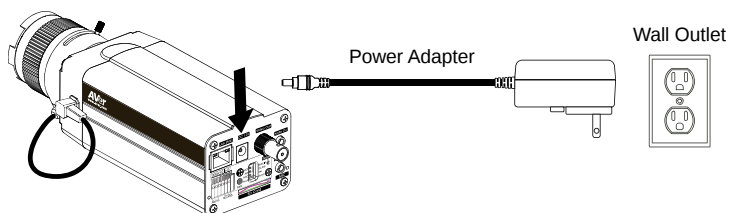
Deploying Network

Network Connection via Ethernet Switch

Connect the RJ45 cable from the Ethernet switch to RJ45 Ethernet jack of camera



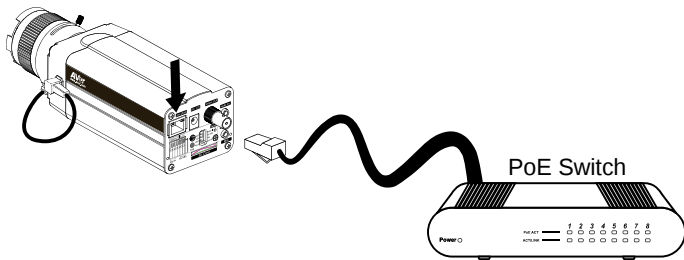
Connect the power adapter to DC12V port of camera



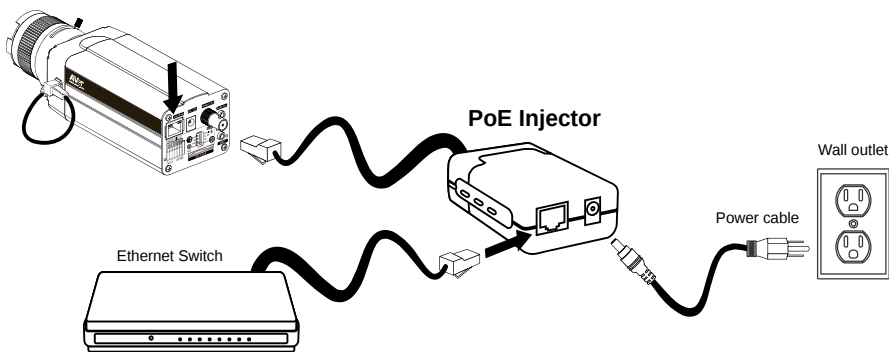
Power over Ethernet Connection

Box type camera is fully complied with PoE standard. It allows you to use PoE enabled switch or PoE injector to transmit data and power thru single Ethernet cable.

■ **PoE Enabled Switch Connection Diagram**



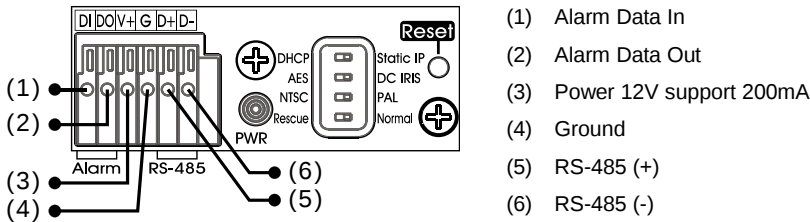
■ **PoE Injector Connection Diagram**



RJ45 LED

LED	Status
Blinking Green	Connected to 100 Base-T mode and also transmitting and receiving data.
Steady Yellow	Connected to the Internet.

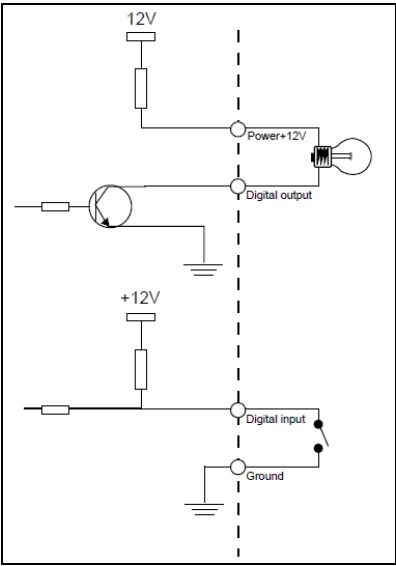
Connecting External Devices to I/O Terminal Block



Power LED

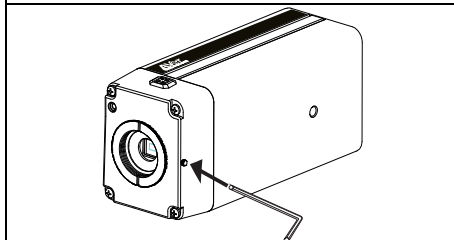
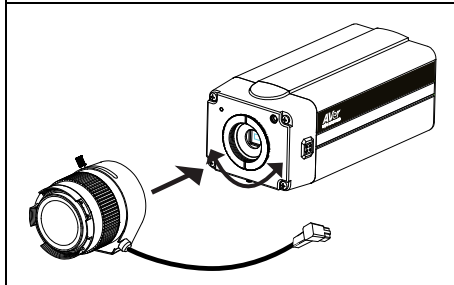
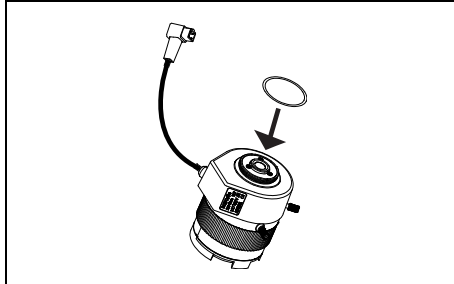
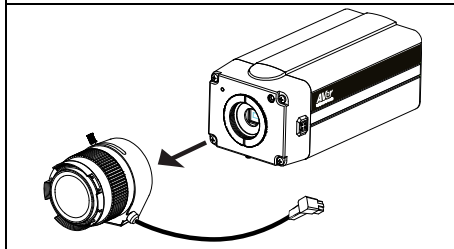
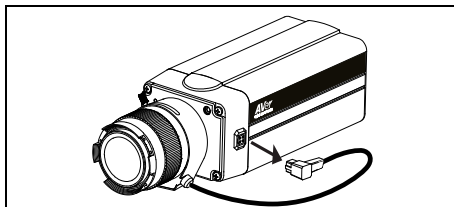
LED	Status
Steady Red	Power on
Blinking Red	Firmware update complete
No Light	Power off

Internal Connection Diagram of DI/DO

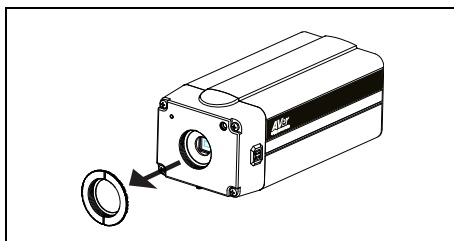


Adjusting the CS-mount Ring

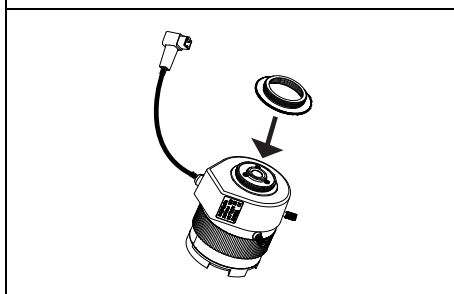
1. Unplug the CS-mount lens cable from the socket.
2. Unscrew the CS-mount lens counterclockwise.
3. Place one lens ring pad.
4. Screw the CS-mount lens and connect the CS-mount lens cable to the socket. Check if the IP camera can display proper image. If not, repeat step 3 and 4 to add the next ring. If all the rings are used up and still the IP camera cannot display proper image. Remove all the rings and continue to next step.
5. Using the L-type hex wrench loosen the bolt underneath the IP camera.



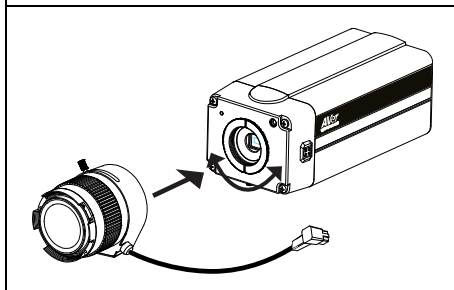
6. Remove the CS-mount ring from the IP camera.



7. Screw the CS-mount ring to the CS-mount lens.

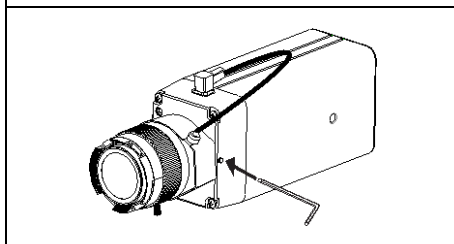


8. Screw the CS-mount lens clockwise back. Unscrew a little and plug the CS-mount lens cable to the socket. Repeat this till the IP camera display the image properly.



9. Once the IP camera has detected the image, use the L-type hex wrench slightly secure bolt underneath the IP camera.

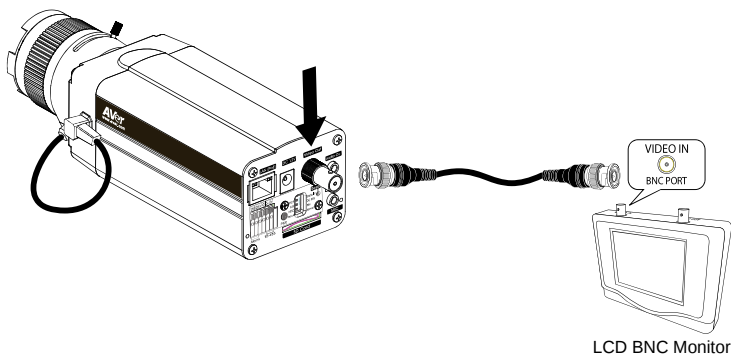
[Note] Do not fully tighten bolt underneath the IP camera for it may damage the CS-mount ring.



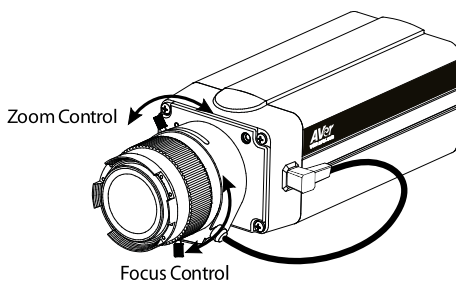
Focusing the IP Camera with BNC Monitor

The IP camera is supported with BNC analog video out port which allows you to connect an analog display devices such as an LCD BNC monitor for you to adjust the camera focus and zoom.

1. Connect the LCD BNC monitor to the Video Out port of IP camera using a BNC cable.



2. Loosen up the focus and zoom control screws and adjust the focus and zoom range. Tighten the focus and zoom screw once you are done adjusting.



Technical Specifications

■ SF2121H-R/FX2000

Model	SF2121H-R	FX2000
Len spec.	Computer AG3Z3112FCS-MPIR (Optional)	
lens type	vari-focal Lens (CS mount)	
F/no	F/1.2	
Iris type	DC-Iris	
focal length	f3.1~8mm	
View Angle	H 105.4°(W)~42.2°(T) V 57.9°(W)~23.8(T)	
MFZ Support	N/A	
Camera image		
Min. illumination	0.15 Lux@F/1.2 in day mode (color) 0.001 Lux@F/1.2 in night mode (B/W)	
Built-in LED	No	
IR distance	No	
Built-in mechanical ICR	Yes	
Auto IRIS	Yes	
Video		
Compression	H.264/MPEG-4/MJPEG	
Max. resolution	1920 x 1080	
Frame rate	1920 x 1080 @ 30fps	
H.264/MPEG-4	VBR, 5 levels	
bit rate mode	CBR, 64/128/512/768Kbps & 1/2/3/4/6/8/10/12Mbps	
MJPEG quality	5 levels	
Regional of Interest	Yes	
Smart Stream	Yes, 5 windows	
Image orientation	mirror, flip	
Motion Detection zones	3	

Model	SF2121H-R	FX2000
Video		
Privacy mask areas	3	
BLC	Yes	
D-WDR	Yes	
De-noise	2D/3D	
Day & night function	Auto/Manual/Schedule	
ePTZ	Yes	
Audio		
Encoder	G.711 (μ-law)/G.726 (bit rate 16K~64bps) /AAC audio compression	
Streaming	2-ways audio	
Microphone	External microphone input	
Network		
Protocols	TCP/IP (IPv4/IPv6), HTTP, HTTPS, UPnP, SMTP, FTP, DHCP, NTP, DDNS, PPPoE, Samba, QoS	
Ethernet	10/100 Base-T, RJ45 connector	
ONVIF	V2.X (Profile S), conformance test V12.06	
Security	Password protection/IP Filter	
Users	up to 10 users simultaneously	
Event		
Profiles	32 sets	
Triggers	Alarm Interval, Motion Detection Region, Digital Input, SD Card, Network	
Actions	Trigger: Digital Output, Alarm Audio Send out video clip: FTP, NAS, SD card Send out snapshot / log: FTP, NAS, SD card, mail	

Model	SF2121H-R	FX2000
Interface		
Digital input/output	1/1	
BNC Video output	Yes	
Built-in storage option	SDHC card (32GB max.)	SDHC & SDXC card (64GB max.)
Built-in microphone	Yes	
External microphone input	Yes	
External Audio output	Yes	
RS-485	Yes	
General		
Power supply	DC 12V(2A)/PoE	
Power consumption	DC: 5.0W (TYP) POE: 6.5W (TYP)	
PoE	PoE Class 3 (IEEE802.3af)	
Dimensions	165.05mm x 58.6mm x 69mm (L x H x W)	
Net weight	490g (w/o bracket)	
Temperature and humidity	0°C~50°C, 20%~90%	
Software Requirement		
OS	Windows® XP/7/8	
Browser	IE 8/9/10 (Full Function), Chrome, Firefox and Safari (Basic Function)	
Firmware remote upgrade	Yes (via HTTP)	
Bundled Software		
VMS (NXU Lite)	free up to 32CH	
IPCAM Utility	Yes	
Warranty		
Main body	2 years	
Accessories	1 year	

■ FX3000-R

Model	FX3000-R
Len spec.	Computer AG3Z3112FCS-MPIR (Optional)
lens type	vari-focal Lens (CS mount)
F/no	F/1.2
Iris type	DC-Iris
focal length	f3.1~8mm
View Angle	H 86.7°(W)~35.2°(T) V 64.4°(W)~26.5(T)
MFZ Support	N/A
Camera image	
Min. illumination	0.15 Lux@F/1.2 in day mode (color) 0.0015 Lux@F/1.2 in night mode (B/W)
Built-in LED	No
IR distance	No
Built-in mechanical ICR	Yes
Auto IRIS	Yes
Video	
Compression	H.264/MPEG-4/MJPEG
Max. resolution	2048 x 1536
Frame rate	2048 x 1536 @ 20fps (Wide Angle) 1920 x 1080 @ 30fps (Normal mode)
H.264/MPEG-4	VBR, 5 levels
bit rate mode	CBR, 64/128/512/768Kbps & 1/2/3/4/6/8/10/12Mbps
MJPEG quality	5 levels
Regional of Interest	Yes
Smart Stream	Yes, 5 windows
Image orientation	mirror, flip
Motion Detection zones	3
Privacy mask areas	3

Model	FX3000-R
Video	
BLC	Yes
Sensor-WDR	Yes
De-noise	2D/3D
Day & night function	Auto/Manual/Schedule
ePTZ	Yes
Audio	
Encoder	G.711 (μ-law)/G.726 (bit rate 16K~64bps) /AAC audio compression
Streaming	2-ways audio
Microphone	External microphone input
Network	
protocols	TCP/IP (IPv4/IPv6), HTTP, HTTPS, UPnP, SMTP, FTP, DHCP, NTP, DDNS, PPPoE, Samba, QoS, SNMP(V1/V2c/V3), 802.1X
Ethernet	10/100 Base-T, RJ45 connector
ONVIF	V2.X (Profile S), conformance test V12.06
Security	Password protection/IP Filter
Users	up to 10 users simultaneously
Event	
Profiles	32 sets
Triggers	Alarm Interval, Motion Detection Region, Digital Input, SD Card, Network
Actions	Trigger: Digital Output, Alarm Audio
	Send out video clip: FTP, NAS, SD card Send out snapshot / log: FTP, NAS, SD card, mail

Model	FX3000-R
Interface	
Digital input/output	1/1
BNC Video output	Yes
Built-in storage option	SDHC & SDXC card (64GB max.)
Built-in microphone	Yes
External microphone input	Yes
External Audio output	Yes
RS-485	Yes
General	
Power supply	DC 12V(2A)/PoE
Power consumption	DC: 5.0W (TYP) POE: 6.5W (TYP)
PoE	PoE Class 3 (IEEE802.3af)
Dimensions	165.05mm x 58.6mm x 69mm (L x H x W)
Net weight	490g (w/o bracket)
Temperature and humidity	0°C~50°C, 20%~90%
Software Requirement	
OS	Windows® XP/7/8
Browser	IE 8/9/10 (Full Function), Chrome, Firefox and Safari (Basic Function)
Firmware remote upgrade	Yes (via HTTP)
Bundled Software	
VMS (NXU Lite)	free up to 32CH
IPCAM Utility	Yes
Warranty	
Main body	2 years
Accessories	1 year

FCC NOTICE (Class B)



This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Federal Communications Commission Statement

NOTE- This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by tuning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/television technician for help.

European Community Compliance Statement (Class B)



This product is herewith confirmed to comply with the requirements set out in the Council Directives on the Approximation of the laws of the Member States relating to Electromagnetic Compatibility Directive 2004/108/EC

COPYRIGHT

© 2013 AVer Information Inc. All rights reserved.

All rights of this object belong to AVer Information Inc. Reproduced or transmitted in any form or by any means without the prior written permission of AVer Information Inc. is prohibited. All information or specifications are subject to change without prior notice. "AVer" is a trademark owned by AVer Information Inc. Other trademarks used herein for description purpose only belong to each of their companies.

NOTICE

SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE. THE INFORMATION CONTAINED HEREIN IS TO BE CONSIDERED FOR REFERENCE ONLY.

WARNING

TO REDUCE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE. WARRANTY VOID FOR ANY UNAUTHORIZED PRODUCT MODIFICATION.



THE MARK OF CROSSED-OUT WHEELED BIN INDICATES THAT THIS PRODUCT MUST NOT BE DISPOSED OF WITH YOUR OTHER HOUSEHOLD WASTE. INSTEAD, YOU NEED TO DISPOSE OF THE WASTE EQUIPMENT BY HANDING IT OVER TO A DESIGNATED COLLECTION POINT FOR THE RECYCLING OF WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT. FOR MORE INFORMATION ABOUT WHERE TO DROP OFF YOUR WASTE EQUIPMENT FOR RECYCLING, PLEASE CONTACT YOUR HOUSEHOLD WASTE DISPOSAL SERVICE OR THE SHOP WHERE YOU PURCHASED THE PRODUCT.

Limited Warranty

AVer Information, Inc. ("AVer") warrants that the applicable product ("Product") substantially conforms to AVer's documentation for the product and that its manufacture and components are free of defects in material and workmanship under normal use. "You" as used in this agreement means you individually or the business entity on whose behalf you use or install the product, as applicable. This limited warranty extends only to You as the original purchaser. Except for the foregoing, the Product is provided "AS IS." In no event does AVer warrant that You will be able to operate the Product without problems or interruptions, or that the Product is suitable for your purposes. Your exclusive remedy and the entire liability of AVer under this paragraph shall be, at AVer's option, the repair or replacement of the Product with the same or a comparable product. This warranty does not apply to (a) any Product on which the serial number has been defaced, modified, or removed, or (b) cartons, cases, batteries, cabinets, tapes, or accessories used with this product. This warranty does not apply to any Product that has suffered damage, deterioration or malfunction due to (a) accident, abuse, misuse, neglect, fire, water, lightning, or other acts of nature, commercial or industrial use, unauthorized product modification or failure to follow instructions included with the Product, (b) misapplication of service by someone other than the manufacturer's representative, (c) any shipment damages (such claims must be made with the carrier), or (d) any other causes that do not relate to a Product defect. The Warranty Period of any repaired or replaced Product shall be the longer of (a) the original Warranty Period or (b) thirty (30) days from the date of delivery of the repaired or replaced product.

Limitations of Warranty

AVer makes no warranties to any third party. You are responsible for all claims, damages, settlements, expenses, and attorneys' fees with respect to claims made against You as a result of Your use or misuse of the Product. This warranty applies only if the Product is installed, operated, maintained, and used in accordance with AVer specifications. Specifically, the warranties do not extend to any failure caused by (i) accident, unusual physical, electrical, or electromagnetic stress, neglect or misuse, (ii) fluctuations in electrical power beyond AVer specifications, (iii) use of the Product with any accessories or options not furnished by AVer or its authorized agents, or (iv) installation, alteration, or repair of the Product by anyone other than AVer or its authorized agents.

Disclaimer of Warranty

EXCEPT AS EXPRESSLY PROVIDED OTHERWISE HEREIN AND TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, AVER DISCLAIMS ALL OTHER WARRANTIES WITH RESPECT TO THE PRODUCT, WHETHER EXPRESS, IMPLIED, STATUTORY OR OTHERWISE, INCLUDING WITHOUT LIMITATION, SATISFACTORY QUALITY, COURSE OF DEALING, TRADE USAGE OR PRACTICE OR THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NONINFRINGEMENT OF THIRD PARTY RIGHTS.

Limitation of Liability

IN NO EVENT SHALL AVER BE LIABLE FOR INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, PUNITIVE, OR CONSEQUENTIAL DAMAGES OF ANY NATURE INCLUDING, BUT NOT LIMITED TO, LOSS OF PROFITS, DATA, REVENUE, PRODUCTION, OR USE, BUSINESS INTERRUPTION, OR PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES ARISING OUT OF OR IN CONNECTION WITH THIS LIMITED WARRANTY, OR THE USE OR PERFORMANCE OF ANY PRODUCT, WHETHER BASED ON CONTRACT OR TORT, INCLUDING NEGLIGENCE, OR ANY OTHER LEGAL THEORY, EVEN IF AVER HAS ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. AVER'S TOTAL, AGGREGATE LIABILITY FOR DAMAGES OF ANY NATURE, REGARDLESS OF FORM OF ACTION, SHALL IN NO EVENT EXCEED THE AMOUNT PAID BY YOU TO AVER FOR THE SPECIFIC PRODUCT UPON WHICH LIABILITY IS BASED.

Governing Law and Your Rights

This warranty gives you specific legal rights; You may also have other rights granted under state law. These rights vary from state to state.