Product Operation Manual

MSHCX080 Network IP Camera

Microseven Systems, Inc.

Walnut, California 91789, USA

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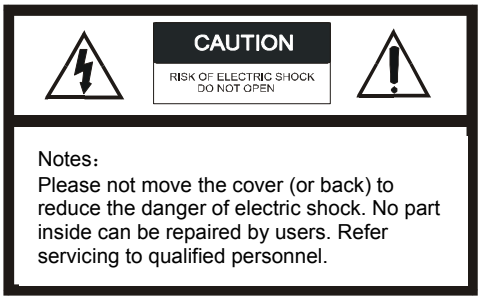
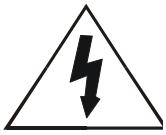
Notes:

Please read the following label before connecting or operating the equipment.



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.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of exposed wiring within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to people.

The serial number of this product can be found on the top of the unit. Please note the serial number of this unit in the space provide and retain this book as a permanent record of your purchase to aid identification in the event of theft.

Model: _____

Product №: _____

Contents

1. Preface

MSHCX020/MSHCX080 series Network IP cameras adopts SONY CCD, with bright and exquisite images. As video & audio multi-media equipment that based on network transmission, which adopts built-in and multi-media communication technology, the camera is a multi-media network terminal that can directly connect to the network.

The camera adopts all-built-in technology, which can be connected to the TCP/IP network without any other equipment and realize the video & audio collection, code compression and transmission function. Outstanding H.264 compression code arithmetic guarantees the minimum occupation of bandwidth, and built-in Web Server enables users to visit the IP camera through IE or special surveillance management software.

Furthermore, the camera adopts big body design and built-in fans, which not only makes it have good appearance, but also guarantees the reliable running of the camera.

2. Key Features

- Minimum Illumination: 0.1Lux @F1.2
- Horizontal resolutions: 480TVL
- H.264 compression format can optimize the image quality and the bandwidth occupation.
- Built in web server, can be viewed directly by IE
- Image capture
- Email and FTP network linkage alarm.
- Can be equipped with wireless transmission module to provide IEEE 802.11b/g standard wireless transmission, and to improve the flexibility of installation.

Other Features

- Powerful software function: provide network video server hardware as well as total software solution.
- Unique video decoding function: can decode the data package of network camera to composite video signal, and display it on monitors.
- Flexible visit mode: one end to multi-end, multi-end to one end.
- Motion detection alarm, I/O status alarm and LOGO update alarm function, with 12x16 detecting areas& 9 level sensitivity ;When the moving objects are discovered in set areas, an alarm signal will be transmitted to appointed client-end through network, image capturing & recording or other relevant actions can be set.
- Built in multi network protocol: Support TCP/IP protocol, allow data sending and receiving by WAN or LAN.
- Built-in Linux operation system.

3. Notes

A. Do not attempt to disassemble the camera yourself.

   To prevent electric shock, do not remove screws or covers. No part inside should be repaired by inexperienced users. Ask a qualified service person for servicing.

B. Handle the camera with care.

   Avoid striking or shaking. The camera could be damaged by improper handling or storage.

C. Do not expose the camera to rain or moisture.

   If rain or moisture, turn the power off immediately and ask a qualified service person for servicing. Moisture can damage the camera and also create the danger of electric shock.

D. Do not use strong or abrasive detergents when cleaning the camera body. Use a dry soft cloth to clean the camera when dirty. In case the dirt is hard to remove, use a mild detergent and wipe gently.

E. Pay great attention to the CCD faceplate cleaning

   Do not clean the CCD with strong or abrasive detergents. Use lens tissue or a cotton tipped applicator and ethanol.

F. Never face the camera towards the sun.

   Do not aim the camera at bright objects. Whether the camera is in use or not, never aim it at the sun or other very bright objects. Otherwise, blooming or smear maybe caused.

G. Do not operate the camera beyond the specified temperature, humidity or power source.

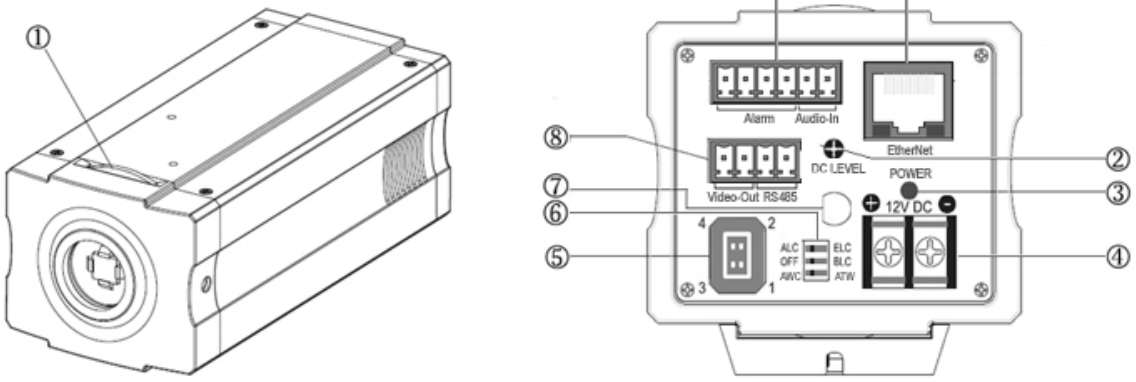
   Use the camera under conditions where temperature is between -10°C - + 50°C and humidity is below 90%

H. The power supply for MSHCX080 is DC12V.

   The adapter with electric current of over 2A is recommended.

I. The pictures in the manual are for reference.

4. Instructions for Main Parts



① Back Focal Adjusting Ring

With C and CS installation modes, and can choose C and CS installation just by circumvolving the adjusting ring.

② DC Level

When use DC to drive lens, it's the dip-switch to adjust value of video output signal.

③ Power

Power Indicator

④ Power Supply Connector

DC 12V power supply connector (please connect according to the marked polarity.)

⑤ Auto Iris Lens Connector

Connect the lens cable to it when VIDEO driver or DC driver lens is provided.

⑥ Switches

- ACL/ELC
- BLC ON/OFF
- ATW/AWC

⑦ Antenna Output

Wireless function module
Outside antenna ACG 2dB.

⑧ Video Output and RS485 Interface

1 channel analog video output, 1 channel RS485 output.

⑨ Alarm and Audio Connector

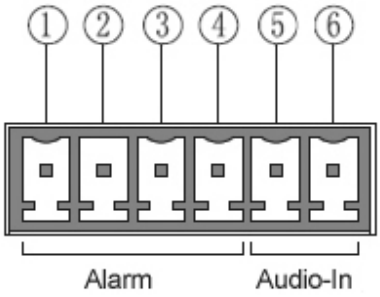
Alarm: None-source alarm input and output.
Audio Input: 1 channel / microphone input.

⑩ Network Interface

RJ-45 standard interface

5. Alarm and Audio Connector

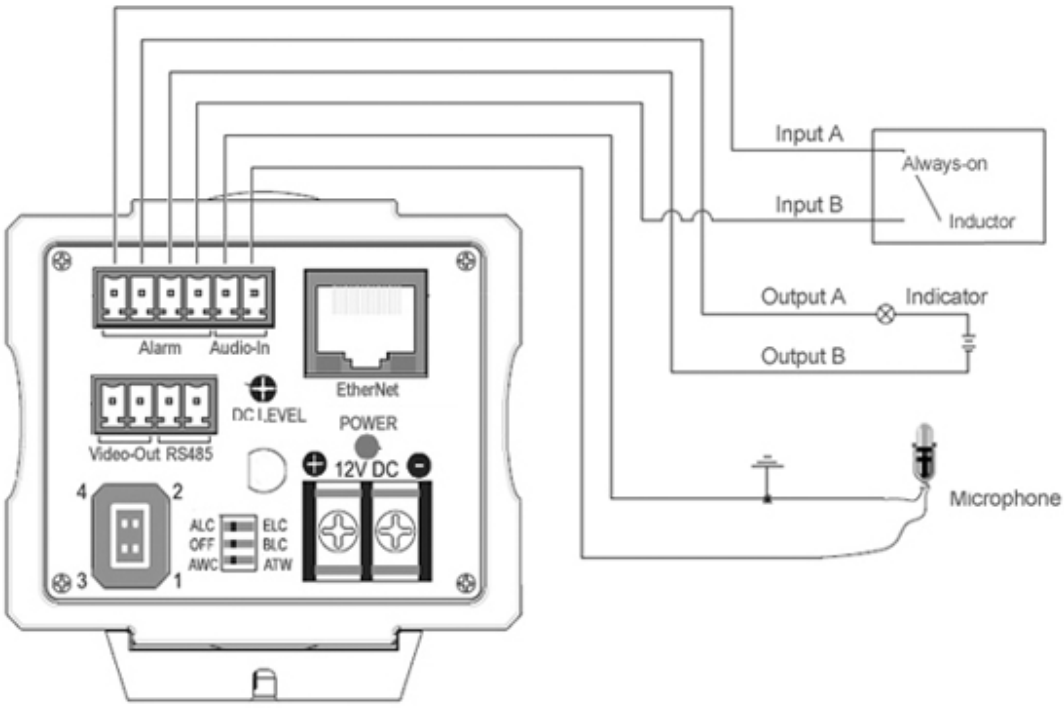
5.1 Connector Definition



The connection figuration of alarm and audio

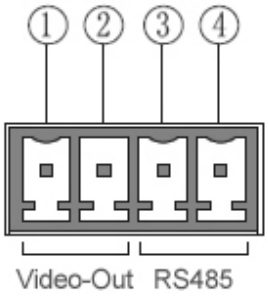
① Alarm input signal
② Alarm output A
③ Alarm input B
④ Alarm input ground
⑤ Audio input ground
⑥ Audio input signal

5.2 Alarm Instruction



When there is alarm signal, the switch S closes and alarm output terminal takes action, and indicator is ON; on contrary, the indicator is OFF when there isn't alarm signal.

5.3 Description of Analog Video Output and RS485 Interface



① Video Output Signal
② Video Output Ground
③ RS485 T+
④ RS485 T-

6. Setup and Adjustment

6.1 Lightness Control Selection

ELC: changeable shutter speed between 1/50s and 1/10000s
ALC: This item is chosen when video drive or DC drive lens is applied.

6.2 DC driver lens level adjustment

When the DC driver auto iris lens is applied, rotate DC button and adjust it to the appropriate place to get the images with proper lightness.

6.3 Installation of Auto Iris Lens Connector

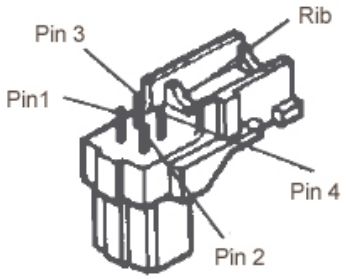
Install the lens connector (YEE4191J100) when an auto iris lens is used.

☞ **The following installation should be undertaken by qualified service personnel or system installers.**

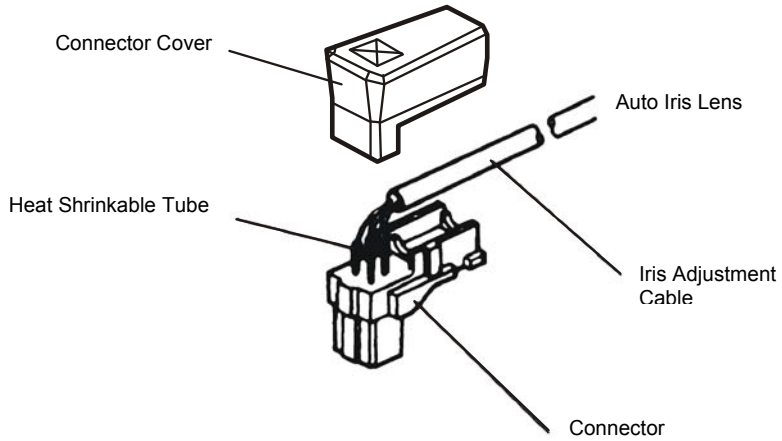
A. Cut the iris control cable at the end of the lens connector to remove the existing lens connector, and then remove the outer cable cover.

The pin assignment of the lens connector is as follows:

	DC Drive
Pin 1	DAMP-
Pin 2	DAMP+
Pin 3	DRIVE+
Pin 4	DRIVE-

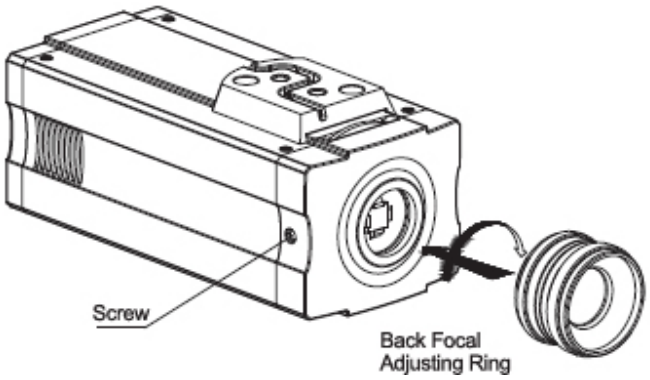


B. After connection, assemble the lens connector as follows:



☞ **When the iris adjustment cable is too tight to lock the connector cover with the connector base, cut off the rib on the connector.**

6.4 Lens installation



☞ **Before you install the lens, loosen the screws on the back focal adjusting ring, and rotate this ring rightwards until it can not move any more (at the side of C install mount) to avoid any damage to the inner glass or CCD image sensor**:

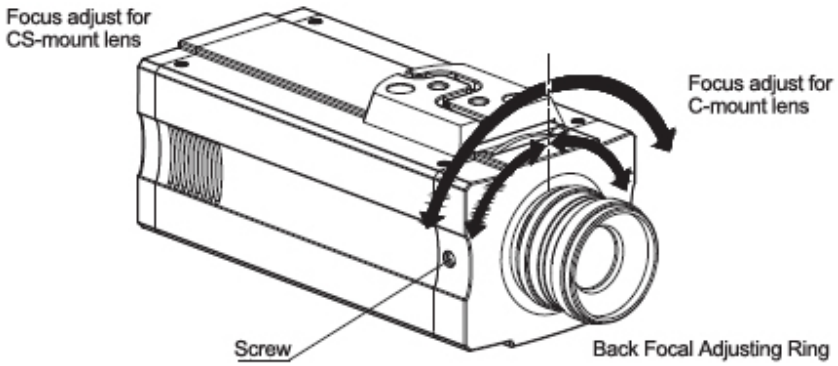
A. Loosen the screws on the back focal adjusting ring: for install it on lens fixing frame of camera.

B. When using auto iris lens, Connect lens cables to auto iris lens Connector on the camera. Turn the back focal adjusting ring to the desired position.

6.5 Adjusting of focus or back focus

Following adjusting work should be done by qualified maintainer or system installer.

A. loosen the screws on the back focal adjusting ring



B. Turn the back focal adjusting ring to the desired position.

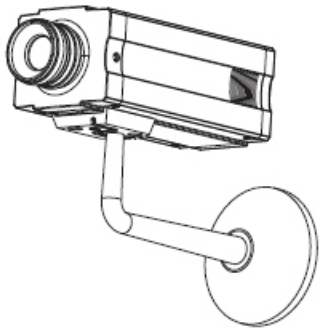
Caution: *When the C-mount lens is mounted, do not rotate the ring anticlockwise till the limit by heavy force. Otherwise the inner glass or CCD image sensor may be damaged.*

C. Tighten the screws on the back focal adjusting ring.

7. Installation of Camera

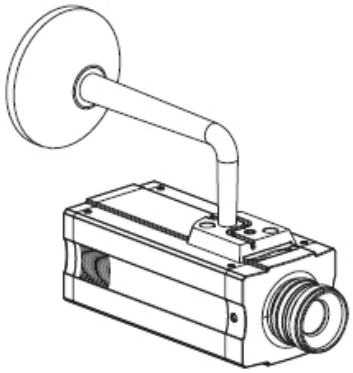
7.1 Mounting from the bottom

This camera is designed to be mounted from the bottom as shown below. The mounting hole is standard photographic pan-head screw size.

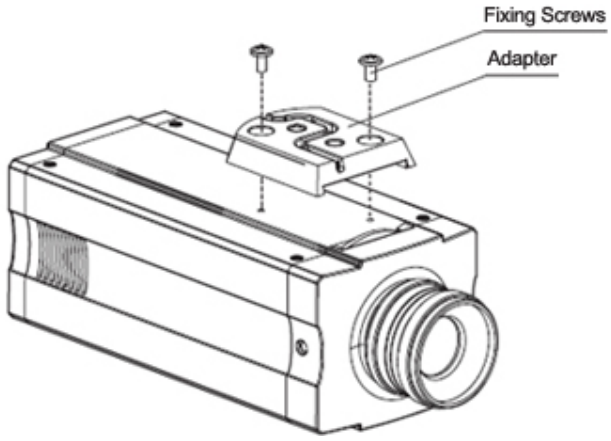


7.2 Mounting from the top

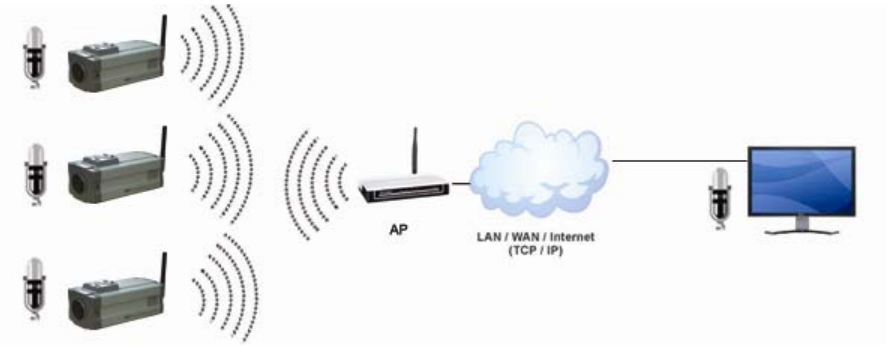
Remove the mount adapter from the bottom of the camera by removing the two fixing screws. Attach the mount adapter to the top as shown in the diagram, and then mount the camera on the mounting bracket.



Make sure that the two original fixing screws are used in mounting the mount adapter as longer length screws may damage inner components.



8. Basic System Diagram and Operating Circumstance



Operate environment

After the equipment installed and connected to the network, it should be operated on Server Software Platform of Microseven Digital Video Server.

9. Specifications

Model	MSHCX080
Pick-up Device	1/3″CCD
Scanning Area	4.89mm (H) × 3.67mm (V)
Pixels	795(H)×597(V)PAL 768(H)×494(V) NTSC
Horizontal Resolution	480 Lines
Minimum Illumination	F1.2, 0.1Lux
Scanning	625 Lines/50 Fields/25 Frame(PAL) 525 Lines/60 Fields/30 Frame(NTSC)
Horizontal	15.625KHz (PAL), 15.750KHz (NTSC)
Vertical	50Hz(PAL), 60Hz(NTSC)
Image / Audio Compression Standard	H.264 / G.711
Resolution	QCIF: 176 * 144 (PAL), 176*120 (NTSC) CIF: 352 * 288 (PAL), 352*240 (NTSC) H-D1: 720 * 288 (PAL), 360*480 (NTSC) D1: 720 * 576 (PAL), 720*480 (NTSC)
Frame Rate	25fps(PAL), 30fps (NTSC)
Stream	100Kbps ~ 3Mbps, CBR/VBR adjustable
Character Superimpose	Support character and time superimpose
Motion Detecting	12x16 detecting areas and 9 levels adjustable sensitivity
Network Interface	1 RJ-45, 10M/100M self-adaptable
Network Protocol	TCP/IP,UDP/IP,HTTP,IGMP,ICMP,TELNET,FTP,DDNS,DNS, PPPOE,DHCP
IE Application	Built-in Web Server, allows IE browsing and image controlling
Network Time Check	Provide the interface for network time check
Equipment Search	Support equipment searching by Ethernet broadcasting
User Administration	Provide multi-level user administration
Built-in Watchdog	Timing detection of chips & software work status, auto system reset
Remote Reposition	Realize remote reset through network
Compressed Code Rate/ Wireless function	32Kbps / IEEE 802.11b/g standard
Working Temperature	-10℃ ~ +50℃
Working Humidity	≤95%
Power Source	DC12V, 2A