



TOP MAST 33

PTZ Camera

User's Manual V1.33

www.envirocams.com

WARNING!



Installation and removal of the unit and its accessories must be carried out by qualified personnel. You must read all of the Safety Instructions supplied with your equipment before installation and operation.

If the product does not work properly, please contact your dealer. Never attempt to disassemble the camera yourself.

(WE SHALL NOT ASSUME ANY RESPONSIBILITY FOR PROBLEMS CAUSED BY UNAUTHORIZED REPAIR OR MAINTENANCE.)

- To minimize the risk of fire or electrical shock, avoid exposing this product to rain or moisture.
- Ensure that installation is performed by a qualified service person and complies with all local codes.
- Verify that the ceiling can support more than SO(N) Newtons if the camera is mounted on it. Confirm the power supply voltage is correct before using the camera.
- Handle the camera with care to avoid dropping or subjecting it to physical shock. Avoid touching the sensor modules with your fingers; if cleaning is necessary, use a clean cloth with a bit of ethanol and wipe gently. If the camera will not be used for an extended period, place the lens cap on to protect the sensor from dirt.
- Do not aim the camera lens at strong light sources such as the sun or incandescent lamps, as this can cause severe damage.
- Protect the sensor from laser beams, ensuring it is not exposed when laser equipment is in use.
- When shipping, pack the camera in its original packaging.

This PORTABLE MOBILE PTZ is designed for rough service and mobile applications. This tough, weatherproof PTZ Camera is completely waterproof to IP66 standards.

Compatible with IPC/ONVIF this rugged mobile PTZ camera has been designed to mount in any orientation on:

- Event surveillance,rapid deployment
- Police enforcement Vehicles
- Remote Surveillance via Wifi
- Emergency Vehicle/Command Centers
- Telescoping Masts CCTV Trailer Units
- Patrol Ships & Boats



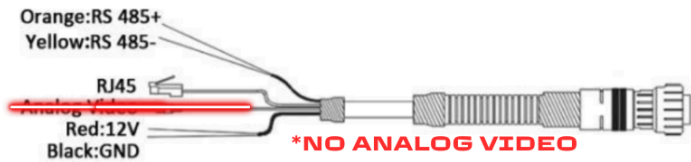
KEY FEATURES

- **33X Optical Zoom Lens:** Ranges from 4.5mm to 135mm, allowing for detailed close-ups and wide-area coverage
- **High-Strength Aluminum PTZ Case:** Durable and robust construction.
- **Powerful Auxiliary IR System:** Provides a range of 30-50 meters.
- **Optional Infrared or White Light Range:** Choose between infrared or white light.
- **High and Low Beam Settings:** Available for both lighting models.
- **Starlight Capability:** Provides excellent low-light performance, even without infrared lighting.
- **Automatic Light Adjustment:** Infrared models automatically switch lamps on in low light and adjust between low and high beams based on camera zoom distance.
- **Infrared LED Lamps:** Offers up to 196 feet of illumination, automatically adjusting brightness for close-up situations.
- **Weatherproof:** Rated up to IP66, making it suitable for harsh weather conditions.
- **Advanced Drive System:** PTZ positioning precision up to $\pm 0.05^\circ$
- **Precision PTZ Control:** Features fast pan and tilt speeds with a positioning accuracy of $\pm 0.05^\circ$.
- **Image Flip Function:** Supports both stand and ceiling mounts.
- **Wide Voltage Range:** Ideal for mobile applications (12-24V DC).
- **Multiple Video Compression Formats:** Compatible with H.265, H.264, and MJPEG.
- **High-Resolution Video:** Supports 2 Megapixels HD (1080p) resolution.
- **Long-Distance Connectivity:** Can transmit video and audio over 800 feet using CAT5e or CAT6 cables.
- **Optional Shock Damper:** Available for enhanced stability.



ENVIRO CAMS

TOP MAST 33X



Video	
Video Compression	H.265, H.264, MJPEG
Frame Rate	30fps
Technical Parameters	
Video Stream	Main Stream: 2688*1520, 2560*1440, 2304*1296, 1920*1080, 1280*720(720P), 720*576(D1), 640*360, 704*288(2CIF), 352*288 (CIF). Auxiliary stream: 1920*1080, 1280*720(720P), 720*576(D1), 640*360, 704*288(2CIF), 352*288 (CIF). Third stream: 720*576(D1), 640*360, 704*288(2CIF), 352*288 (CIF)
Video Bit Rate	128Kbps~16Mbps
OSD	Time, PTZ coordinates, zoom, preset position, serial OSD, headcount, network OSD, picture OSD, ambient volume, device latitude/longitude coordinates, etc.
ROI	8 Area
Privacy Cover	Black Style, Mosaic Style: 8 Single Scene, 24 Multi-Scene
Snapshot	Timed Snapshot, Cycle Snapshot, Cruise Preset Snapshot, Manual Snapshot
Snapshot Max. Resolution	2688*1520

Camera	
Sensor	1/2.7" 4MP Progressive Scan Starlight CMOS Sensor
Optical	zoom 33X
Focal Length	Motorized zoom, 4.5~148.5mm
Aperture Range	F1.65 (W)~F4.7 (T)
Shutter	Auto/Manual, 1-1/100000s
Defog	Adaptive Defog
SNR	>56dB
WDR	120dB
Minimum Illumination	0.003lux (F1.65, AGC ON, color), 0.002lux (F1.65, AGC ON, B/W)
Day/Night Switch	Automatic, day, night, on/off control
3D Localization	Support
Antishake	Support

****SUPPLIED 12V DV POWER SUPPLY RECOMMENDED AND MUST BE POWERED WITHIN A COUPLE HUNDRED FEET, USING THIS DC VOLTAGE.**

Pan&Tilt	
Pan Range	360°endless, Speed: 0.5°~80°
Tilt Range	-20°~90°, Speed: 0.5°~60°
Number of Preset	255
Patrol	6 patrols, up to 18 presets per patrol
Pattern	4, with the total recording time not less than 10 minutes

Audio	
Audio Compression	G.711U, G.711A
Audio Bitrate	G.711U, G.711A: 8KHz / 16KHz

Smart	
Perimeter Defense	Supports cross-border detection, zone intrusion, entering the zone, and leaving the zone; Support motorized vehicles, non-motorized vehicles, pedestrian target classification detection capture and arming

Network	
Protocols	L2TP, IPv4, IPv6, IGMP, ICMP, ARP, TCP, UDP, DHCP, RTP, RTSP, RTMP, DNS, DDNS, NTP, FTP, UPnP, HTTP, SNMP, SIP
Interface Protocol	ONVIF Profile G, Profile T, Profile S, API
Cache Supplement Recording	Supports SD card disconnected cache supplemental recording.

General	
Storage	Micro SD, up to 256GB
RS-485 Protocols	Pelco-P, Pelco-D 2400bps, 4800bps, 9600bps, 19200bps (self-adaptive)
Power Supply	DC 12V 3A
Power Consumption	30 W
Working Environment	-20 °C~65°C
Weight	7.72lbs
Ingress Protection	IP 66

ATTENTION

Careful Transportation:

- Protect the product from heavy pressure, strong stacking, and soaking during transportation and storage.
- The product must be transported in split packages, both when delivered by suppliers and when returned to the factory for debugging.
- Any damage occurring during transportation after assembly is not covered under the guaranteed repair.

When Malfunctions Happen:

- If there is smoke or an unusual odor coming from the product, immediately turn off the switch, disconnect the power, and stop using it. Contact the company for assistance.

Do Not Disassemble or Modify:

- Do not open the product's body as it may lead to danger or damage. For any internal settings or debugging, please contact the company.

Avoid Inserting Foreign Objects:

- Ensure no metal or flammable materials enter the camera. Foreign objects can cause fire, short circuits, or other damages.
- If water or other liquids enter the camera, turn off the power and disconnect it. Contact the company for assistance.
- Protect the camera from rain and seawater.

Handling and Placement:

- To avoid damage, do not drop, hit, or shake the product strongly.
- Keep the product away from electric and magnetic fields. Avoid placing it near TVs, wireless transmitters, cyclotrons, electric motors, transformers, or speakers, as these can interfere with the images.

Avoid Moisture and Dust:

- Do not place the camera in areas with high humidity, steam, or dust, as these can damage the camera.

Avoid High Temperatures:

- Do not place the product near heat sources such as stoves or spotlights.
- Avoid direct sunlight, which can deform or fade the product.
- Do not install the product near ceilings, kitchens, or boiler rooms where temperatures can be high.

Cleaning:

- Wipe away dirt with a soft cloth.
- For stubborn dirt, use a soft cloth with a mild detergent, then dry with a clean, soft cloth.

Usage Environment Requirements:

- Outdoor Dome Camera:
 - Temperature: -40°F to 140°F (-40°C to 60°C)
 - Humidity: <90%
 - Atmospheric Pressure: 86 to 106 KPa
 - Power Supply: 12V-24V DC

Do not aim the camera at bright light sources.

MAIN FEATURES

Built-In Decoder:

- Programmable Digital Design: Retains data or actions after a power outage. Integrated design ensures high reliability.
- Memory Protection: Automatically resumes its prior position after rebooting from a power outage.
- Power-Up Memory Function: Settings automatically resume their previous state or action before the power outage, including home position preset, cruising tracks, pattern scan, right and left scan, and frame scan.
- Leisure Auto Run Function: Automatically performs actions such as home position, preset, cruising tracks, pattern scan, right and left scan, and frame scan after a period of inactivity.
- 8 Channels Timing Function: Allows for timed start-up of presets, auto cruising, pattern scan, auto scan, etc.
- 265 Presets: Supports up to 265 preset positions, with 8 cruising tracks, each track having 18 preset positions. Users can set the staying time and scan speed for each preset via the menu.
- 4 Pattern Scans: Each pattern scan can record up to 500 minutes.
- Three-Dimensional Positioning: Allows for point and magnify by mouse, displaying the object in the corner of the screen and magnifying it.
- Coordinate Display: Shows current flip and pan angle and lens magnification times. Supports RS485 bus interface.
- Title Information Hiding: Option to hide title information (except dome title).
- Color/B&W Auto Shift: Automatically shifts between color and black & white based on time settings.
- Time and Temperature Display: Includes time calibration function.
- Soft Address Switch Amend Function: Allows for soft protocol and baud rate adjustments, and front address switch amendments via back controlling equipment, set up according to actual needs after installing all domes.
- Broadcast Address Support: No. 255 is the broadcast address.
- Front Equipment Malfunction Feedback: Transfers malfunction information to the back command center through video signal, helping users identify the cause of equipment malfunctions conveniently.

Built-In Holder:

- Precise Driver: Operates smoothly with sensitive response and accurate definition.
- Integrated Design: Compact and robust.
- Ingenious Mechanical Driver Device: Supports 360° continuous rotation without monitoring blind spots.
- Horizontal Rotation: Rotates slowly at 0.5° without image quiver, with a maximum rotation speed of 80°.
- Vertical Monitoring: Supports continuous monitoring up to 75° vertically.

Built-In Integrated Digital Color Camera:

- Auto Focus
- Auto Light Control
- Auto White Balance
- Auto Color/B&W Shift

FUNCTIONS INTRODUCTION

Self-Test

- **Power On:** When the dome camera is powered on, it automatically moves horizontally and vertically.
- **Auto-Check:** The screen displays an auto-check process. It verifies the pan and vertical origin points.
 - If there is an error, the screen will display "horizontal error" or "vertical error."
 - If the pan and vertical origin points are not checked, inspect the camera.
- **Display Information:** The screen shows the type or status of the camera if auto-identified, ensuring the dome operates normally through the auto-check. All dome information is displayed until the dome is operated.

Focus/Rotate Speed Auto Matching

- **Fast Response:** The dome's quick response can cause the image to move rapidly, potentially losing the image when manually adjusting the long focus.
- **Auto Adjustment:** The dome automatically adjusts the pan/tilt position and vertical rotation speed, making it easier to manually track the objective.

Power Up Act

- **Prearranged Actions:** When the dome powers up, it can start prearranged actions such as pattern tours, cruising scans, presets, and automatic scanning.
- **Return to Previous State:** It can automatically return to the state before a power cut.
- **Menu Setting:** This function can be enabled through the "power up act" item in the menu.
- **Importance:** This feature is crucial when the dome is accidentally stopped by factors like power cuts, ensuring it doesn't stay at an incorrect angle.

Leisure Time

- **Waiting Orders:** After a period of inactivity, the dome can automatically perform a prearranged action such as pattern tracing, cruising scan, preset point, or auto scan.
- **Intelligent Monitoring:** This function is set through the "self act" and "leisure time" menu options.
- **Importance:** It ensures the dome doesn't stay at an unsuitable angle during periods of inactivity. The time can be set from 3 seconds to 100 minutes.

FUNCTIONS CONTINUED

Settings and Call Preset Positions

- **Preset Functions:** The dome can store the position data of the PTZ's pan angle, tilt angle, and camera lens zoom.
- **Convenient Adjustment:** Users can store and call preset positions using the control keyboard, adjusting the PTZ and camera to the desired position.
- **Support:** The dome supports up to 256 preset positions.

Auto Cruising

- **Built-In Function:** The dome can automatically cruise according to a predefined sequence of preset points.
- **Settings:** Users can set the staying time at each preset and the running scan speed.
- **Groups:** The dome has 6 groups of cruising queues, each with 18 preset points.
- **Adjustment:** Cruising speed, presets, and staying time can be adjusted through the "pan/tilt" sub-menu to "tour scan." Call preset points 75-80 to run the 6 groups of auto cruising queues separately.

Auto Scan Function

- **Built-In Function:** The dome can set up right and left limit positions.
- **Continuous Movement:** With a single command, the dome can move repeatedly between two tilted positions according to prior menu settings, enabling auto cruising when not manually operated.

FACTORY DEFAULT PARAMETERS

Camera IP address: 192.168.1.13

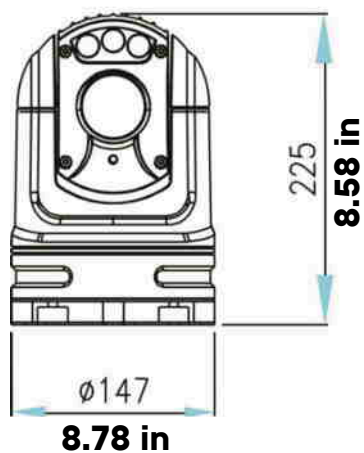
Camera Username: admin (all lowercase)

Camera Password: Admin123. (Case-Sensitive - Cap. "A", and a period (.) on the end)

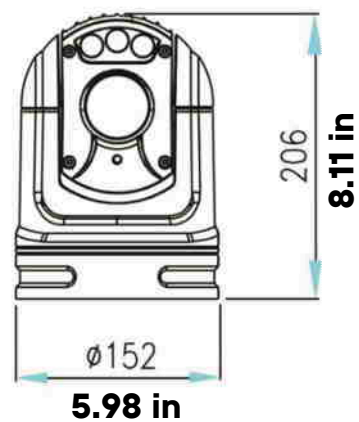
INSTALLATION

Fixed Mounts:

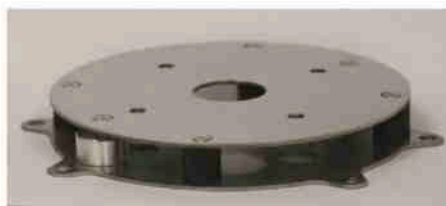
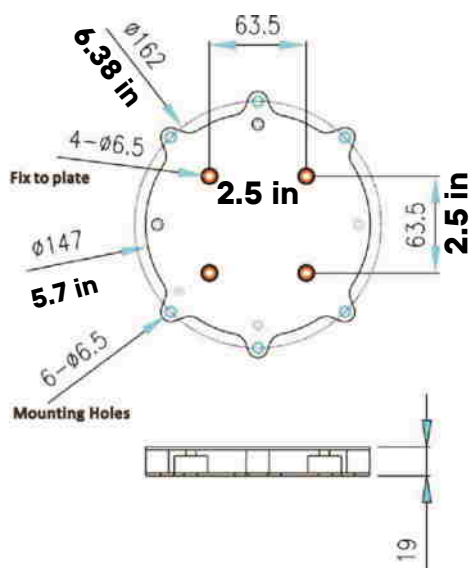
With Damper



Without Damper



PTZ Dimension(:mm)



Mounting Plate(:mm)

INSTALLATION OVERVIEW

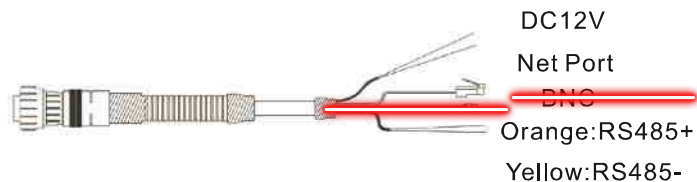
Disassembly of the camera is not required for installation. Disassembling the camera can cause permanent damage and will void the warranty. In most installations, the camera will be connected via a System Cable and a Break-Out Connector Cable. The breakout cable provides the following connections (labels given in parentheses):

- RJ45 Ethernet (ETHERNET RJ 45)
- Power with 2 terminal rings (DC 12V, GND)
- Communication control rings (RS 485+, RS485-)



Each breakout end of the cable (away from the camera) must be protected from the weather.

CAMERA CONNECTIONS



12Pin Cable: Pin Definition	
1,2	Power+
3,4	Power-
5	Video-
6	Video+
7,8,9,10	RJ45, 1,2,3,6
11	Rs485+
12	Rs485-

Note: BNC is unused; No Analog Video

CAMERA MOUNTING

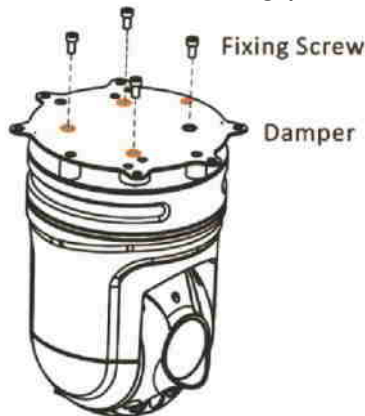
General installation information vehicle PTZ is given below:

Firmly secure the camera to a designated frame or structure capable of supporting the camera, using the mounting pattern shown below.

(For temporary deployment, skip this step)

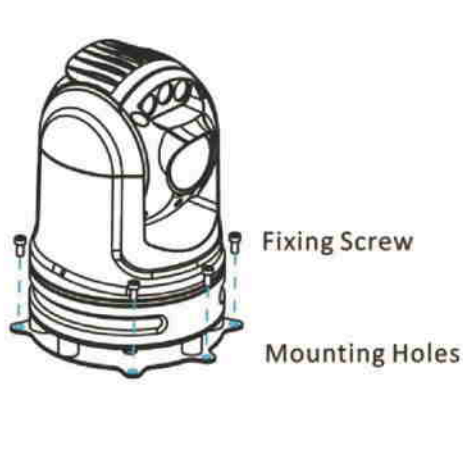
The Top Mast 33x enclosure can be mounted to a mast mount, pedestal mount or order a rubber-coated magnet kit (Part # - EC-TMMagnets)

1. Take the damper out of package and fix it to the PTZ plate with four correct screws to the four mounting holes, or order our rubber-coated magnet kits (Part # - EC-TMMagnets) to attach to mounting plate.



Rubber-coated magnet kit
(Part # - EC-TMMagnets)

2. Place the unit onto the installation plate. Ensure the six mounting holes align with the mast/vehicle bracket. Secure the PTZ to the mounting plate using the six appropriate screws.

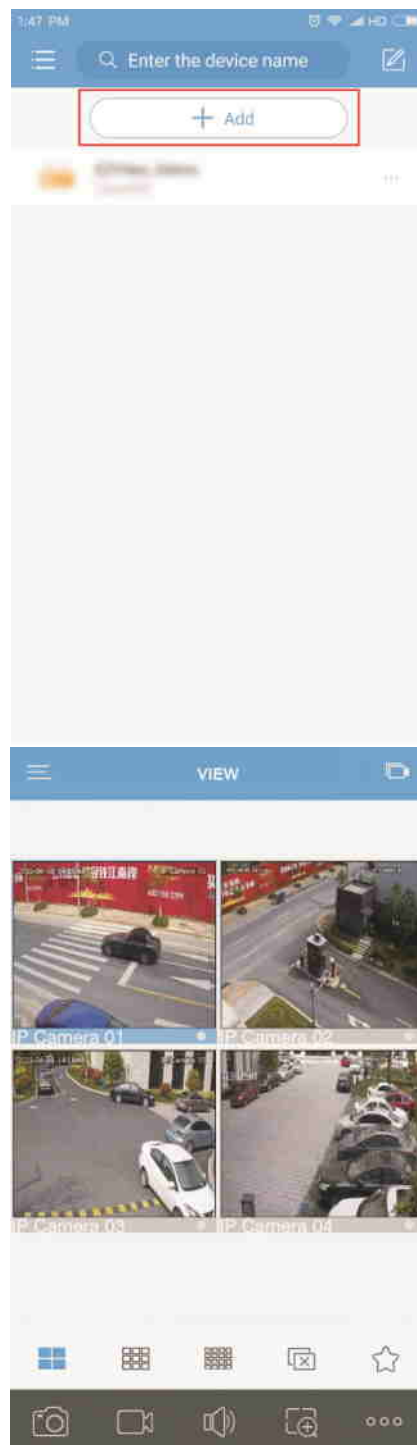
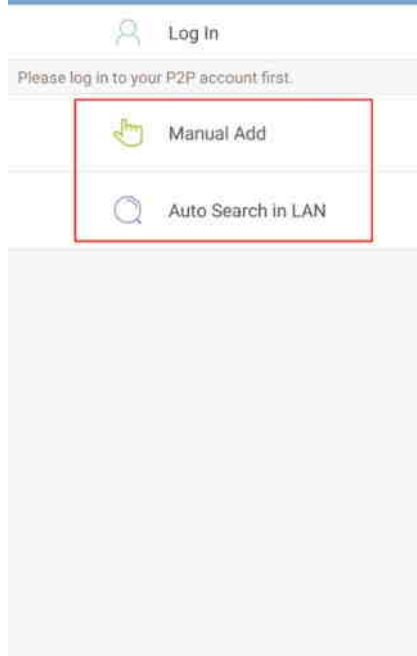
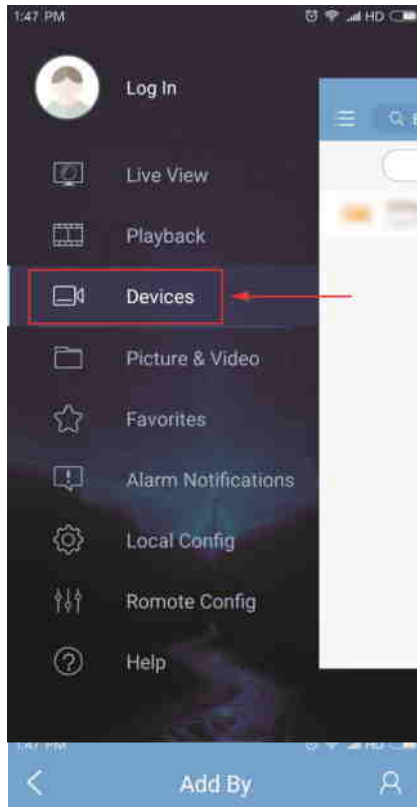


3. Connect the cable with the monitor, control device, and power source.

GUARD VIEWER

The following is the rapid use of “Guard Viewer” for Android mobile phone:
Initial Setup:

1. When you first access the system, navigate to the “Device” section. Select the option to “ADD” a new device.
2. Adding a Device: You have two options to add a device: *Auto Search in LAN*: This option will automatically search for devices connected to your Local Area Network (LAN). *Manual ADD*: If you prefer, you can manually add a device by entering its specific details.
3. Real-Time Monitoring: Once the device is added, you can start real-time monitoring. Preview: View live footage from your camera. Cloud Control: Manage and control your device remotely via cloud services.



COMPUTER CONNECTION METHOD

Web connection

Step 1. Open the web page, enter default IP address: <http://192.168.1.13>

Step 2. Input the authorized username and password. The defaults are:

Camera IP address: 192.168.1.13

Camera Username: admin (all lowercase)

Camera Password: Admin123. (Case-Sensitive - Cap. "A", and a period (.) on the end)

The following page will be shown after correct login authentication



No.	Description
1	Menu
2	PTZ control area Note: This area is available for PTZ dome cameras and PTZ cameras.
3	Live view window
4	Live view toolbar

"For optimal performance, use Edge in Internet Explorer mode."

