

AC4-Series

Analog Rugged PTZ Camera

Installation Manual & User Guide

**AC4 SONY Daylight
PTZ Camera**



**AC4T FLIR TAU
PTZ Thermal Camera**



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Safety Notes

The following important notes must be followed carefully to run the camera, controller and respective accessories in total safety. Before installing the camera and controller, please read this manual carefully; when installing, please follow instructions of installation indicated in this manual. Please keep this manual for future use.

- The following installation should be performed by qualified service personnel or system installers in accordance with all local rules.
- Before powering on the camera and controller, please check the power voltage carefully. Make sure that you are using the right power source for them.
- Please put the power cable, video cable and control cable in safe place.
- Do not operate the camera and controller beyond the specified temperature and humidity.
- When transporting, avoid violent shake or force to the camera and controller.
- To prevent electric shock, do not remove screws or covers of the camera or controller. There are no self-serviceable parts inside. Refer to qualified service personnel for servicing.
- Video cables and RS485 cable should be far away from other cables. Shielded and independent wiring is necessary for video and control cables.
- When cleaning the camera, please use soft cloth. If the camera is very dirty, wipe it off gently with a soft cloth moistened with a weak solution of water and a neutral kitchen detergent. Wring all liquid from the cloth before wiping the camera, then wipe off all remaining dirt with a soft, dry cloth. Use lens cleaning paper to clean the lens.
- Do not move the camera head or camera body manually. In doing so would result in malfunction of the camera. Do not hold the camera head when carrying the camera.
- Make sure the camera and controller is far away from area or device where radiation, X-rays, strong electric waves, or magnetism is generated.

1.01 Introduction

The portable rugged PTZ camera is designed for practical and extreme applications, such as military field surveillance, security outdoor evidencing etc. It is featured as weather-proof, anti-vibration and anti-corrosion.

It can be deployed into a mobile surveillance system, consisting of ptz camera, vehicle video recorder, monitor, control system and 3G wireless video transmitter. Meanwhile a remote controller is available for the user inside the vehicle to control the camera outside.

1.02 Overview of Key Features

AC4 SONY PTZ Daylight Camera

- IR Illumination Range - 60m
- AC3 High Resolution SONY Camera - 550TVL
- Impressive 28x / 36x Optical & 12x Digital Zoom
- Low Power Consumption
- Built In Heater / Defroster
- Digital Image Stabilization
- 360° Continuous Rotation Pan / 115°Tilt with Auto-Flip
- Digital Noise Reduction
- Image flip
- Wide Dynamic Range to counter glare from bright sunshine, Soft PTZ address, baud rate self-adaption
- Extremely Compact & Rugged Construction
- IP66 weatherproof

AC4T FLIR PTZ Thermal Camera

Resolution AC4T 640:	640 x 512 Pixels
Resolution AC4T 336:	336 x 256 Pixels
Lens / FOV	19 mm / 32° x 26° 13 mm / 45° x 37°
Pixel Size	25 Micro
Video signal	PAL 9Hz
Digital zoom	2/4 x
Infrared wavelength	850nm
Infrared Reach	60m
Pan range	360°
Tilt range	-25° to +90°
S/N-Ratio	min. 50dB
Data communication	RS485
Protocol	Pelco-D/Pelco-P
Video signal output	CVBS
Power Supply	9-36V DC

2.01 Functions

Soft Address

The camera address can be programmed with built-in OSD menu or a preset command, and the user does not need to dismount the camera from field or do any screw work.

Self-Adaption of Baud Rate and Protocol

The camera can automatically identify the protocol and baud rate of the controller and adapt the camera setting accordingly, with no manual DIP Switch involved.

The factory default is: Camera Address:1 Protocol: Pelco-D BaudRate:9600bps

Day/Night Function

The IR cut filter of camera module inside the camera can be removed by sending special command, so that the camera can change from color to mono. The picture is clear even if the illumination is as low as 0.01Lux.

Save/Call Preset

Preset function is that dome saves current horizontal angle and title angle of pan/tilt, zoom and position parameters into memory. When necessary dome calls these parameters and adjusts Pan/Tilt and camera to that position. User can save and call presets easily and promptly by using keyboard controller or infrared controller. The camera supports up to 256 presets.

Zoom control

User can adjust zoom wide or tele by controller and get desired image.

Focus control

System defaults Auto Focus mode, that is, the lens and camera will automatically adjust the focus to get the best image.

Focus can also be controlled manually from the controller if required. Press Focus Near or Focus Far key to manually focus. Focus can be manual via keyboard or other controller, please refer to control keyboard or other controller operation manual for detailed operation.

The camera will NOT auto focus in the following status.

- Target is not in the center of image.
- Targets are in near and far at the same time.
- Target is of strong light object. Such as spotlight etc.
- Target is behind the glass with water drop or dust.
- Target moves too fast.

- Large area target such as wall.
- Target is too dark or vague.

IRIS control

System defaults Auto IRIS. Camera can adjust immediately according to the alteration of back ground illumination so that a lightness steady image can be achieved.

You may adjust IRIS by controller to get required image brightness, and call back Auto IRIS by controlling the joystick.

Auto White Balance

Camera can automatically adjust white balance (WB) according to the alteration of background lightness to give a true color image.

Back Light Compensation (BLC)

If a bright backlight presents, the subjects in the picture may appear dark or as a silhouette. Backlight compensation enhances objects in the center of the picture. The camera uses the center of the picture to adjust the IRIS. If there is a bright light source outside this area, it will wash out to white. The camera will adjust the IRIS so that the object in the sensitive area is properly exposed.

Auto Cruise

The preset position is programmed to be recalled in sequence. This feature is called auto cruise.

Auto, Random and Frame Scan

Auto Scan: Make the camera scan 360° ranging from the current position.

Random Scan: Make the camera scan 360° ranging from the current position, pause at every 108°.

Frame Scan: Make the camera scan between two set positions.

Image Flip

Enable you to view image easily when PTZ is either installed on roof of a car or is mounted on the ceiling.

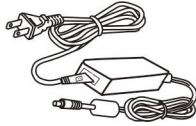
3.01 Packing List

When you open the package, please make sure below items are included. If any item is missing, please contact your supplier.

PTZ Camera (1)



Power Adapter (1)



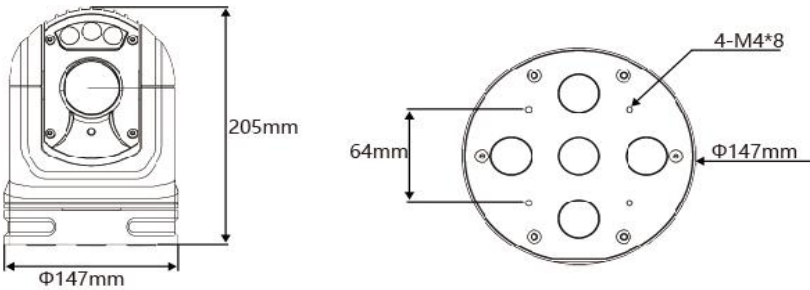
Control Cable (1)



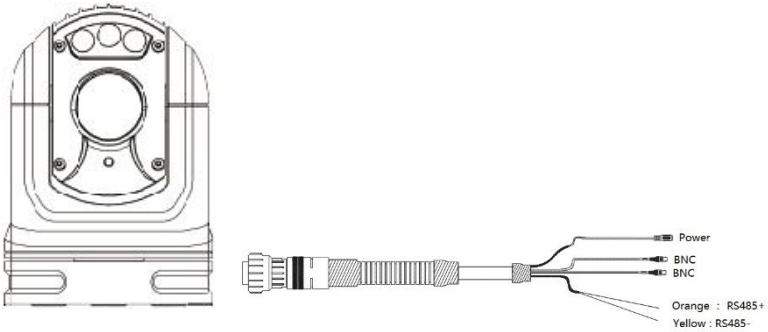
3.02 Hardware Installation

The camera installation type is fixed.(stand or ceiling mount)

Use 4 screws of M4 * 8 to fix PTZ camera to target place



3.03 Connections



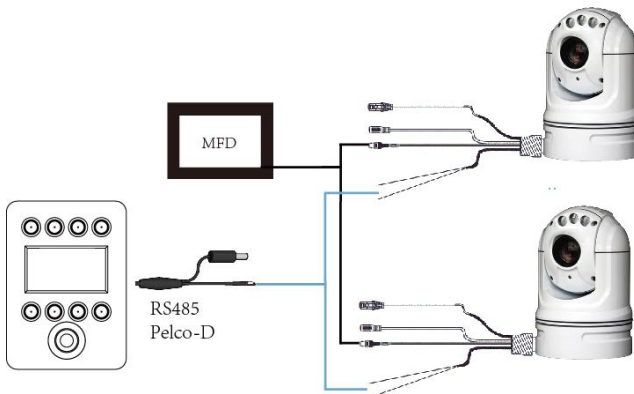
Power: DC12V

BNC: Output thermal video

BNC: Output thermal video or vs video (switch video)

RS485: Connect to Pelco-D Joystick PTZ Controller RS485 (Orange – A, Yellow – B)

3.04 Typical Configuration Examples



4.01 Special Control Commands

The camera special function is operated by the pelco-d command.

Command	Function	Remarks
Preset 30	Image freeze on	
Preset 31	Image freeze off	
Preset 32	ICR Manual mono mode	
Preset 33	ICR Manual color mode	
Preset 34	Auto switch between color mode And mono mode	
Preset 35	WDR ON	
Preset 36	WDR OFF	
Preset 37	BLC ON	
Preset 38	BLC OFF	
Preset 40	DEFOG ON	
Preset 41	DEFOG OFF	
Preset 42	IMAGE STABILIZATION ON	
Preset 43	IMAGE STABILIZATION OFF	
Preset 44	INSTALL STAND	
Preset 45	INSTALL CEILING	
Preset 48	Digital Noise Reduction OFF,1-5steps	
Preset 50	ICR Manual mono mode and turn on lights	
Preset 51	ICR Manual color mode and turn off lights	
Preset 52	Digital zoom on	
Preset 53	Digital zoom off	
Preset 60	Set Left Boundary Of Frame Scan	
Preset 61	Set Right Boundary Of Frame Scan	
Preset 62	Scan from Left boundary to Right Boundary	
Preset 63	Cruise from preset 1 to 20(if the preset is seted)	
Preset 64	360° Scan	
Preset 66	Display OSD	

Preset 67	Closed OSD	
Preset 68	Camera Soft Address -1	Effective after restart
Preset 69	Camera Soft Address +1	Effective after restart
Preset 70	Clear All Presets	
Preset 90	Reboot PTZ	
Preset 91	Factory Reset	

4.02 Technical Specifications SONY Daylight Camera

Camera	
Image Sensor	1/4"SONY EX-View HAD CCD
Effective Pixel	PAL: 752(H)×582(V);NTSC:768(H)×494(V)
TV Lines	550 TVL
Digital Zoom	36X
Digital Zoom	12X
Horizontal Field of View	57.8° ~ 1.7°
Lens	3.4mm to 122.4mm
Digital Noise Reduction	1~5 Steps
Day/Night ICR	Auto/Manual
WDR	On/Off
Image Stabilization	On/Off
Min Illumination	Color mode: 1/60s mode: 1.4lux 1/4s mode: 0.1 lux B/W Mode: 1/4s mode: 0.01 lux
Lights	
Lamp Range	60m
Infrared Spectrum	850nm
Interface	
Video Output	1V P~P, 75Ω Composite, PAL or NTSC, BNC
Comm Interface	RS485
PTZ	
Pan Range	360° Continuous
Pan Speed	0.1° ~ 80°/s
Tilt Range	-25° ~ 90°
Tilt Speed	0.1°~ 60°/s

General

Communications	Pelco-D / Pelco-P Protocol
Baud Rate	2400/4800/9600/19200 self-Adaptive
Address	0-255 (soft address)
Environmental	IP66
Dimension	Φ147mm x 205mm Height
Power Supply	10V-24V 24W Max(Motor Drive & Illumination On)
Operating Temperature	-25°C~+60°C

This manual is only for reference