

## Product Specification

### 3Mega-Pixel Vandal Proof Fish-Eye IP Camera

**ICA-8350**

Version 1.0

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Change History:

Revision	Date	Author	Change List
Version 1.0	2013/01/14	Anthony	Initial release

Author	Anthony	Editor:	Anthony
Reviewed by:	Jonas	Approved by:	Tom

## 1. PRODUCT DESCRIPTION



### **Exceptional surveillance with outdoor-ready 3 Mega-Pixel Fish-Eye**

The PLANET ICA-8350 3Mega-Pixel Fish-Eye IP Camera supports H.264, MPEG-4, and JPEG compression formats and delivers excellent picture quality in up to 1536 x 1536 pixels at 20 frames per second (fps). Incorporating the professional 3.4MP-resolution sensor, the ICA-8350 provides high quality images and panorama function with quad view to enable images of monitoring and recording from four different angles to be displayed simultaneously. It offers 180° panoramic view by wall mount installation or 360° surround view in deployment of ceiling / floor / table mount. Therefore, users do not need to install multiple IP cameras and hence save tremendous installation and maintenance cost. Moreover, the IP66-rated vandal proof housing protects the ICA-8350 against rain and dust and ensures stable operation under extreme weather conditions. The ICA-8350 is an ideal solution for both indoor and outdoor surveillance applications such as buildings, hospital, bank, hotel lobby, garages, hallway, stores and offices.

### **Complete Monitoring by 360° Surround View**

The ICA-8350 is a fisheye camera with 360 degree panoramic wide angle view without blind spot to allow monitoring all angles of a location using just one camera and thus save lots of traditional mechanical Pan/Tilt maintenance cost. The distorted hemispherical image of the fisheye camera will be converted into the conventional rectilinear projection. Without installing any software, by the ICA-8350, you can watch live view and utilize functions such as motion detection and camera tampering through the Web interface via an IE browser. It also provides distortion correction function to fix the camera video so users can zoom in and zoom out the image, and pan across the camera's video to survey a large area easily.

### **Day & Night functionality**

The ICA-8350 features an automatic, removable infrared-cut filter, which enables the camera to provide color video when there is sufficient light, and black/white video in dark conditions. The camera is able to maintain clear images 24 hours a day.

## Exceptional Image Quality

Together with powerful image processing attributes like Wide Dynamic Range and 3D Digital Noise Reduction (3DNR) technology, the ICA-8350 is able to filter the intense backlight surrounding a subject and remove noises from video signal. The result is that an extremely clear and exquisite picture quality can be produced even under any challenging lighting conditions.

## Camera tampering and audio detection

Provided with three individually configurable motion detection zones, the ICA-8350 can record video, trigger alarms or alerts when motion is detected in specified areas. Moreover, the camera's built-in microphone enables you to hear voice from where out of the video surveillance range and to trigger the audio detection alarm when sounds like screams or glass breaking are detected.

## Advanced event management

The ICA-8350 supports a number of advanced features to enhance surveillance flexibility and event management capabilities. The advanced features include AV out for two-way audio function, RS485 for connection of an optional pan/tilt enclosure which effectively adds pan/tilt functionality, and inputs/outputs interface for connecting to external devices such as door sensors and relays to activate light or close doors.

## Flexible Installation and Power Functionality

The ICA-8350 incorporates IEEE 802.3af Power over Ethernet technology and can be powered from a PoE Switch via the network, which eliminates the need for power cables and reduces installation costs. With advanced features of the Gigabit Ethernet Transmission, the ICA-8350 gives users the utmost in bandwidth flexibility and storage efficiency. Furthermore, the ICA-8350 is ONVIF-compliant and therefore interoperable with other brand's products in the market, greatly supporting users to integrate with their existing surveillance network. In addition, the ICA-8350 seamlessly integrates with the 64-CH central management software, providing advanced monitoring and video management features. The ICA-8350 is indisputably the top choice for reliable and high performance panoramic surveillance.

## 2. PRODUCT FEATURES

### ➤ **Camera**

- 1/2.8" 3.4Mega-Pixel progressive scan CMOS sensor
- 360° /180° Fish-Eye panoramic wide angle view
- 9 different video modes including digital PTZ function
- Maximum resolution 1536 x 1536
- Removable IR-Cut Filter for Day & Night Function

### ➤ **Video / Audio**

- H.264 and M-JPEG video compression simultaneously
- Simultaneous multi-stream support
- H.264 high profile, main profile and baseline
- Up to 22fps for all resolutions
- 3DNR to improve picture quality at low Lux

- WDR Enhancement function strengthens visibility under extremely bright or dark environments
- Two-Way audio support with enhanced audio quality

➤ **Network and Configuration**

- Compliant with IEEE 802.3af PoE interface for flexible deployment
- Equipped with Gigabit Ethernet port
- Auto MDI/MDI-X supported
- Supports IPv6 in addition to the standard IPv4
- RTSP / UPnP / 3GPP / HTTPS protocols selectable

➤ **Easy Installation & Management**

- ONVIF compliant for interoperability
- IP66 outdoor classifications with cable management bracket for rigorous environment
- Built-in Samba client for NAS
- 3GPP for 3G mobile remote applications
- Micro SD card local video recording supported
- RS-485 interface for P/T scanner control
- Digital Input/Output for integration with sensors and alarms
- Cam Viewer 3 Central management software supported

### 3. PRODUCT SPECIFICATION

#### 3.1 COMPONENT

CPU	ARM based SoC
RAM	256MB
Flash	16MB
LAN	RT8211E

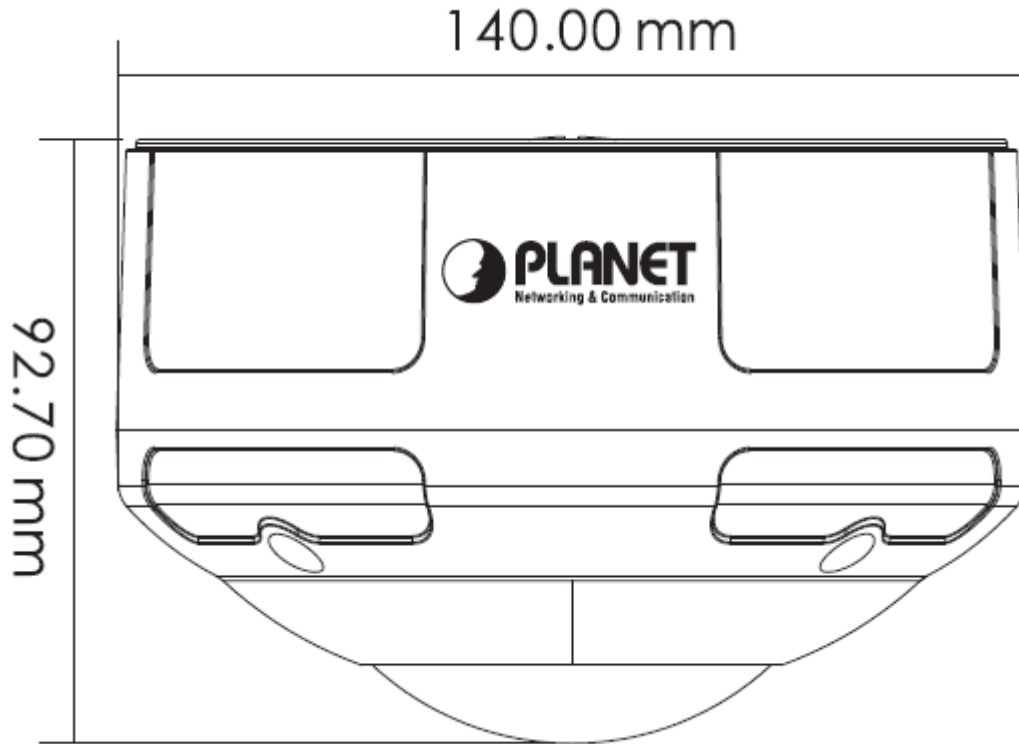
### 3. 2 FUNCTIONAL SPECIFICATIONS

<b>Product</b>	<b>ICA-8350</b> 3Mega-Pixel Vandal Proof Fish-Eye IP Camera
<b>Camera</b>	
<b>Image Device</b>	1/2.8" 3.4Mega-Pixel progressive scan CMOS sensor
<b>Lens</b>	FOV=180 +/- 5°(D/H/V), F=2.0, f=1.25mm Mechanical IR Cut Filter Angle of view : 360 degree view angle
<b>Min Illumination</b>	0.5 Lux @ F2.0
<b>Effective Pixels</b>	1536 x 1536 pixels
<b>Video</b>	
<b>Video Encoder</b>	H.264 / M-JPEG
<b>Video Resolution</b>	H.264 1536 x 1536 / 1280 x 1280 / 768 x 768 / 384 x 384 M-JPEG 1536 x 1536 / 1280 x 1280 / 768 x 768 / 384 x 384
<b>Frame Rate</b>	Up to 22fps for all resolutions
<b>Image Setting</b>	AE, AWB 3D Noise reduction Color, brightness, sharpness, contrast Mirror/Flip 7 Privacy Masks Text, time and date overlay
<b>Streaming</b>	Simultaneously multi-profile streaming Streaming over UDP, TCP, or HTTP M-JPEG streaming over HTTP (server push) Controllable frame rate and bandwidth Constant and variable bit rate (H.264) ROI AOI
<b>Region of Interest</b>	2 windows with selectable resolution and codec max region size 640x352
<b>Rate Control</b>	CBR (Constant Bit Rate) VBR (Variable Bit Rate) EVBR (Enhanced Variable Bit Rate)
<b>UI Layout</b>	<ul style="list-style-type: none"> <li>▪ 1O - One Original fish-eye view</li> <li>▪ 1P - One Panoramic view</li> <li>▪ 1R - One Regional view</li> <li>▪ 2P - Two Panoramic views</li> <li>▪ 1O3R - One Original and three Regional views</li> <li>▪ 4R - Four Regional views</li> <li>▪ 1P2R - One Panoramic and two Regional views</li> <li>▪ 1P3R - One Panoramic and three Regional views</li> <li>▪ 4R PRO - Four Regional views interactively displayed when the field of view changes in any of the views</li> </ul>
<b>Audio</b>	
<b>Audio Streaming</b>	2-Way Audio
<b>Audio Compression</b>	RTSP: G.711 64kbps, G.726 32kbps
<b>Microphone</b>	External microphone input
<b>Audio Output</b>	Adjustable audio output gain
<b>Network and Configuration</b>	
<b>Network Standard</b>	IEEE 802.3 10Base-T IEEE 802.3u 100Base-TX IEEE 802.3ab 1000Base-T

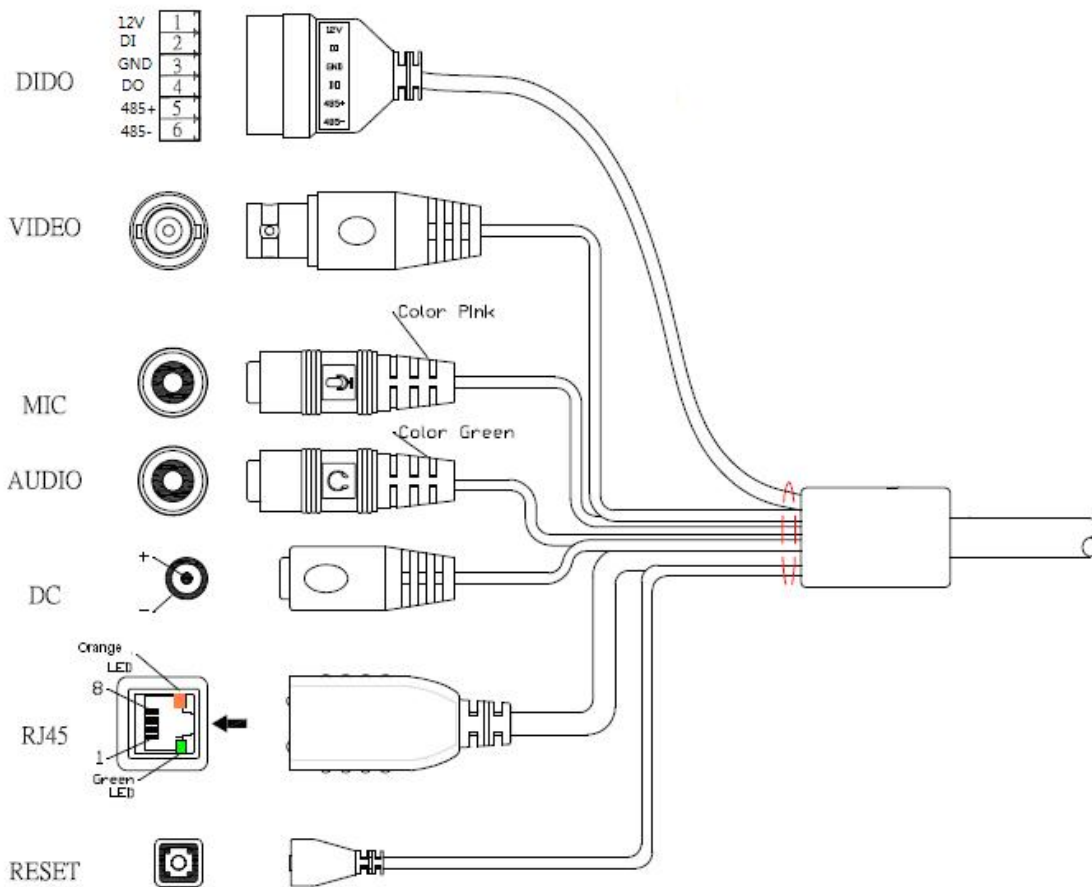
<b>Network Protocol</b>	IPv4, IPv6, TCP/IP, UDP, HTTP, HTTPS, SMTP, FTP, NTP, DNS, DDNS, DHCP, ARP, Bonjour, UPnP, RTSP, RTP, RTCP, IGMP, PPPoE, 3GPP, ICMP, Samba
<b>Security</b>	Password protection, IP address filtering, HTTPS encrypted data transmission, user access log
<b>Users</b>	20 simultaneous unicast users
<b>System Integration</b>	
<b>SDK</b>	Open API for software integration ONVIF
<b>Alarm Triggers</b>	Intelligent video motion detection and external input
<b>Alarm Events</b>	File upload via FTP, Samba, SD card or email Notification via email, HTTP, and TCP External output activation Audio alerting output Pre and post alarm buffering
<b>Environment</b>	
<b>Power Requirement</b>	12V DC, 1A IEEE 802.3af Class 3
<b>Power Consumption</b>	7W max.
<b>Operating Temperature</b>	-20 ~ 50 Degree C
<b>Operating Humidity</b>	20 ~ 80% (non-condensing)
<b>Weight (includes LENS)</b>	817g
<b>Dimension (W x H)</b>	140 x 92.7 mm
<b>Emission</b>	CE, FCC
<b>Connectors</b>	10/100/1000 RJ-45 DC power jack Terminal block for 1 alarm input and 1 output RS-485 interface for pan/tilt scanners control External MIC input Audio out Composite video output (Max. resolution: D1 720 x 480 pixel) Micro SD card(Max 32GB, Class 6) Factory default reset

### 3.3 PHYSICAL SPECIFICATION

<b>Dimension</b>	140 x 92.7mm ( $\phi$ x H)
<b>Weight</b>	817g



**I/O Control Instruction:**



**Descriptions for I/O cable set:**

Interface	Description																					
<b>RJ45 LAN socket</b>	Connects to your local area network by Ethernet cable LAN LED (green color) This LED will be flashing while network accessing via Ethernet Power LED (orange color) This LED is used to indicate whether DC power is on or not																					
<b>DC-in Jack</b>	DC power input, connect to AC power adapter <b>Note</b> that supply the power to the Network Camera with the power adapter included in package																					
<b>RS-485 &amp; digital I/O</b>	RS-485 : Connect to a local keyboard controller DI/ DO: Connect to sensor in and alarm out devices Cable for I/O connectors:																					
	<table border="1"> <thead> <tr> <th>Name</th> <th>Number</th> <th>Function</th> </tr> </thead> <tbody> <tr> <td>12VDC</td> <td>1</td> <td>DC 12V (50mA maximum)</td> </tr> <tr> <td>DI</td> <td>2</td> <td>Digital signal input</td> </tr> <tr> <td>GND</td> <td>3</td> <td>GND</td> </tr> <tr> <td>DO</td> <td>4</td> <td>Digital signal output</td> </tr> <tr> <td>485+</td> <td>5</td> <td>RS485 data +</td> </tr> <tr> <td>485-</td> <td>6</td> <td>RS485 data -</td> </tr> </tbody> </table>	Name	Number	Function	12VDC	1	DC 12V (50mA maximum)	DI	2	Digital signal input	GND	3	GND	DO	4	Digital signal output	485+	5	RS485 data +	485-	6	RS485 data -
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<b>MIC in (Audio in)</b>	Connect a microphone to the network camera
<b>Audio out</b>	Connect a loud speaker to the network camera. This function is for voice alerting and two-way audio
<b>Video out (BNC connector)</b>	The Network Camera also provides composite video output. The video output function is only for easy installation to check view angle and focus. The output is not a Mega-pixel resolution. Furthermore, only "720p Mode" supports this function. "2 Mega Mode" does not support it. Please refer to Setting \ Video \ Common chapter
<b>Reset</b>	<p>This button is used to restore the all factory default settings. Sometimes restarting the device will make the system back to a normal state. However, if the system still got problems after restart, user can restore the factory default settings and install it again.</p> <p>Restore the device:</p> <ol style="list-style-type: none"> <li>1. While the Camera is ready and then press the button down continuously</li> <li>2. Hold the button at least 5 seconds and release it. Then the device has been restored to default settings and reboot again</li> </ol> <p>Note: Restoring the factory default setting will lose the all previous settings included IP address forever. User needs to run the IPWizard II program to search the device and configure it to let the device work properly again</p>

### 3.4 ENVIRONMENTAL SPECIFICATION

#### Temperature

<b>Operating</b>	-20 ~ 50 degree C
<b>Storage</b>	-25 ~ 55 degree C

#### Humidity

<b>Operating</b>	20 ~ 80% (non-condensing)
<b>Storage</b>	10 ~ 85%

### 3.5 ELECTRICAL SPECIFICATION

Device Input Voltage:	12V DC / 1A	
Power Adapter:	Power Input	100~240, 50-60Hz, 0.4A Switching Power Supply
	Power Output	12V DC / 1A

### 3.6 REGULATORY COMPLIANCE

CE, FCC, RoHS, WEEE

### 3.7 BASIC PACKAGING

ICA-8350 x 1  
 Accessory Kit x 1  
 (Hex wrench x 1, Expansion screws x 2, tapping screws x 2)  
 2 pin Terminal Block x 1  
 Power Adapter x 1  
 User's Manual CD x 1  
 Quick Installation Guide x 1

### 3.8 PACKAGE INFORMATION

<b>Dimension</b>	252 x 192 x 140mm (W x D x H)
<b>Weight</b>	1240 g (gross weight) 8 pcs in one carton

### APPENDIX A: Default Setting

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<b>Default DHCP Client</b>	On
<b>Default IP Address</b>	192.168.0.20 – if no DHCP existed in the network
<b>Default Login User Name</b>	admin
<b>Default Login Password</b>	admin