H.265 Smart IR Bullet IP Camera with Artificial Intelligence

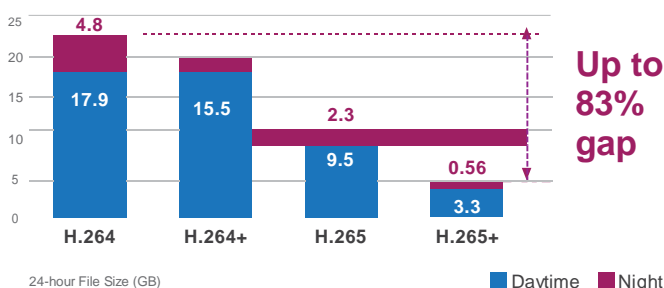## Built-in Unique Brand-new Artificial Intelligence Technology

To fulfill the deployment demand for the new-generation Artificial Intelligence and Internet of Things (IoT), PLANET ICA-A4480 Smart Camera is embedded with Artificial Intelligence that features **Face Recognition, Face Comparison, Intrusion, Loitering, Line Crossing, People Gathering Detection**.

Incorporating the **Sony STARVIS** back-illuminated CMOS sensor and 30-meter smart IR illuminators, which are specially designed for surveillance applications, the ICA-A4480 provides sharp images under all lighting conditions and multiple event rules for higher accuracy and better alarm systems.

High Efficiency Video Compression

The ICA-A4480 employs the H.264(+)/H.265(+) technology and 3 streaming capabilities to enable the camera to provide higher and more efficient image compression rates. If the same image quality level of H.264 is compared with that of H.265, the latter is able to save around 83% of bandwidth, meaning H.264(+)/ H.265(+) offers much higher quality video for less bandwidth. Thus, it can further enhance the overall performance of its IP surveillance system.

Camera

- 1/2.8" 4 megapixel Sony STARVIS back-illuminated CMOS sensor
- 2.8 mm fixed with 4MP lens
- 0.005 lux minimum illumination at F1.2
- Built-in smart IR illuminators, effective up to 30 meters
- Removable IR-cut filter for Day & Night function

Video and Audio

- Simultaneous H.264(+)/H.265(+)/JPEG/AVI/MJPEG triple-stream video encoding
- Simultaneous multi-stream support
- H.264/H.265/MJPEG baseline profile, main profile or basic or high profile options
- Max. resolution of 2690 x 1944 at 15 fps
- WDR (50dB) enhancement function strengthens visibility under extremely bright or dark environments
- 3DNR to improve picture quality at low lux
- Two-way audio support
- Image adjustment options
  - Image Adjustment
  - Exposure Settings
  - Backlight Settings
  - Day and night switch
  - White Balance
  - Video Adjustment
  - Image Enhancement
  - Defog Model
- OSD Settings
- Motion detection
- 3 configurable regions of privacy mask to protect personal privacy
- Video tampering
- Alarm Input
- Exception
  - Network Disconnected
  - IP address Conflicted

Exceptional Image Quality

Together with powerful image processing attributes like Wide Dynamic Range (WDR) and 3-dimensional Noise Reduction (3DNR) technology, the ICA-A4480 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.

Advanced Media Management

The ICA-A4480 supports a number of advanced features to enhance surveillance flexibility and event management capabilities. The advanced features include ROI (region of interest), motion detection, and 3 configurable regions of privacy mask to protect personal privacy, alarm input for setting up the arming time and video tampering function. It also comes with defog model, image adjustment options and external ports that allow accessories, such as speakers and microphones, to be added to the ICA-A4480 for two-way audio communication.

Flexible Installation and Power Functionality

Powered from a PoE power sourcing equipment such as 802.3af/at PoE switch or 802.3af/at PoE injector over a network cable, the ICA-A4480, adopting the IEEE 802.3af standard, does not need extra power cables and manpower, thus reducing installation costs while increasing deployment flexibility and scalability. The ICA-A4480 is ONVIF compliant and interoperable with other brands in the market, making it an indisputably ideal choice for reliable and high-performance surveillance.

- ROI (Region of Interest)
- Artificial Intelligence options
  - Face Recognition
  - Intrusion Detection
  - Line Cross Detection
  - Loitering Detection
  - People Gathering Detection

Power over Ethernet

- Compatible with IEEE 802.3af Power over Ethernet PD for flexible deployment

Network Configuration and Management

- IPv4 DHCP Client and IPv4 Static IP Address management
- PLANET DDNS and Easy DDNS, FTP, SMTP, P2P, Cloud, RTSP Encryption, PTZ and IPEYE available options
- ONVIF compliant for interoperability
- SNTP Network Time Protocol/synchronize with computing time
- Schedule power rebooting
- System log
- User management options for various authorities:
  - Admin
  - Operator
  - Guest
- System maintenance
  - Firmware upload/download via HTTP
- Easy configuration and management via Windows-based software or web interface
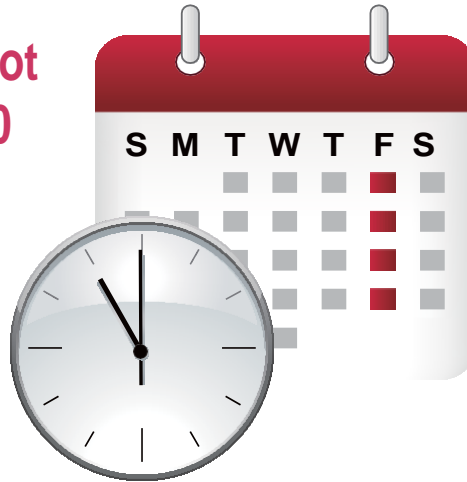- PLANET Search Tools utility and Professional Video/Central Management Software

Case and Installation

- IP67-rated metal housing with cable management bracket for rigorous environment
- Waterproof and dustproof designs
- -30 to 60 degrees C operating temperature
- Micro SD/SDHC card local video recording supported
- Digital Input / Output for integration with sensors and alarms
- RS485 for PTZ (Pelco-D and Pelco-P)
- Plug and Play installation

Scheduled Power Rebooting

The ICA-A4480 can be scheduled to reboot at a specified time like every minute, every hour, every week or every month to reduce the chance of crash resulting from buffer overflow.

Automatically Reboot Every Friday 23:00

Water-resistant and Dust-proof Protection

Being able to operate under the temperature range from -30 to 60 degrees C, and equipped with a tough IP67-rated metal housing, the ICA-A4480 can withstand rain and dust, and operate under extreme weather conditions, thus making it an ideal solution for outdoor applications, such as buildings, roads, parking areas, garages, railway stations and airports. It ensures the highest level of reliability for mission-critical applications in any difficult environment.

Dustproof

Immersion under 1M

IP67 Weather Proof

Applications

Security IP Surveillance Deployment with Artificial Intelligence

PLANET ICA-A4480 with built-in Face Recognition and other Artificial Intelligence functions, can offer high security surveillance applications under various operation environments, such as airports, railway stations, public transportation systems, department store, and more.

Shopping Mall

Commercial Building

Face Recognition

Intrusion Detection

People Gathering Detection

Line Crossing Detection

Railway Station

Public Transportation

High Scalability for Various Industrial IP Surveillance Solutions

PLANET high-resolution ICA-A4480 can offer various surveillance applications as it can capture clear images and is perfect for identifying objects and persons. Moreover, the ICA-A4480 supports 802.3af PoE PD interface, and facilitates the outdoor surveillance applications without worrying the electric source. Besides, Planet VMS, NVR, HDVR, Web UI and App management make you easy to do the configuration and live viewing. With powerful features offered, the ICA-A4480 no doubt is your best choice for outdoor surveillance solution.

Specifications

Product	ICA-A4480			
Camera				
Image Sensor	1/2.8" Sony STARVIS back-illuminated CMOS sensor			
Lens	Focus Length: 2.8mm Focus Control: Fixed Lens Type: Fixed Pixels:4MP Angle of view: Horizontal: 80 degrees Vertical: 62 degrees			
Min. Illumination	0.005 lux (color) @ F1.2 0lux (B/W) @ IR on			
IR Illuminations	Built-in smart IR illuminators, effective up to 30 meters *The IR distance is based on the environment			
Effective Pixels (H x V)	2690 x 1944			
Power over Ethernet				
PoE Standard	IEEE 802.3af PoE PD			
Image				
Video Compression	H.264(+)/H.265(+)/MJPEG			
Video Resolution	Protocol	Main Stream:	Sub Stream:	Tri-Stream:
	H.264/H.264+ H.265/H.265+	2690 x 1944 1920 x 1080 1280 x 720	720 x 480 1280 x 720	352 x 288
	MJPEG	1920 x 1080		
Frame Rate	Up to 15~25 fps for all resolutions			
Bitrate	32~16384kbps			
Shutter Time	Auto, PAL/NTSC (1/25 sec. ~ 1/10000 sec.)			
Image Setting	Image Adjustment Exposure Settings Backlight Settings Day and night switch White Balance Video Adjustment Image Enhancement Defog Model OSD Settings (Text, time and date overlay and overlay image on video) Motion detection, video tampering, alarm Input 3 configurable regions of privacy mask to protect personal privacy			
Streaming	Streaming over UDP, TCP, HTTP, or HTTPS Controllable frame rate MJPEG streaming over HTTP (server push) Constant and variable bit rate ROI (Region of Interest)			
Artificial Intelligence				
Intelligent Analysis	Face Recognition Intrusion Detection Line Cross Detection Loitering Detection People Gathering Detection			
Recognition	Face Detection and Recognition Number of faces per frame: 32 Capture rate: >99.5% Repeat capture rate: <15% False capture rate: <0.5% Number of supported faces: 10,000 Minimum detection of face pixels: 25 x 25 Maximum detection of face pixels: 300 x 300			
Audio				
Audio Streaming	Two-way audio			
Audio Compression	G.711A/G.711U			
Audio Input	External microphone input			
Audio Output	External speaker output			

Networking & Configuration	
Standards Compliance	IEEE 802.3 10BASE-T IEEE 802.3u 100BASE-TX IEEE 802.3af Power over Ethernet
Protocol	IPv4 DHCP Client and IPv4 Static IP Address management PLANET DDNS and Easy DDNS, FTP, SMTP, P2P, Cloud, RTSP Encryption, PTZ and IPEYE
Security	User Management options for various authority Admin / Operator / Guest
Users	On-line monitoring of 16 clients at the same time
Web Brower	IE8~11, Google Chrome, Firefox , Mac Safari
App	YES (Android, IOS with P2P QR code)
Language	Chinese Simplified, Chinese Traditional, English, Bulgarian, Polish, Arabic, German, Russian, French, Korean, Portuguese, Japanese, Turkish, Spanish, Hebrew, Italian, Dutch, Czech, Vietnamese

System Integration	
Application Programming Interface	ONVIF compliant
Alarm Triggering	Motion Detection / Video Tampering / Alarm Input Face Recognition / Intrusion Detection / Line Cross Detection / Loitering Detection / People Gathering Detection
Alarm Events	SMTP, FTP, Cloud(Google, Dropbox), SD card

Hardware Specification	
Power Requirements	12V DC, 0.7A IEEE 802.3af
Power Consumption	8W (IR on)
Dimensions (W x D x H)	157 x 66 x 70 mm
Weight	650g
SD Card Slot	Micro SD (512GB maximum)
LED	42μ x 2pcs
Connector	10/100Mbps Ethernet, waterproof and dustproof RJ45 connector DC power jack RCA audio in /out (white) Alarm in/out (1~4) and RS485 (5~6)
Enclosure	IP67 metal case

Standards Conformance	
Regulatory Compliance	FCC Part 15 Class B, CE

Environments	
Operating	Temperature: -30 ~ 60 degrees C Relative Humidity: 5 ~ 95% (non-condensing)
Storage	Temperature: -30 ~ 60 degrees C Relative Humidity: 5 ~ 95% (non-condensing)