

2-/4-Channel Cam Viewer E-series for **A**utomatic **L**icense **P**late **R**ecognition **CV7-LP Series**



Presentation Outlines

- ◆ **Product Overview**
- ◆ **Product Features**
- ◆ **Product Applications**
- ◆ **Product Comparison**



Software-based ALPR Solution with Flexible Integration

Live & Pre-recorder Video Analysis Advanced Search & Filter Video Export

CV7L NVR

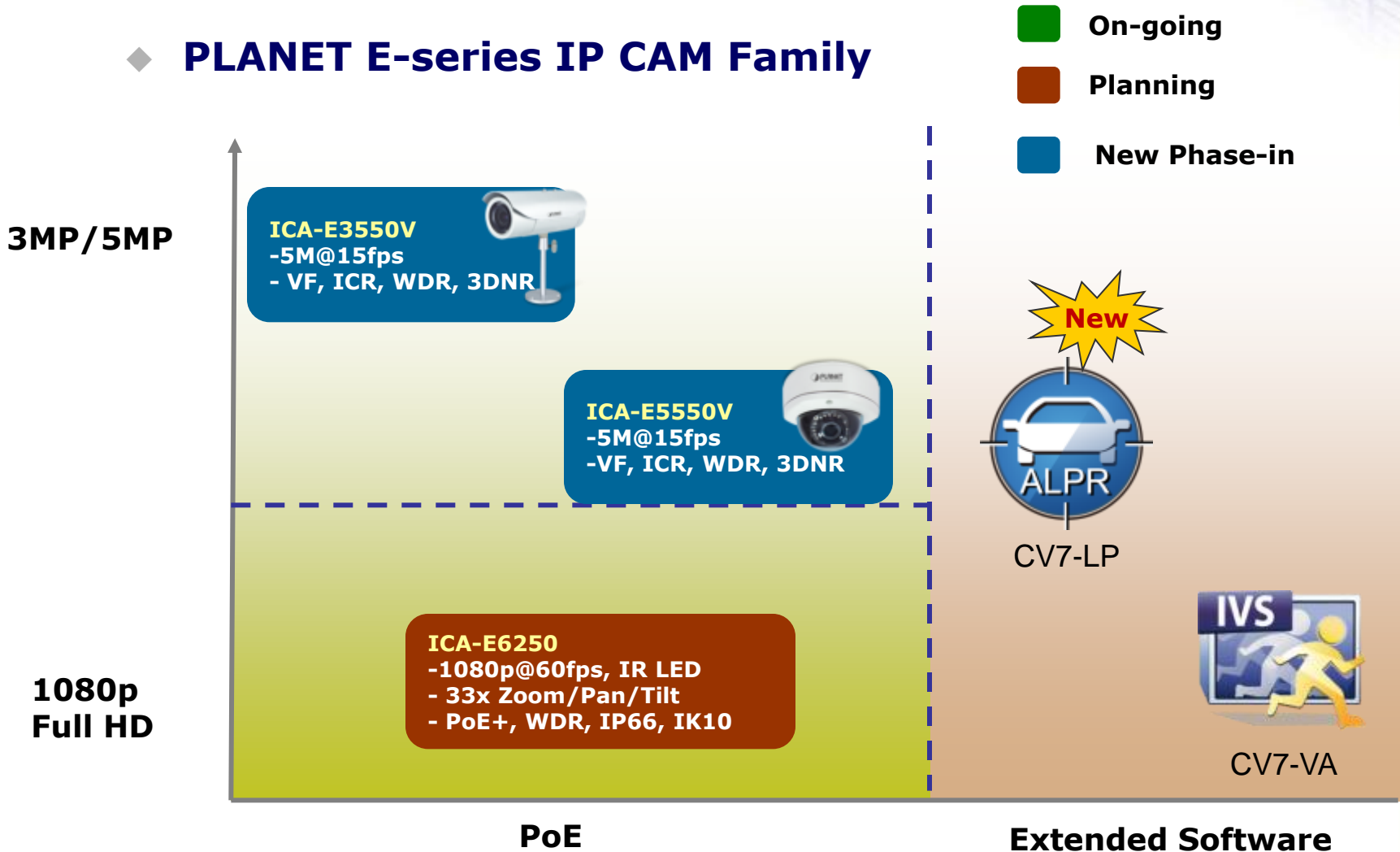
LIVE VIDEO
E-series Camera

Automatic License Plate Recognition Software

Intelligent and Efficient License Plate Monitoring for Security
Software-based Automatic License Plate Recognition (ALPR) Solution **CV7-LP series**

Product Positioning

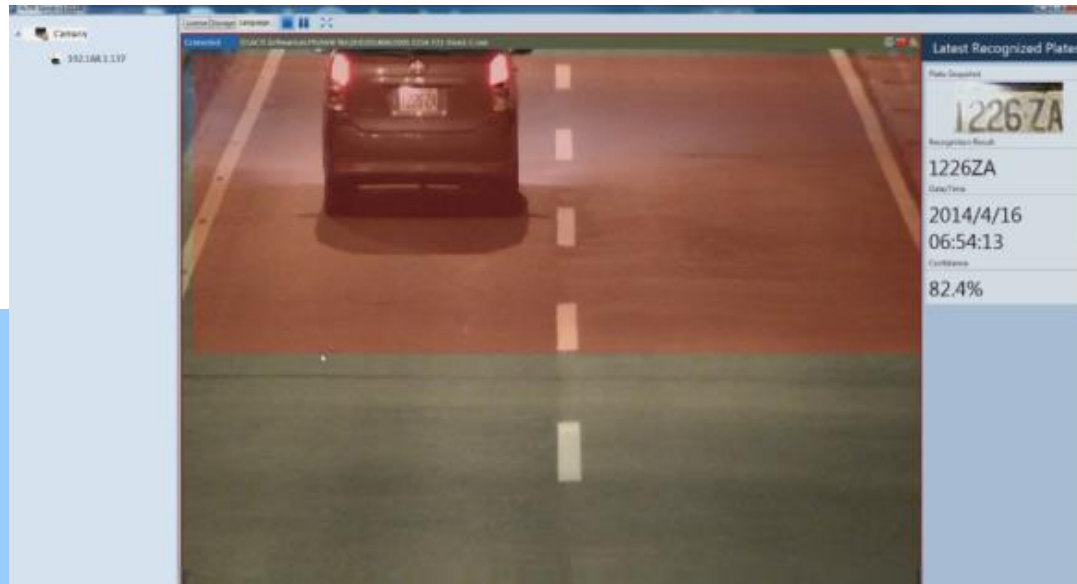
◆ PLANET E-series IP CAM Family



Product Overview

◆ CV7-LP ALPR Software

- ✓ Automatic License Plate Recognition
- ✓ Provides efficiency in parking and traffic control, as well as law enforcement



Projected-base
Integration

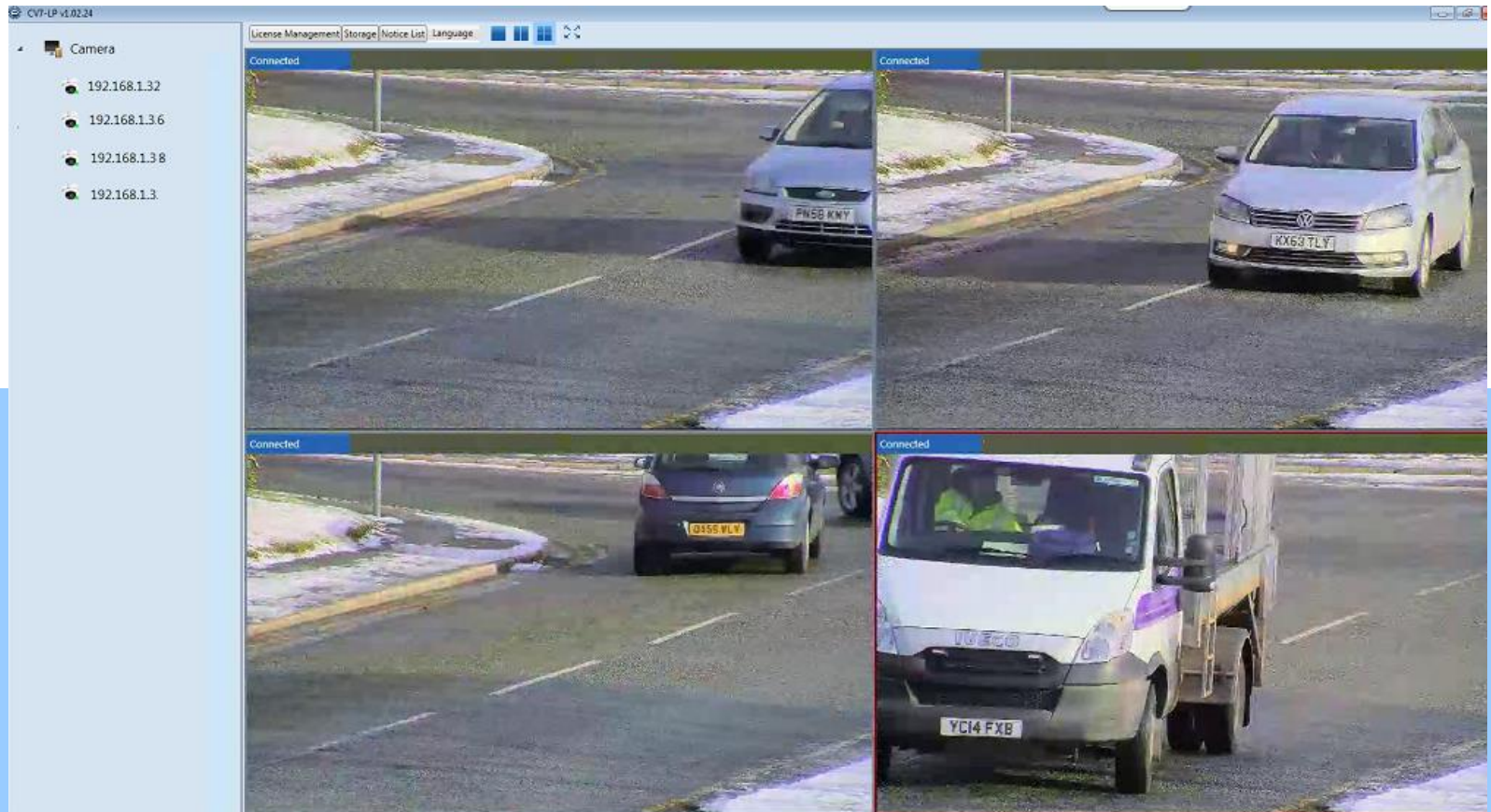
Video
Analysis

Advanced
Search & Filter

Management
Up to 2 / 4 CH

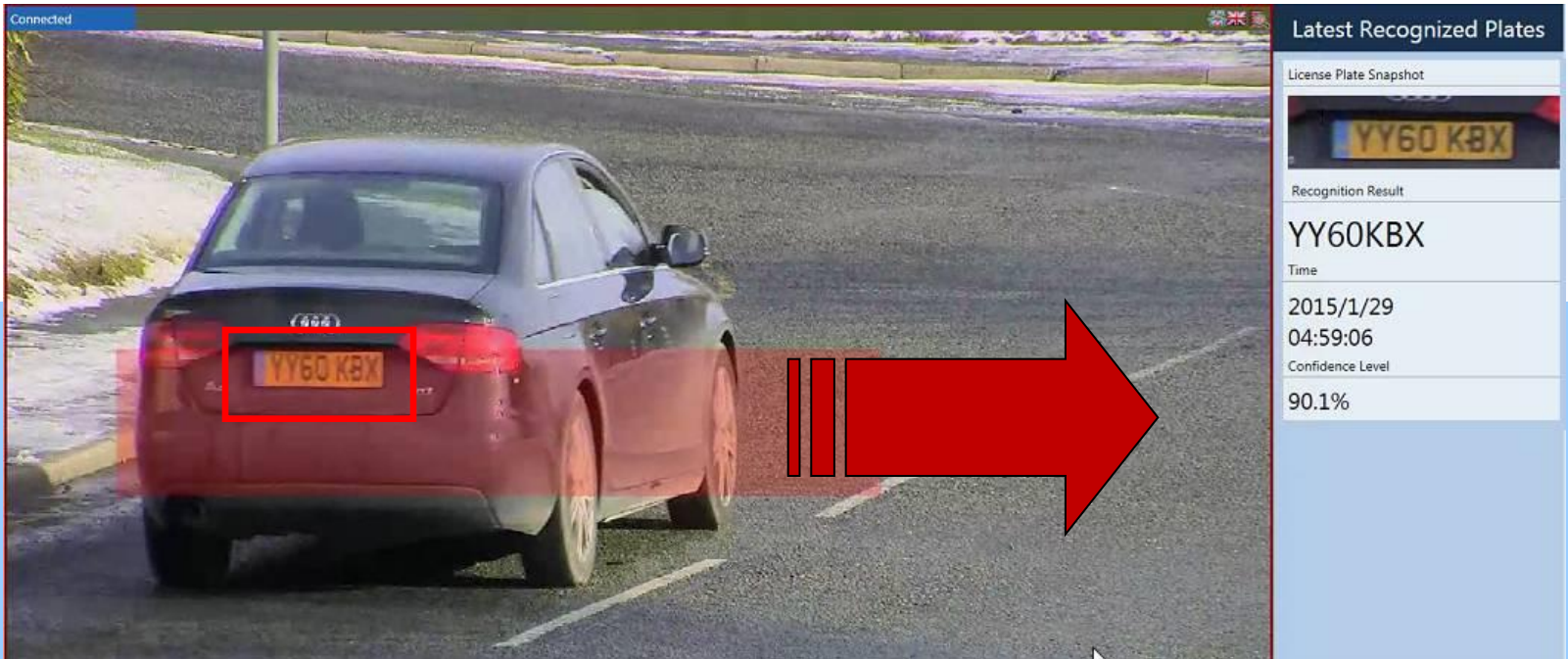
Product Features – *Up to 4 Concurrent Analysis*

- ✓ Up to 4 channels of video can be analyzed at one time in the server.



Product Features – *Display Real-time Information*

- ✓ The CV7-LP provides the feature to display real-time information of the latest recognized license plate. It will show a snapshot of the license plate, the result of the recognition, time and date captured, and the confidence level of the algorithm.

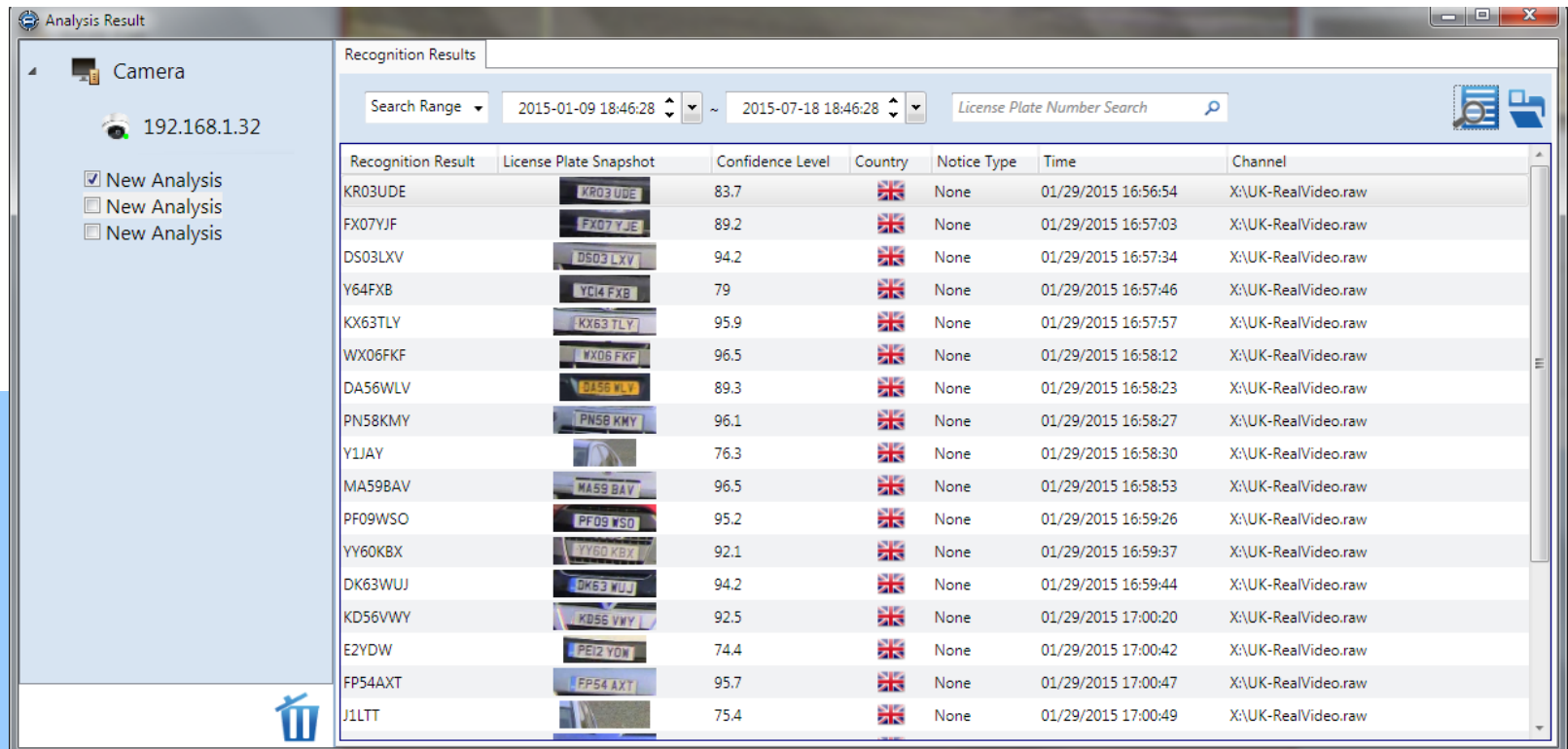


The screenshot displays a real-time video feed of a dark grey car parked on a road. A red rectangular box highlights the license plate 'YY60 KBX'. A large red arrow points from this box to a sidebar titled 'Latest Recognized Plates'. The sidebar contains the following information:



































Latest Recognized Plates	
License Plate Snapshot	
Recognition Result	YY60KBX
Time	2015/1/29 04:59:06
Confidence Level	90.1%

Product Features– *Result Report*

- ✓ At the end of each plate analysis, results can be printed for an overview.



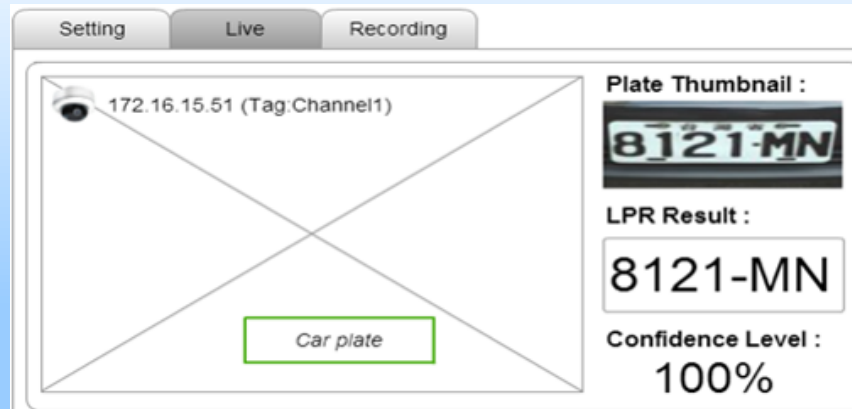
The screenshot shows the 'Analysis Result' window with a sidebar on the left and a main table area. The sidebar includes a 'Camera' section with the IP address '192.168.1.32' and three checkboxes, all of which are currently unchecked. The main area is titled 'Recognition Results' and features a search range from '2015-01-09 18:46:28' to '2015-07-18 18:46:28' and a 'License Plate Number Search' field. Below this is a table with the following data:

Recognition Result	License Plate Snapshot	Confidence Level	Country	Notice Type	Time	Channel
KR03UDE		83.7		None	01/29/2015 16:56:54	X:\UK-RealVideo.raw
FX07YJF		89.2		None	01/29/2015 16:57:03	X:\UK-RealVideo.raw
DS03LXV		94.2		None	01/29/2015 16:57:34	X:\UK-RealVideo.raw
Y64FXB		79		None	01/29/2015 16:57:46	X:\UK-RealVideo.raw
KX63TLY		95.9		None	01/29/2015 16:57:57	X:\UK-RealVideo.raw
WX06FKF		96.5		None	01/29/2015 16:58:12	X:\UK-RealVideo.raw
DA56WLV		89.3		None	01/29/2015 16:58:23	X:\UK-RealVideo.raw
PN58KMY		96.1		None	01/29/2015 16:58:27	X:\UK-RealVideo.raw
Y1JAY		76.3		None	01/29/2015 16:58:30	X:\UK-RealVideo.raw
MA59BAV		96.5		None	01/29/2015 16:58:53	X:\UK-RealVideo.raw
PF09WSO		95.2		None	01/29/2015 16:59:26	X:\UK-RealVideo.raw
YY60KBX		92.1		None	01/29/2015 16:59:37	X:\UK-RealVideo.raw
DK63WUJ		94.2		None	01/29/2015 16:59:44	X:\UK-RealVideo.raw
KD56VWY		92.5		None	01/29/2015 17:00:20	X:\UK-RealVideo.raw
E2YDW		74.4		None	01/29/2015 17:00:42	X:\UK-RealVideo.raw
FP54AXT		95.7		None	01/29/2015 17:00:47	X:\UK-RealVideo.raw
J1LTT		75.4		None	01/29/2015 17:00:49	X:\UK-RealVideo.raw

All – Full Functions to Meet Your Needs

License Plate Recognition with Confidence Level

- ✓ For each ROI in each channel, the ALPR will recognize the license plate and provide the confidence level at the same time.



- ✓ Applications – Parking Lot Management, Toll Stations, Moving Violations, Stolen Cars, Traffic Control, Border Crossing, Gas Stations, Law Enforcement, etc.

All – Full Functions to Meet Your Needs

Search Filters

- ✓ Time of incident and vehicle color can be set as filters for vehicle search.



2014-02-12 00:00:00 ~ 2014-02-13 00:00:00

Time Period Color

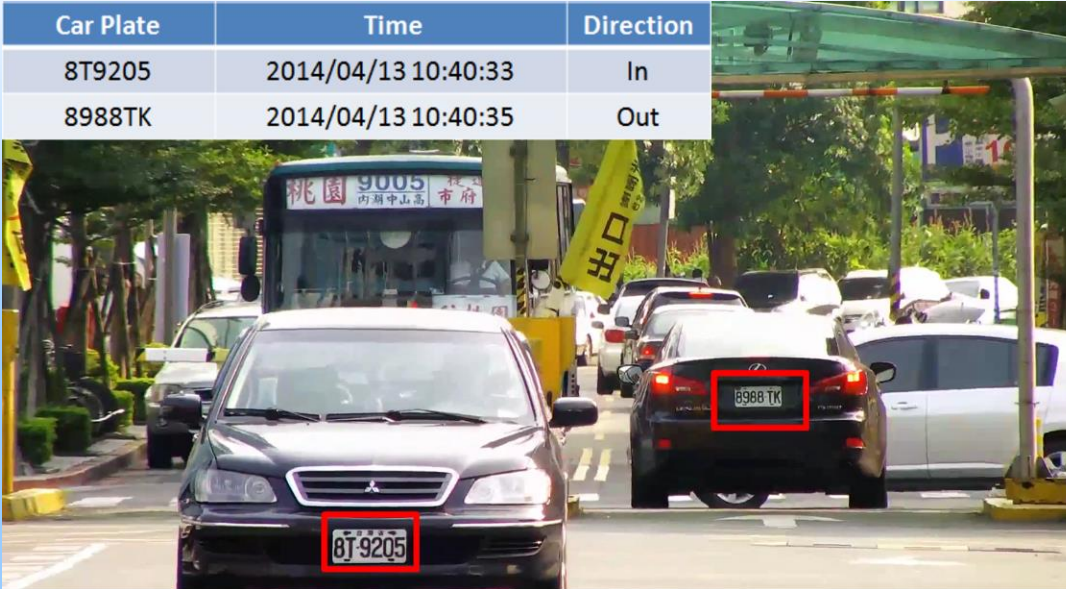
- ✓ Reports with filters for specific screening conditions provides you a quick and easy way to search for critical video footage.

All – Full Functions to Meet Your Needs

ALPR Smart Search Result Player

- ✓ The vehicle license plate recognition result will be displayed with a confidence level in the ALPR Smart Search Result Player.

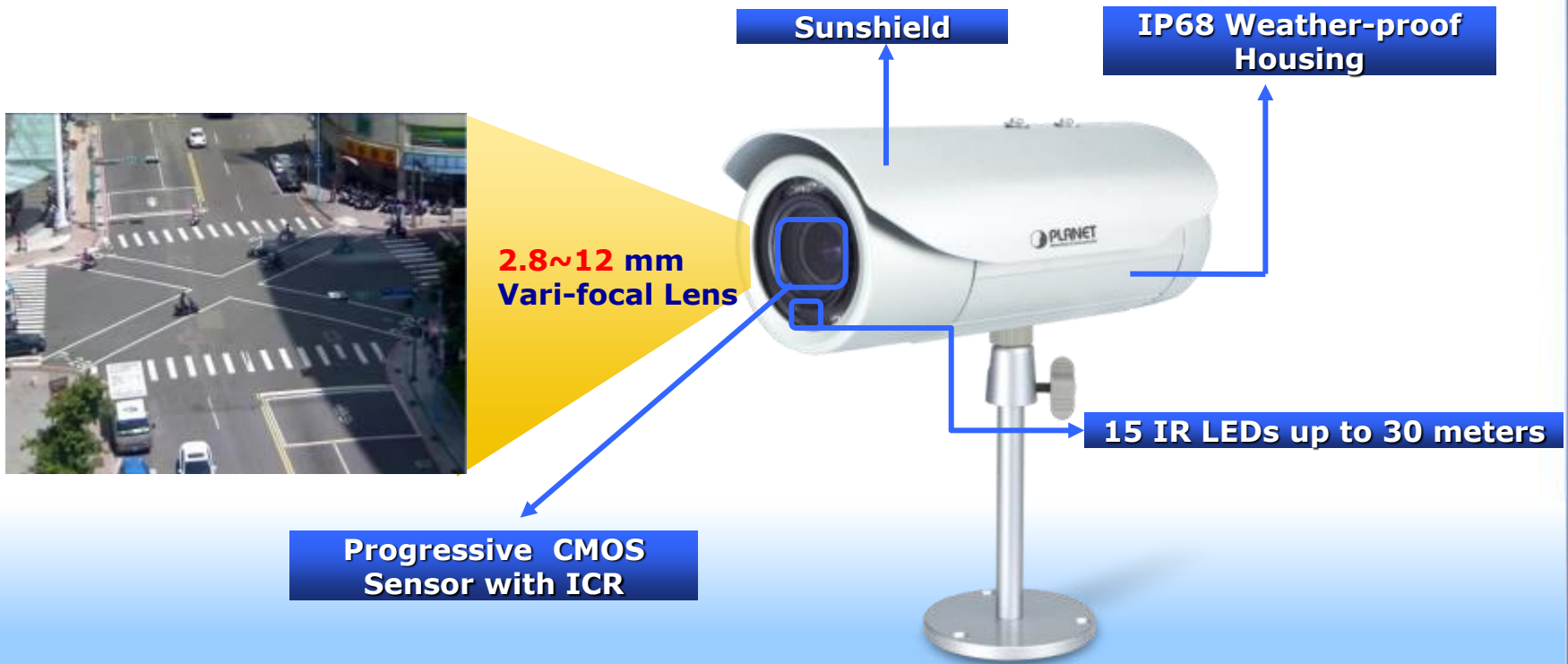
Car Plate	Time	Direction
8T9205	2014/04/13 10:40:33	In
8988TK	2014/04/13 10:40:35	Out



- ✓ The vehicle license plate captured with confidence level helps user to screen out uncertain or unclear license plates, saving time from incorrect results.

Supported ICA - *E-series Camera*

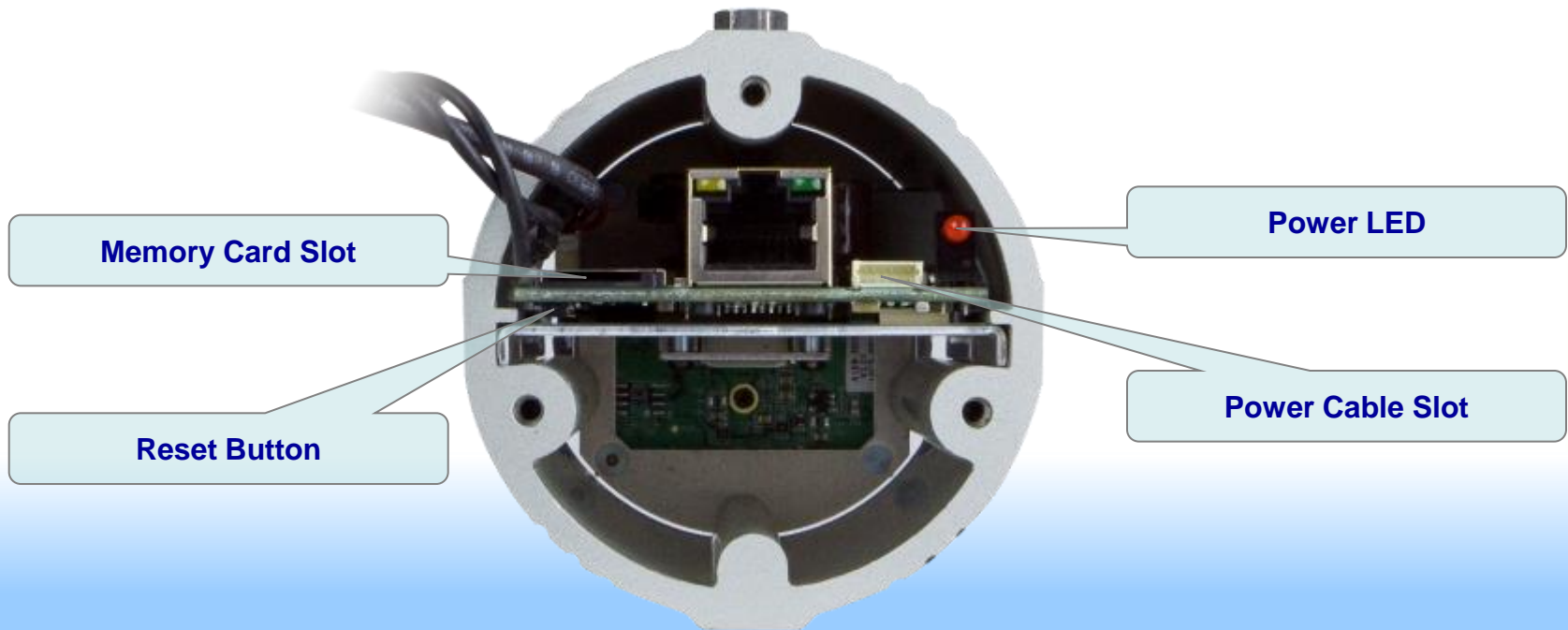
◆ Front View of ICA-E3550V



Product Overview

I/O Control Instructions of ICA-E3550V

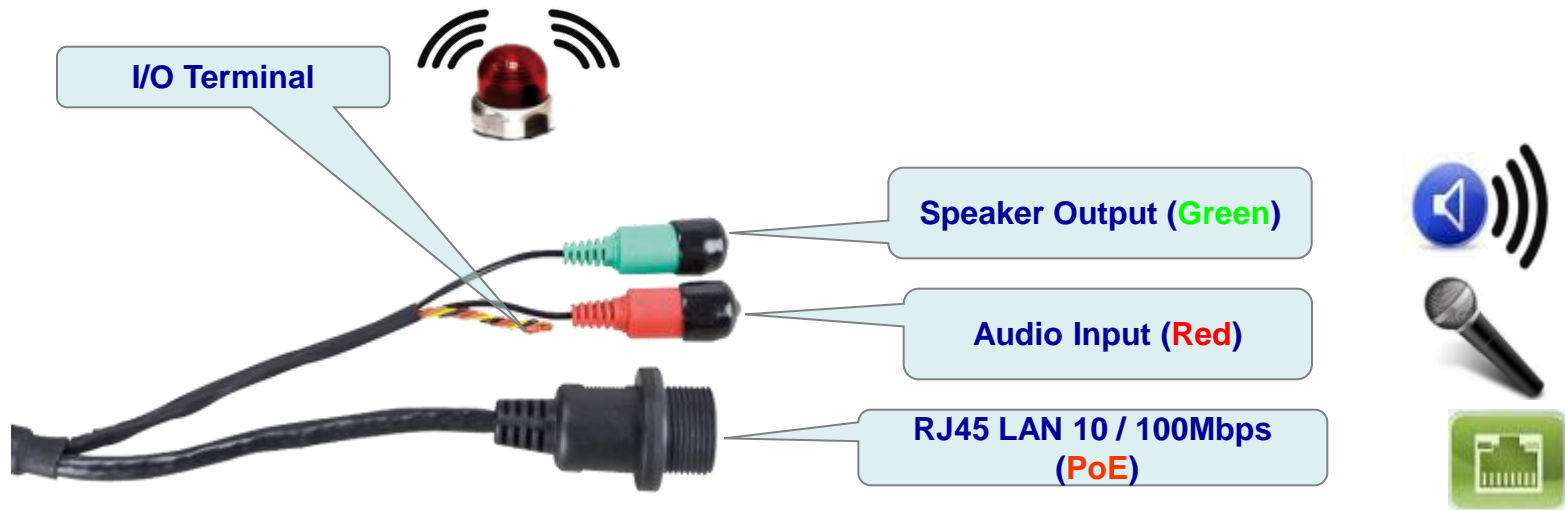
Internal Connectors



Product Overview

I/O Control Instructions of ICA-E3550V

External Connectors



Supported ICA - *E-series Camera*

◆ Front View of ICA-E5550V



IP66 Weatherproof

IK10 Vandalproof

15 IR LEDs up to 30 meters

2.8~12 mm Vari-focal Lens



Product Overview

I/O Control Instructions

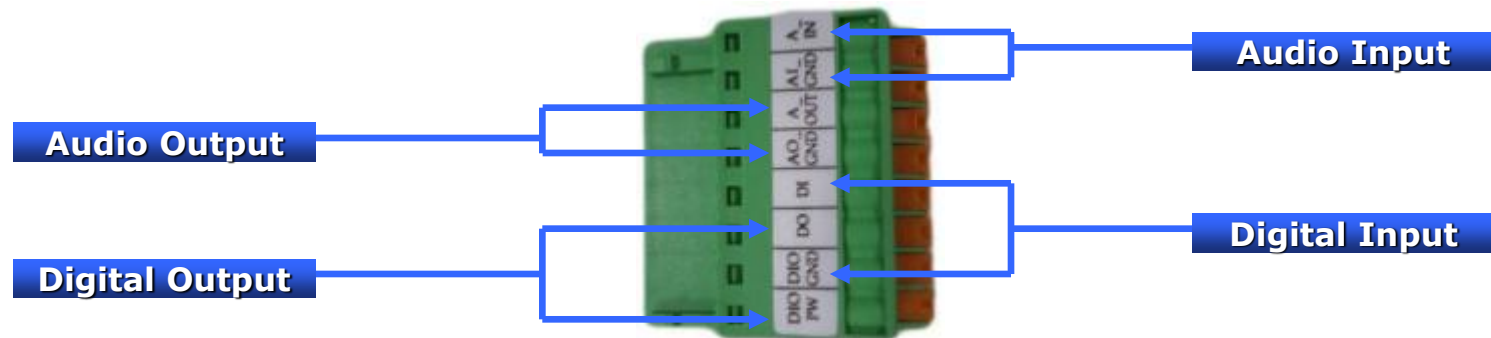
Connectors



Product Overview

I/O Control Instructions

Terminal Block



ICA-E-series Product Features

➤ Camera

- ✓ **1/3.2" 5 mega-pixel progressive scan CMOS sensor**
- ✓ **2.8~12 mm vari-focal, fixed-iris lens**
- ✓ **0.1 lux minimum illumination at F1.4**
- ✓ **Maximum resolution 2592 x 1944**
- ✓ **Max. resolution of 1080p at 30fps and 5 mega-pixel at 15fps**
- ✓ **Removable IR-cut Filter for Day & Night function**
- ✓ **Built-in 15 IR illuminators, effective up to 30 meters**

ICA-E-series Features – *Vari-focal*

◆ Vari-focal Offers the Best Recording Flexibility

- ✓ The **2.8 ~ 12mm** vari-focal lens of the ICA-E3550V/E5550V offers a high millimeter setting for narrow viewing fields or a low millimeter setting for wider viewing fields.



Vari-focal lens for available focal lengths

ICA-E-series Features - **ICR**

◆ Day & Night Functionality

- ✓ The **ICR** (Removable IR-cut filter) and built-in **IR** LED illuminators enable the camera to provide color video when there is sufficient light, and black and white video in dark conditions.



ICA-E-series Features

➤ Video/Audio

- ✓ Simultaneous **H.264** and **M-JPEG** video compression
- ✓ Simultaneous **multi-stream** support
- ✓ H.264 high profile, main profile and baseline
- ✓ **3DNR** to improve picture quality at low lux
- ✓ **WDR** Enhancement for enhancing visibility under extremely bright or dark environments
- ✓ **Two-way** audio support with enhanced audio quality

ICA-E-series Features – *Multi-Profile*

◆ Multi-Profile

- ✓ Supporting simultaneous **multiple resolutions** and **video compressions** can generate different video streams per user's command.



Recording

2592x1944 @15fps (5MP)



Remote Access

1280x720 @5fps

ICA-E-series Features - **WDR**

◆ Exceptional Image Quality

- ✓ **WDR** (Wide Dynamic Range) Enhancement for enhancing visibility under extremely bright or dark environments



ICA-E-series Features – **3DNR**

- ◆ **Exceptional Image quality**

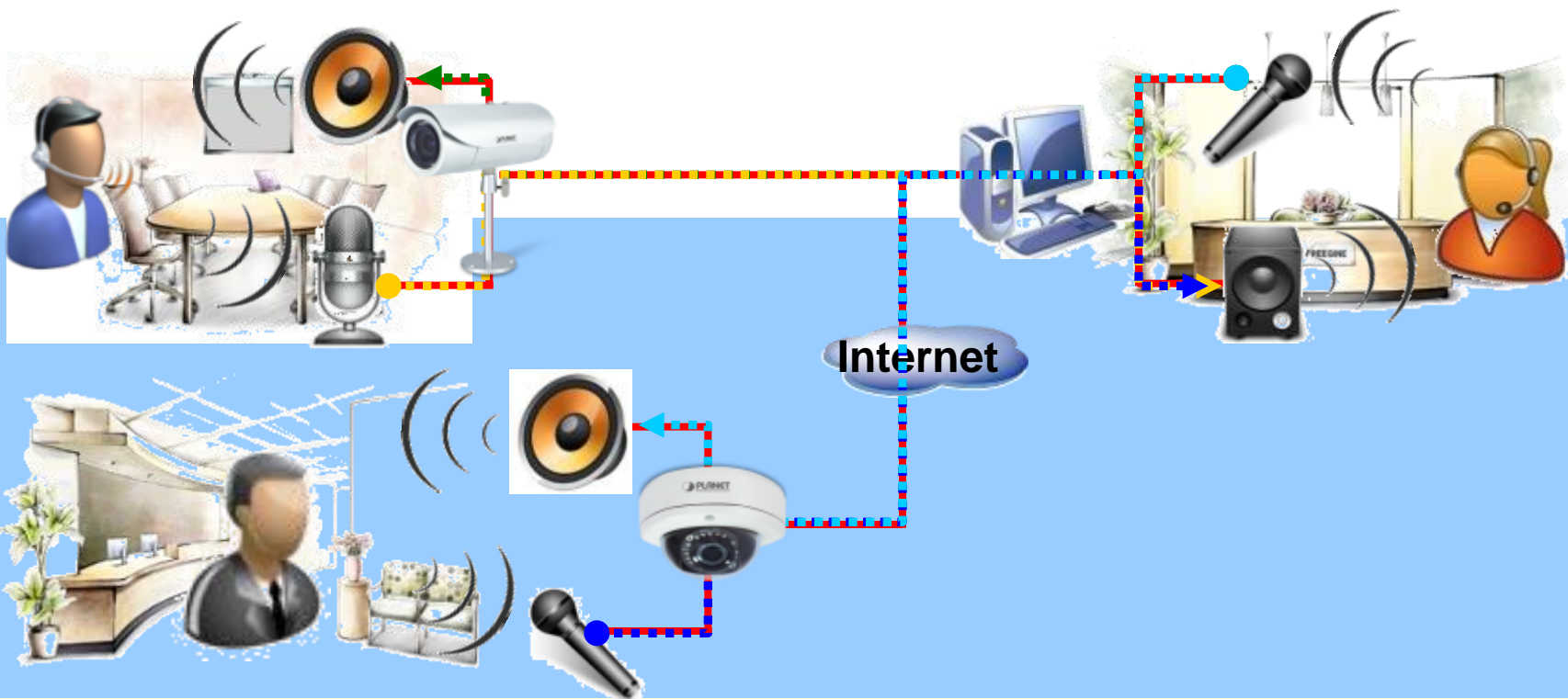
- ✓ **3DNR** (3-dimensional Noise Reduction) to improve picture quality at low lux



ICA-E-series Features - *2-way Audio*

◆ Supporting 2-way Audio

- With **2-way audio** function, IP camera becomes a bridge that helps users to talk to other people.
- Via two IP cameras, users can easily communicate to each other at an international meeting or for a personal chat.



ICA-E-series Features

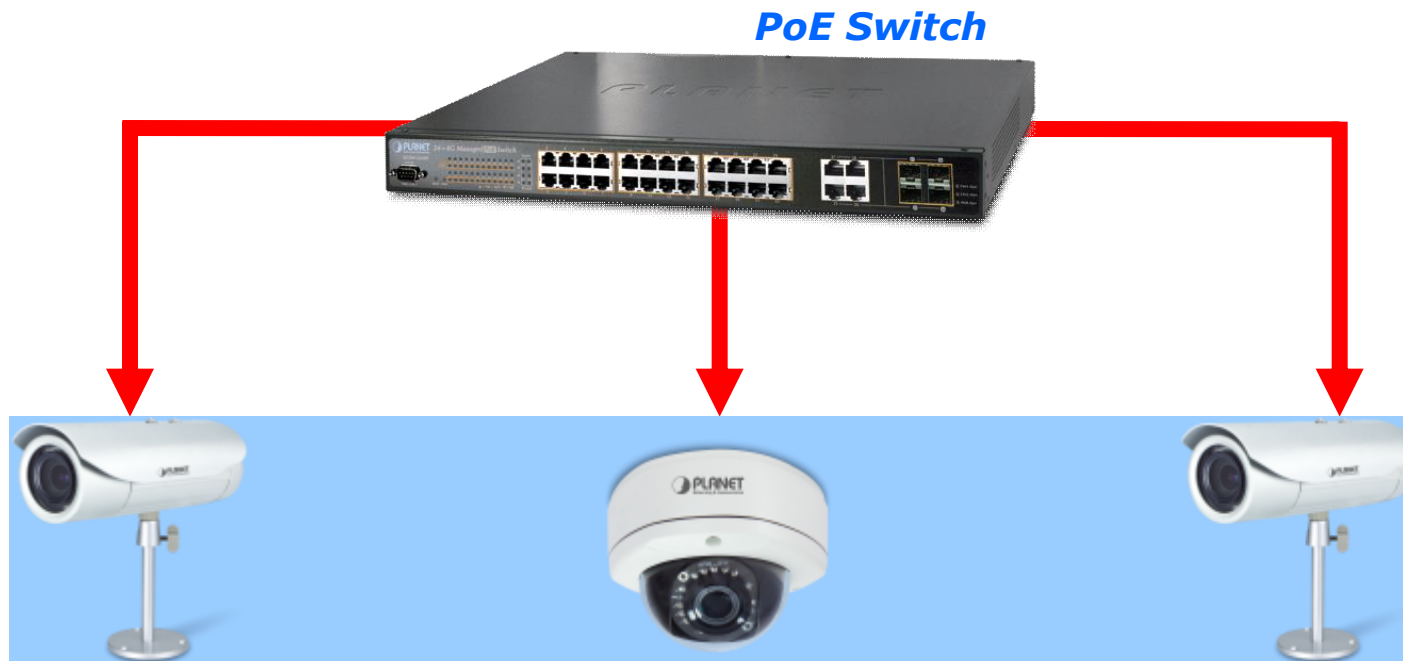
➤ Network and Configuration

- ✓ Compliant with **IEEE 802.3af PoE** interface for flexible deployment
- ✓ Auto MDI/MDI-X supported
- ✓ Supports both **IPv6** and **IPv4**
- ✓ Provides password protection, IP address filtering, HTTPS encryption, anonymous login, 802.1X network access control
- ✓ RTSP/UPnP/Bonjour/SNMP/PPPoE/HTTPS protocols selectable

ICA-E-series Features - *PoE*

◆ Power over Ethernet

- ✓ IEEE 802.3af support enables the camera to be installed anywhere without the need for additional power socket for the IP camera.

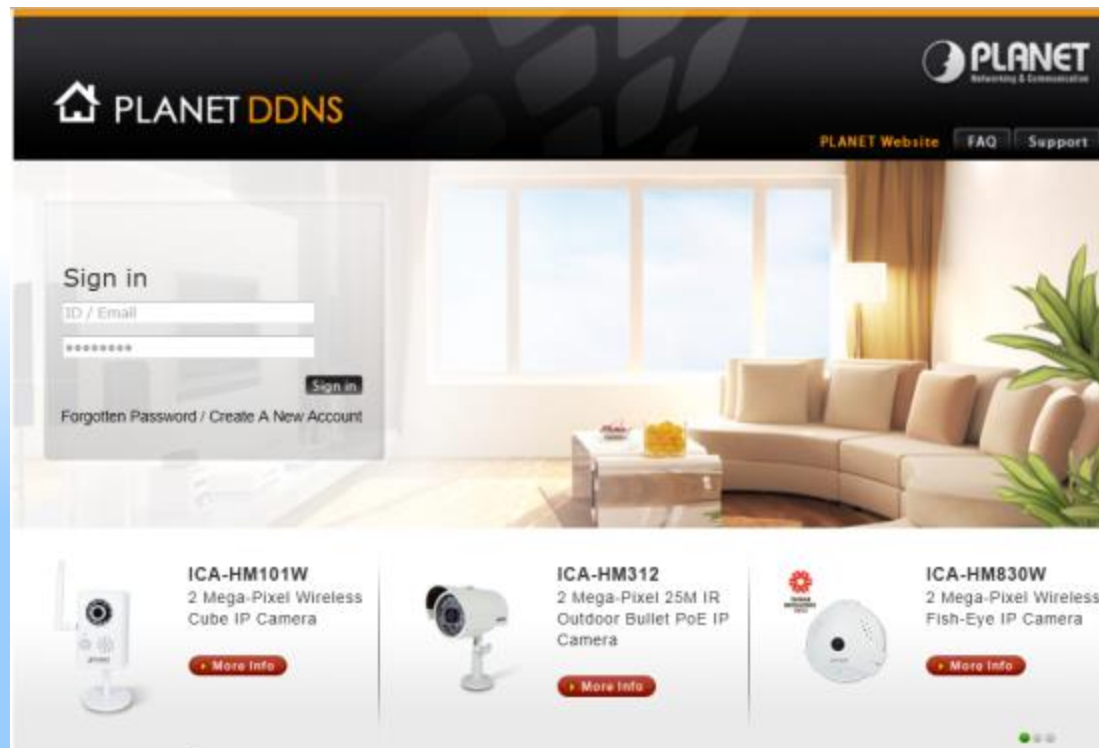


Compliant with IEEE 802.3af standard PoE interface, these cameras can be located in places where there are no power outlets.

ICA-E-series Features - **PLANET DDNS**

◆ Access anytime, anywhere

Sign-in **PLANET DDNS** to register a simple domain name to access home device anytime, anywhere. Also **PLANET easy DDNS** lets user easily use PLANET DDNS function without manually adding new account.



The screenshot shows the PLANET DDNS website interface. At the top, there is a dark header with the PLANET logo and navigation links for 'PLANET Website', 'FAQ', and 'Support'. Below the header, a 'Sign in' form is displayed on the left, featuring input fields for 'ID / Email' and a password, a 'Sign in' button, and links for 'Forgotten Password' and 'Create A New Account'. The background of the page is a bright, modern living room with a beige sofa and large windows. At the bottom, three product cards are shown, each with an image of a camera and a 'More Info' button:

- ICA-HM101W**: 2 Mega-Pixel Wireless Cube IP Camera
- ICA-HM312**: 2 Mega-Pixel 25M IR Outdoor Bullet PoE IP Camera
- ICA-HM830W**: 2 Mega-Pixel Wireless Fish-Eye IP Camera

[Already a planetddns user ? Log in now](#)

ICA-E-series Features

➤ Easy Installation & Management

- ✓ **ONVIF** compliant for interoperability
- ✓ **Intelligent Motion Detection**
- ✓ **IK10/IP68(ICA-E3550V)/ IP66(ICA-E5550V)** classifications with vandal and weather proof
- ✓ **Supports MicroSDHC/MicroSDXC** card for local video recording
- ✓ **Digital Input/Output** for integration with sensors and alarms
- ✓ **Mobile app** viewer for Android and iOS
- ✓ **Cam Viewer 7 Lite** video management software supported

ICA-E-series Features – *Motion Detection*

◆ 3 Motion Detection Areas

- ✓ Once there is any moving activity detected in the specified area, the camera can soon send a message to the manager by email or upload recording/picture onto FTP and email.

1: 2015-06-23 10:34:59

ssion **Motion Detection** Day/Night Image Exposure/White Balance OSD/Private

Runtime MD Profile ▾

Region	Enabled	Sensitivity	Trigger Interval
1	<input checked="" type="checkbox"/>	70 ▾	1 ▾



ICA-E-series Features – *Weatherproof*

◆ Most Extreme Environments

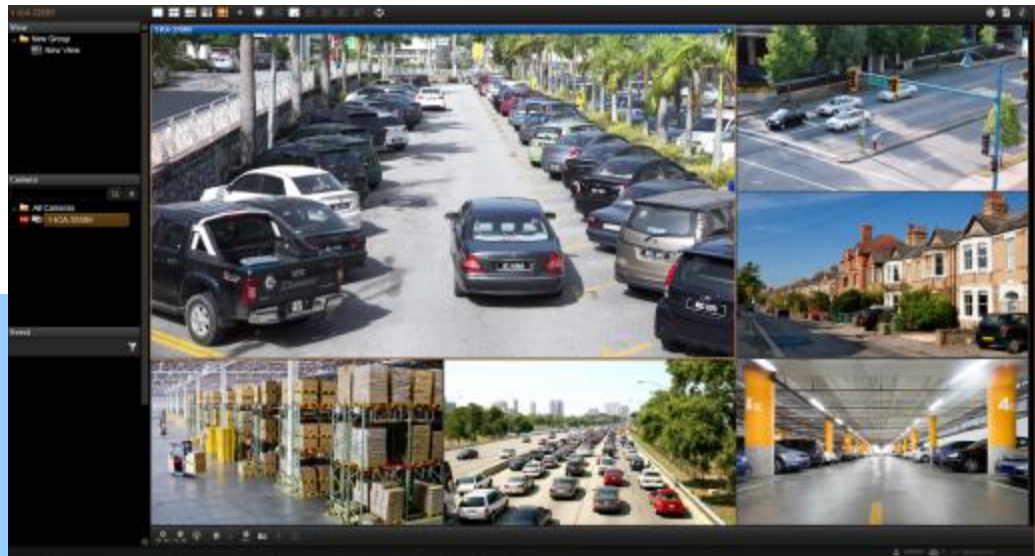
- ✓ **IP68 (ICA-E3550V)/IP66 (ICA-E5550V) weatherproof** housing helps to protect the ICA-E series against dust, rain, snow and sun in outdoor surveillance system deployments.



Product Features – **CV7L**

◆ **CV7L Management Software**

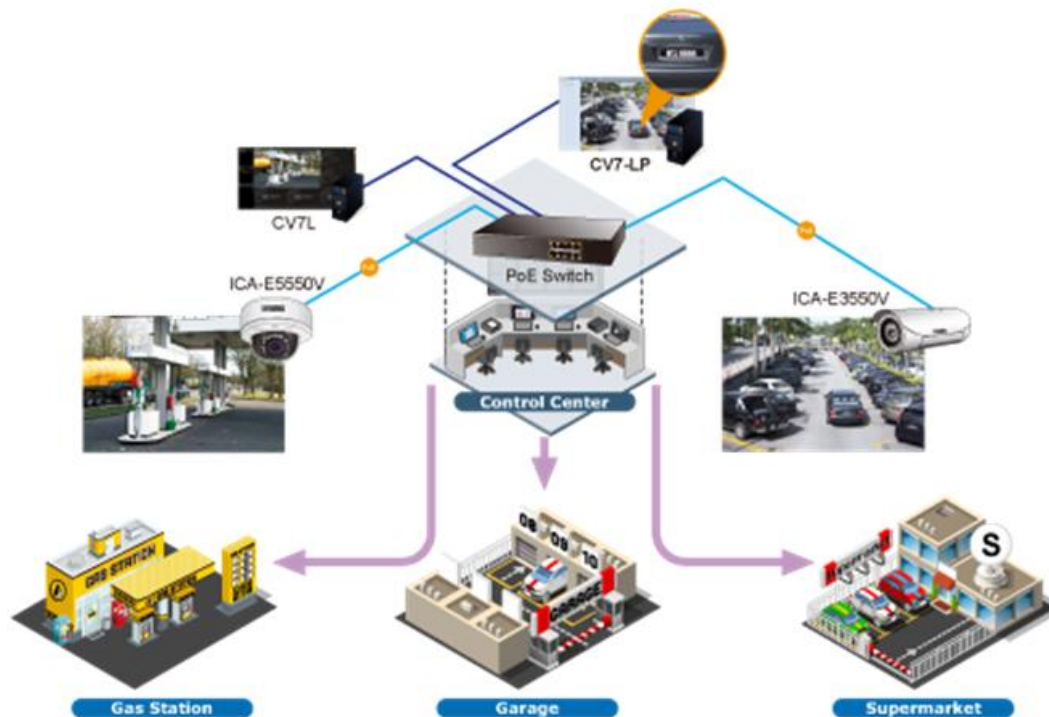
- ✓ The CV7-LP supports the analysis of the video of CV7L, which is a 16-ch central management software for ease of maintenance and remote monitoring. Customers are asked to contact our sales department for more channels with charge.



Applications

◆ Various Surveillance Applications

- ✓ PLANET E-series of IP cameras are able to provide advanced surveillance monitoring applications with CV7L for video management and free 1-ch license software such as video analytics (CV7-VA) and vehicle license plate recognition (CV7-LP).



Appendix -- Sales Target

◆ Target Markets

- ✓ IP Surveillance System Integrators
- ✓ Enterprises, SMBs
- ✓ Resellers







◆ Profitable Products

- ✓ The following are potential to all customers:
 - ICA-3350P, ICA-3550V
 - CV7-VA4, CV7-VA9



Appendix

◆ Related E-series IP Cameras & Software

Model Name		Description
CV7-LP2 / CV7-LP4		2-/4-Channel Cam Viewer E-series for Automatic License Plate Recognition
ICA-E3550V		5 Mega-pixel Bullet IR PoE IP Camera with Extended Support
CV7-VA4 / CV7-VA9		4-/9-Channel Cam Viewer E-series for Intelligent Management
ICA-E5550V		5 Mega-pixel Vandalproof IR PoE IP Camera with Extended Support

Appendix -- Must Know

◆ Technical Zone

✓ Bandwidth and Video Size Estimation

- The frame rate of video transmitted from the Internet Camera depends on connection bandwidth between client and server, video resolution, codec type, and quality setting of server. Here is a guideline to help you roughly estimate the bandwidth requirements for your Internet Camera.
- The required bandwidth depends on content of video source. The slow motion video will produce smaller bit rate generally and fast motion will produce higher bit rate and vice versa. Actual results generated by the Internet Camera may be varying.

Image Resolution	Average range of data sizes for JPEG mode	Average bit rate for MPEG4 mode	Average bit rate for H.264 mode
320 x 240 QVGA	8 ~ 20k bytes per frame	256kbps~768kbps @ 30fps	192kbps~512kbps @ 30fps
640 x 480 VGA	20 ~ 50K bytes per frame	512kbps~3072kbps @ 30fps	384kbps~1536kbps @ 30fps
1920 x 1080 Full HD	200 ~ 500k bytes per frame	-	1536kbps~10000kbps @ 30fps
2048 x 1536 3 MP	300 ~ 750k bytes per frame	-	2048kbps~12000kbps @ 30fps
2592 x 1944 5 MP	500 ~ 1300k bytes per frame	-	1800kbps~10000kbps @ 15fps



ACTIVATING IP POWER