

# IQeye Sentinel Series

## Indoor/Outdoor Camera



### Installation and Operating Instructions

**IQinVision** 

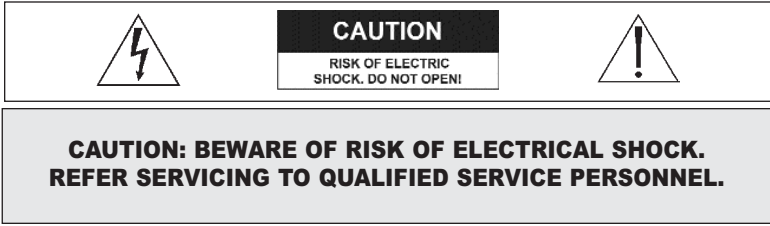
*When you can't afford to miss a thing.*

IQeye Partner:

**SINGAPORE  
COMM**

[www.singcomm.com.sg](http://www.singcomm.com.sg)

# Important Safeguards



This label may appear on the bottom of the unit due to space limitations.



The lightning flash with an arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated “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 presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

**WARNING: TO PREVENT FIRE OR SHOCK HAZARD,  
DO NOT EXPOSE UNITS TO RAIN OR MOISTURE.**



Attention: Installation should be performed by qualified service personnel only in accordance with the National Electrical Code or applicable local codes.

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## 1. Unpacking

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Unpack carefully. This is an electromechanical device and should be handled carefully. Check to ensure the following items are included:

- Integrated Sentinel Camera/Housing unit
- 3mm Allen wrench
- Wall Mount template
- Punch down tool
- Mounting hardware
- CD-ROM

## 2. Service

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If the unit needs repair service or parts, the customer should contact IQinVision for authorization to return, as well as shipping instructions.

IQinVision  
33122 Valle Road  
San Juan Capistrano, CA 92675-4853 USA  
Phone: +1-949-369-8100 or 1-877-850-0805 (toll-free in U.S.)  
Fax: +1-949-369-8105

## 3. Description

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The IQeye Sentinel Series is an All-Weather Megapixel Network Camera that is entirely Power-over-Ethernet with an integrated, vandal and tamper-resistant design. Sentinel's exclusive pivoting arm allows you to use the same camera for wall, ceiling or parapet mounting with no additional hardware. The entire unit is designed to withstand the harshest weather conditions, including hot, cold and wet environments.

The IQeye Sentinel series comes in multiple resolution options from 1.3 to 5 megapixels, and is available in both standard and day/night configurations. A wide variety of high quality lenses are available so Sentinel can deliver superb images in any application.

Camera construction is cast aluminum and ABS with powdercoat finish.

## 4. Installation

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*NOTE: This manual describes how to install the Sentinel series camera system, and details the wall, ceiling and parapet mounting options. Installations should be performed by qualified service personnel only in accordance with local codes.*

## 5. Parts List

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The following depicts the parts included:

- 1 Indoor/Outdoor Camera and Lens Module
- 2 Wall, Ceiling & Parapet Arm
- 3 Power/Data Back Box

### Tools required:

- 3mm Allen wrench (*supplied*)
- Small straight-blade screw driver
- Punch down tool (*supplied*)

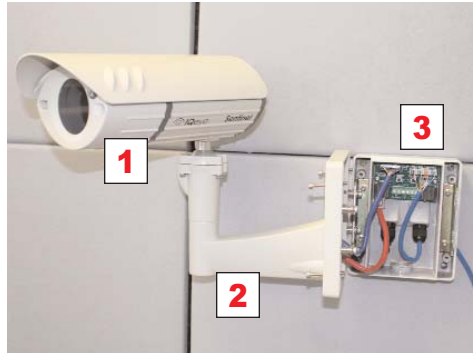


Figure 1

## 6. Mounting Options

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### Wall Mount



### Ceiling Mount



### Parapet Mount



Figure 2

## 7. Camera/Arm Removal & Adjustment

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*Note: The camera/arm needs to be removed from the back box to allow the back box to be mounted to the designated mounting wall, ceiling, or parapet surface.*

1. Using the Allen wrench (*supplied*) loosen the 4 screws located on the corners of the power/data back box.
2. Unplug the two camera-side connections from the back box.

3. Remove the camera/arm module from the back box.
4. Once installation is complete, replace the camera-side connections and cover. Then tighten the retaining screws securely.



Figure 3

## 8. Mounting the Power/Data Back Box

Before mounting the power/data back box, determine if camera installation will be wall, ceiling, or parapet and if the wiring will pass through the compression fittings in the back or the ½" NPT conduit mount on the bottom of the back box.

**NOTE:** If using the ½" hole on the bottom of the junction box, a ½" (15mm) NPT compression fitting can also be used. Heyco P/N 3200 is also appropriate.

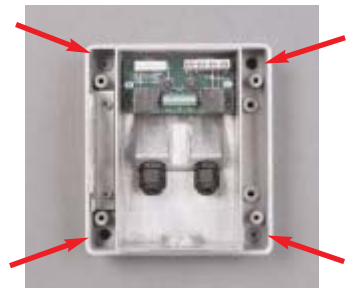


Figure 4

1. As the arrows in Figure 4 indicate, use the supplied wall mount template to locate the four mounting holes for the power/data back box.
2. Drill four (4) holes for the mounting screws using the included mounting template as a guide. If installing outdoor, apply a weatherproof sealant around each hole at the mounting surface.
3. Provided are four (4) #14 x 2" flanged (approximately 10 mm head x 50.1 mm in length), hex head screws that can be used to install into a variety of wood and metal substrates. If mounting into wooden studs, it is recommended that a 1/8" (3mm) wide by 2" (4.8cm) deep pilot hole be drilled prior to installing the screws. Alternatively, the installer can provide screws with a head diameter less than #14 (3/8" or 10mm) in size so that they can fit into the junction box opening.

*NOTE: It is recommended that each screw and the material it is being installed into be able to bear a minimum of 50 pounds (22 kilograms) of pull force.*

4. Pass the power & data cables through the back box, then install the power/data back box on the mounting surface.

## 9. Terminating Power and Data Cabling Inside the Back Box

Power and data cabling must be routed to the right side (wall-side) of the back box. Cut all cables with sufficient slack to reach the connector terminals in the back box but not long enough to be pinched or obstruct the arm installation.

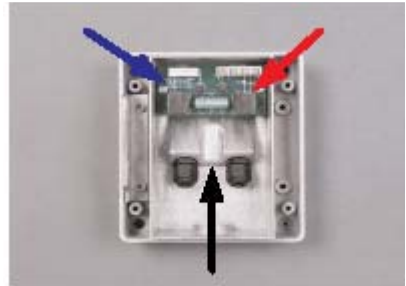
**→ Camera-Side Terminations**

**→ Wall-Side Terminations**

- RJ-45
- Punch Down Terminal

**→ Screw Terminal**

- Direct Power -  
12-24VDC or 24VAC
- Trigger In
- Relay Out



**Figure 5**

### 1. CONNECTING POWER:

The IQeye Sentinel can be power via Ethernet using an IEEE 802.3af power source, or powered directly.

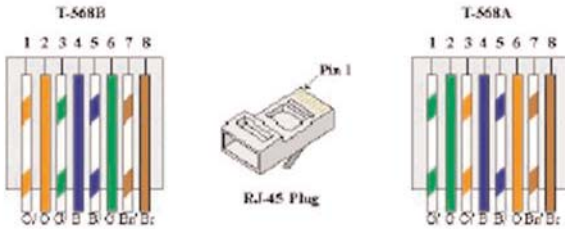
- **Powered via PoE:** Input from conforming IEEE 802.3af Power-Over-Ethernet (PoE) power injector or switch.
- **Powered Directly:** Input voltage is 12-24VDC or 24VAC. IQeye Sentinel camera/housing modules include built-in bridge rectifier circuitry, so power wiring polarity can be installed with the + or - on either terminal without risk of damaging the camera or affecting performance.

*NOTE: Using a power source with specifications other than those defined herein may result in errant functionality or damage to the camera, and will void the product warranty.*

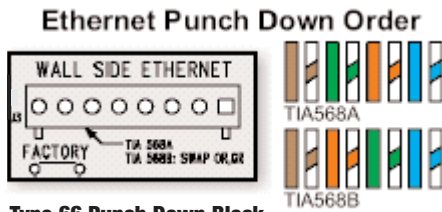
**2. CONNECTING DATA (ETHERNET) CABLE:**

Route and connect the Ethernet cable to the Ethernet connections (RJ-45 or Punch Terminal) labeled wall-side in the back box.

The two most common schemes for wiring CAT5 cables are 568A & 568B. The 568B wiring scheme is widely used in the US, and for off the shelf CAT5 cables. New installations should use the 568A CAT5 wiring scheme. Either wiring standard will work but you need to ensure that the standard you select matches the building wiring.



**Figure 6**



**Figure 7**

# 10. Camera/Arm Installation

The back box is provided with arm hangers on both sides to hold the camera/arm module on the back box to facilitate installation.

*NOTE: The arm hangers function perfectly at any orientation of the junction box and will firmly hold the camera and junction box cover in any of the Wall, Ceiling or Parapet mount configurations.*

1. Insert the two (2) pins into the channel and slide the camera/arm module down until it locks in place on the arm hanger.

**WARNING:** *Serious injury and/or damage to the unit can occur if the camera/arm module are not fully locked in place.*



Figure 8

2. Connect Ethernet and terminal block cables from the camera to the left-side (camera-side) of the junction box.

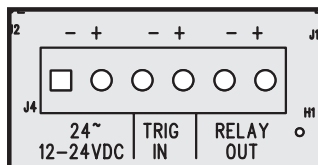


Figure 9

3. If I/O connections are being used, attach them to the appropriate I/O terminals on the center terminal block of the back box as shown in *Figure 9*.

4. After all connections are made in the back box, remove the camera/arm from the hanger and secure to the back box by tightening the four (4) screws with the supplied Allen wrench.



Figure 10

- If mounting the unit outdoors, please take necessary and thorough measures to ensure the camera unit is properly sealed from inclement weather. An example would be to use silicone sealer around the back of the base, being sure to surround all holes with a generous bead of sealant to the outer edge of back box surface. You should use a sealing method you are familiar with and which conforms to any local, state, county and country requirements and laws.

### BLINK PATTERNS

Your IQeye Sentinel all-weather megapixel camera is equipped with two status indicator LEDs that can be seen on the back of the Sentinel enclosure. During normal operation, the following colors and patterns should be visible

Status	Left LED	Right LED
Connected to the network but no network activity	Solid Yellow (10 base) Solid Green (100 base)	Green 2-second blinking pattern
Connected to the network with network activity	Intermittently blinking between red/green as activity occurs	Intermittently blinking between red/green as activity occurs
Connected but no power	Dark	Dark

**Figure 11**

If your Sentinel camera fails to power up or indicate a network connection or show activity, please contact IQinVision technical support for assistance.

# 11. Adjusting/Removing the Sunshield

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## CAUTION

**Your IQ Sentinel sunshield is not captive to the camera enclosure. Please be sure you have the sunshield firmly in hand during adjustment, installation and/or removal.**

*NOTE: For indoor applications of the Sentinel, you may wish to leave the sunshield removed for aesthetic reasons. Though it is not required for normal operation of the Sentinel, the following instructions detail proper adjustment/removal/installation of this sunshield.*

**1. ATTACHING SUNSHIELD** -- Follow these steps if you wish to attach the sunshield to the Sentinel:

- a.** Be sure that the sunshield bracket is firmly attached to the Sentinel before attempting to attach the sunshield.
- b.** With the fluted fins on the sunshield toward the front of the camera, line up the grooves on the sunshield with the flanges on the sunshield bracket and gently slide the sunshield back into the bracket.
- c.** Once the sunshield is in the desired position, tighten the 3mm set screw located on the top and center of the sunshield using the supplied 3mm Allen wrench. *NOTE: To properly tighten the set screw, turn until the screw starts to become tight then turn an additional 3/4 turn.*

**2. ADJUSTMENT/REMOVAL** -- With the supplied 3mm Allen wrench, loosen the single (1) hex set screw on top of the sunshield. **DO NOT REMOVE THE SET SCREW.** Generally, only half a turn or less is required to sufficiently loosen the set screw for adjustment and/or removal of the sunshield.

- a. ADJUSTMENT** – With the set screw loose, gently move the sunshield back or forth to position, then re-tighten the thumbscrew with the supplied 3mm Allen wrench. *NOTE: To properly tighten the set screw, turn until the screw starts to become tight then turn an additional 3/4 turn.*

**b. REMOVAL** – With the sunshield set screw loosened, gently pull the sunshield toward you until it is free of the sunshield bracket.

**c. OPTIONAL** – The bracket that holds the sunshield can also be removed if desired. To remove the sunshield bracket, loosen and remove the two (2) 3mm countersunk screws using the supplied 3mm Allen wrench. The bracket can then be removed. Though it is not required for the integrity of the Sentinel unit, you may wish to re-insert and tighten the two (2) 3mm countersunk screws back into the Sentinel casing.

## 12. Camera/Lens Adjustment

1. With the supplied 3mm Allen wrench, loosen any two adjacent screws of the four available ball pivot screws. This should loosen the ball enough to allow you to position the camera to the desired orientation. Tighten the screws to secure the camera module in place.



Figure 12

2. For the ceiling and parapet mount, it may be necessary to rotate the lower portion of the ball bracket. This can be achieved by loosening the two 3mm Allen screws on the bottom of the arm elbow.

*(NOTE: DO NOT REMOVE the screws in the elbow of the mount as they can be very difficult to re-insert.)*

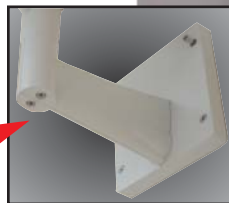


Figure 13

Once the lower arm is rotated to the necessary position, retighten the elbow 3mm screws.

3. Remove the lens cap with the supplied Allen wrench to expose the lens and IQfocus analog video port.
4. Set the iris on the lens to the 'Open' position, then lock it down with the iris set screw.
5. The Sentinel camera/housing module can be focused using a field service monitor. If no analog monitor is available, then focus must be performed by using a browser to view the camera images.
6. Use the varifocal adjustment on the lens to set the field-of-view, then lock the varifocal adjustment set screw.
7. Focus the lens using the focus adjustment on the lens, then lock the focus adjustment set screw.

*NOTE: IQinVision provides a desiccant pack for placement inside the lens cover assembly. IQinVision recommends that you utilize this desiccant pack to prevent fogging of the inside of the lens glass due to any moisture that is present when you install the camera.*

8. Position the supplied desiccant pack above the lens and wrap it around the lens between the lens and the lens cover ring. **NOTE: DO NOT TUCK DESICCANT PACK INTO OUTER CHAMBER OF LENS COVER.** Desiccant pack must be placed next to the lens within the inner chamber of the lens cover.
9. Clean all glass surfaces, including the surface of the lens, and the inside and outside of the lens cover using a lens polishing cloth and approved lens/glass cleaning solution.
10. Carefully replace the lens cover, ensuring that no portion of the desiccant pack obscures the lens or protrudes beyond the inner lens chamber.
11. When the lens adjustments are complete, reinstall the lens cover and tighten the two (2) screws with the supplied Allen wrench. It is not necessary to apply significant force to the tightening of the lens cover screws. Once they are snug, turn an extra 1/2 turn beyond snug.

# 14. PC Configuration of IQeye Sentinel

*PLEASE NOTE – The default user name for all IQeye devices is “root” and the default password is “system”.*

- a) Insert the IQtools CD into the CD drive of the PC. The IQfinder installation application will launch automatically.



Figure 14

- b) Click the “Scan for IQeye cameras on my network” button to find IQeye cameras.



Figure 15

c) The detected cameras will be displayed in the IQfinder window. Highlight a camera from the list and click the “Assign IP” button to edit the selected camera’s IP settings.

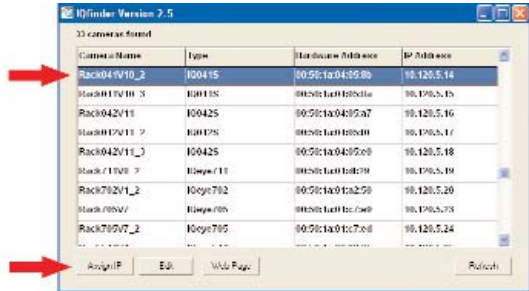


Figure 16

d) The Assign IP window allows the IP address, Subnet, and Gateway of the camera to be changed. It also allows the camera to be configured to DHCP. Click the “Apply” button after making the desired changes.

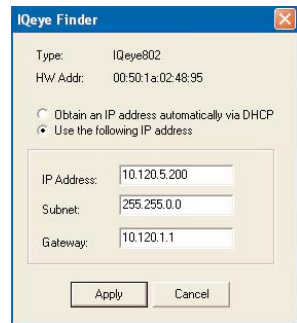


Figure 17

e) To view a camera, double-click on a camera entry in the list, highlight the camera and click the “Open” button. The ‘Live’ page will be displayed.

*Note: It’s also possible to open Internet Explorer, then enter the IP address of the IQeye device in the address field of the browser.*

*PLEASE NOTE – The default user names for all IQeye devices is “root” and the default password is “system”.*

*When you can’t afford to miss a thing.*