SECTION 28 23 00

VIDEO SURVEILLANCE SYSTEM

Display hidden notes to specifier. (Don't know how? [Click Here](https://www.arcat.com/sd/display_hidden_notes.shtml))

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\*\* NOTE TO SPECIFIER \*\* EnviroCams; Commercial Grade Security Cameras and Video Surveillance.  
This section is based on the products of EnviroCams, which is located at:201 N. Elm St.Kemp, TX 75143Toll Free Tel: 866-264-0041Email: [request info (sales@envirocams.com)](https://arcat.com/rfi?action=email&company=EnviroCams&message=RE%253A%2520Spec%2520Question%2520(13700evc)%253A%2520&coid=54218&spec=13700evc&rep=&fax=)  
Web: <https://www.envirocams.com>   
 [ [Click Here](https://arcat.com/company/envirocams-54218) ] for additional information.  
WHAT MAKES US DIFFERENT?  
Here are just a few reasons:  
All of our Cameras and NVRs are UL Listed  
Long Distance - at least 820 feet on normal CAT5 or Cat6, for audio, video, and power (PTZ's need to be powered closer to the camera)  
Plug-N-Play- gone are the hours of connecting to each camera with a computer, setting the address, then mapping that address to the NVR. Simply plug in an Enviro Cams camera - and within a minute you have video. It is all done automatically.  
All cameras are weatherproof to IP67 ratings. So any weather you encounter is OK.  
Each camera is rated to withstand temperatures down to -40 below zero, and more than +140 above.

1. GENERAL
   1. SECTION INCLUDES

\*\* NOTE TO SPECIFIER \*\* Delete items below not required for project.

* + 1. Network video recorders. (NVR 864, 64 channel) (NVR
    2. Security Cameras:
       1. Dome.
       2. Bullet.
       3. Pan, tilt, zoom.
    3. Camera mounting brackets and junction boxes.
  1. RELATED SECTIONS

\*\* NOTE TO SPECIFIER \*\* Delete any sections below not relevant to this project; add others as required.

* + 1. Section 26 00 00 - Electrical.
    2. Section 26 05 00 - Common Work Results for Electrical.
    3. Section 25 15 16 - Integrated Automation Software for Control and Monitoring Networks.
  1. REFERENCES

\*\* NOTE TO SPECIFIER \*\* Delete references from the list below that are not actually required by the text of the edited section.

* + 1. Canadian Underwriters Laboratories (CUL):
    2. European Agency for Safety and Health at Work:
       1. Regulation (EC) No 1907/2006 - Registration, Evaluation, Authorization and Restriction of Chemicals (REACH)
    3. European Standards (EN):
       1. EN 55032 - Electromagnetic compatibility of multimedia equipment - Emission requirements.
       2. EN 55035 - Electromagnetic compatibility of multimedia equipment - Immunity requirements
       3. EN 61000 - Electromagnetic Compatibility (EMC)
    4. Federal Communications Commission (FCC):
       1. FCC CFR 47 - Title 47 of the United States Code.
    5. International Electrotechnical Commission (IEC):
       1. IEC 60529 - Ingress Protection (IP Code) Certification Testing.
       2. IEC 62262 - Mechanical Impact Testing.
       3. IEC/EN/UL 62368 - Audio/Video, Information and Communication Technology Equipment.
    6. Restriction of Hazardous Substances (RoHS).
    7. Underwriters Laboratories (UL):
       1. All cameras and Network video recorders must be listed.
    8. Waste Electrical and Electronic Equipment (WEEE):
       1. Directive 2012/19/EU of the European Parliament and of the Council.
  1. SUBMITTALS
     1. Submit under provisions of Section 01 30 00.
     2. Product Data:
        1. Manufacturer's data sheets on each product to be used.
        2. Preparation instructions and recommendations.
        3. Storage and handling requirements and recommendations.
        4. Typical installation methods.

\*\* NOTE TO SPECIFIER \*\* Delete if not applicable to product type.

* + 1. Verification Samples: Two representative units of each type, size, pattern, and color.
    2. Shop Drawings: Include details of materials, construction, and finish. Include relationship with adjacent construction.
  1. QUALITY ASSURANCE
     1. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with a minimum of five years documented experience.
     2. Installer Qualifications: Company specializing in performing Work of this section with minimum two years documented experience with projects of similar scope and complexity.
     3. Source Limitations: Provide each type of product from a single manufacturing source to ensure uniformity.

\*\* NOTE TO SPECIFIER \*\* Include mock-up if the project size or quality warrant the expense. The following is one example of how a mock-up might be specified. When deciding on the extent of the mock-up, consider all the major different types of work on the project.

* + 1. Mock-Up: Construct a mock-up with actual materials in sufficient time for Architect's review and to not delay construction progress. Locate mock-up as acceptable to Architect and provide temporary foundations and support.
       1. The intent of a mock-up is to demonstrate quality of workmanship and visual appearance.
       2. If the mock-up is not acceptable, rebuild the mock-up until satisfactory results are achieved.
       3. Retain mock-up during construction as a standard for comparison with completed work.
       4. Do not alter or remove mock-up until work is completed or removal is authorized.
  1. PRE-INSTALLATION CONFERENCE
     1. Convene a conference approximately two weeks before scheduled commencement of the Work. Attendees shall include Architect, Contractor and trades involved. Agenda shall include schedule, responsibilities, critical path items and approvals.
  2. DELIVERY, STORAGE, AND HANDLING
     1. Store and handle in strict compliance with manufacturer's written instructions and recommendations.
     2. Protect from damage due to weather, excessive temperature, and construction operations.
  3. PROJECT CONDITIONS
     1. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.
  4. WARRANTY
     1. Manufacturer's standard limited warranty unless indicated otherwise.

1. PRODUCTS
   1. MANUFACTURERS
      1. Acceptable Manufacturer: EnviroCams, which is located at:201 N. Elm St.Kemp, TX 75143Toll Free Tel: 866-264-0041Email: [request info (sales@envirocams.com)](https://arcat.com/rfi?action=email&company=EnviroCams&message=RE%253A%2520Spec%2520Question%2520(13700evc)%253A%2520&coid=54218&spec=13700evc&rep=&fax=);Web: <https://www.envirocams.com>

\*\* NOTE TO SPECIFIER \*\* Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.

* + 1. Substitutions: Not permitted.
    2. Requests for substitutions will be considered in accordance with the provisions of Section 01 60 00.

\*\* NOTE TO SPECIFIER \*\* Delete article if not required or delete basis of design options not required.

* 1. NETWORK VIDEO RECORDERS
     1. Basis of Design: NVR 864, 64 Channel IP NVR as manufactured by EnviroCams.
        1. Video/Audio/Power over Cat5e (Exclusive Enviro Cams Extended Mode): 820 feet (250 m).
        2. HDD hot swap with RAID 0, 1, 5, 6, 10 storage scheme configurable.
        3. Third-Party IP Camera Support: With ONVIF conformance.
        4. Support 2 channel HDMI, 1 channel VGA, 1 channel CVBS, HDMI2 at up to 4K (3840x2160) resolution.
        5. Accurate and instant live access of all cameras.
        6. Simultaneous retrieval of recorded footage for 16 cameras.
        7. Supports various VCA detection alarm and search.
        8. Remote access capable for P2P, UPnP, NTP, DHCP and PPPoE.
        9. VMS Software: With unlimited access to smart device app; Droid and iPhone.
        10. Incoming Bandwidth: 320 Mbps available.
        11. Alarm In and Out; standard.
        12. Video / Audio Input:
            1. IP Video Input: 64 channels.
            2. Two Way Audio Input: 1 Channel, RCA. Audio capabilities built-in.
        13. Network:
            1. lncoming Bandwidth: 320 Mps.
            2. Outgoing Bandwidth: 320 Mps.
            3. Remote Users: 128 users. 64 active users may be logged in at any given time.
        14. Video / Audio Output:
            1. HDMI / VGA Output:

HDMl1 / VGA: 1920xl080p - 60 Hz.

HDMl1 / VGA: 1920xl080p - 50 Hz.

HDMl1 / VGA: 1600xl200 - 60 Hz.

HDMl1 / VGA: 1280xl024 - 60 Hz.

HDMl1 / VGA: 1280x720 - 60 Hz.

HDMl1 / VGA: 1024x768 - 60 Hz.

HDMl2: 4K (3840x2160) - 60 Hz.

HDMl2: 4K (3840x2160) - 30 Hz

HDMl2: 1920xl080p - 60 Hz.

HDMl2: 1920xl080p - 50 Hz.

HDMl2: 1600xl200 - 60 Hz.

HDMl2: 1280x1024 - 60 Hz.

HDMl2: 1280x720 - 60 Hz.

HDMl2: 1024x768 - 60 Hz.

* + - * 1. CVBS Output: 1 channel BNC.
        2. Recording Resolution: 12MP, 8MP, 6MP, SMP, 4MP, 3MP, 1080p, 960p, 720p, D1, 2CIF, and CIF.
        3. Audio Output: 1 channel, RCA.
        4. Synchronous Playback: 16 channel.
      1. Decoding:
         1. Compression: H.265 and H.264.
         2. Live View / Playback: 12MP, 8MP, 6MP, SMP, 4MP, 3MP, 1080p, 960p, 720p, D1, 2CIF, and CIF.
         3. Capability: 3 x 12 MP at 25.
         4. Capability: 4 x 4K at 30.
         5. Capability: 8 x 4MP at 30.
         6. Capability: 16 x 1080P at 30.
         7. Capability: 32 x 960P at 25..
         8. Capability: 36 x 720P at 30
         9. Capability: 64 x D1.
      2. Hard Disk:
         1. SATA: 8 interfaces.
         2. Capacity: Up to 8 TB for each disk.
      3. External Interface:
         1. Network Interface: Two, RJ-45 10M/100M self-adaptive Ethernet Interface.
         2. Serial Interface: One RS232. One RS485.
         3. USB Interface: Rear Panel: Two USB2.D, and One US83.0.
         4. Alarm In: 16 channels.
         5. Alarm Out: 4 channels.
         6. Power Output: 12 Vdc.
      4. General:
         1. Power Supply: 100 to 240 Vac.
         2. Power Consumption of NVR w/o HDD: 20 Watts or less.
         3. Power Consumption of HDD: Approximately 5.5 Watts per 6 Tb HDD.
         4. Working Temperature: 14 to 131 degrees F (-1 to 55 degrees C).
         5. Working Humidity:10 to 90 percent.
         6. Dimensions: 3.4 x 17.4 x 19.9 inches (86 x 442 x 531 mm).
         7. Weight without HDD: 11.31 lbs (5.13 kg) or less.
    1. Basis of Design: NVR 416,16 Channel IP NVR with Built-In PoE as manufactured by EnviroCams.
       1. Video/Audio/Power over Cat5e (Exclusive Enviro Cams Extended Mode): 820 feet (250 m).
       2. Plug and Play with 16 independent PoE network interfaces.
       3. Third-Party IP Camera Support: With ONVIF conformance.
       4. Support 2 channel HDMI, 1 channel VGA, HDMI at up to 4K (3840x2160) resolution.
       5. Accurate and instant live access of all cameras.
       6. Simultaneous retrieval of recorded footage for 16 cameras.
       7. Remote access capable for P2P, UPnP, NTP, DHCP and PPPoE.
       8. VMS Software: With unlimited access to smart device app; Droid and iPhone.
       9. Incoming Bandwidth: 160 to 320 Mbps available.
       10. Alarm In and Out; standard.
       11. Video / Audio Input:
           1. IP Video Input: 16 channels.
           2. Two Way Audio Input: 1 Channel, RCA. Audio capabilities built-in.
       12. Network:
           1. lncoming Bandwidth: 160 Mps.
           2. Outgoing Bandwidth: 320 Mps
           3. Remote Users: 128 users. 64 active users may be logged in at any given time.
       13. Video / Audio Output:
           1. HDMI / VGA Output:

HDMl1 / VGA: 1920xl080p - 60 Hz.

HDMl1 / VGA: 1920xl080p - 50 Hz.

HDMl1 / VGA: 1600xl200 - 60 Hz.

HDMl1 / VGA: 1280xl024 - 60 Hz.

HDMl1 / VGA: 1280x720 - 60 Hz.

HDMl1 / VGA: 1024x768 - 60 Hz.

HDMl2: 4K (3840x2160) - 60 Hz..

HDMl2: 4K (3840x2160) - 30 Hz

HDMl2: 1920xl080p - 60 Hz.

HDMl2: 1920xl080p - 50 Hz.

HDMl2: 1600xl200 - 60 Hz.

HDMl2: 1280x1024 - 60 Hz.

HDMl2: 1280x720 - 60 Hz.

HDMl2: 1024x768 - 60 Hz.

* + - * 1. Recording Resolution: 12MP, 8MP, 6MP, SMP, 4MP, 3MP, 1080p, 960p, 720p, D1, 2CIF, and CIF.
        2. Audio Output: 1 channel, RCA.
        3. Synchronous Playback: 16 channel.
      1. Decoding:
         1. Compression: H.265 and H.264 video formats.
         2. Live View / Playback: 12MP, 8MP, 6MP, SMP, 4MP, 3MP, 1080p, 960p, 720p, D1, 2CIF, and CIF.
         3. Capability: 3 x 12 MP at 25.
         4. Capability: 4 x 4K at 30.
         5. Capability: 8 x 4MP at 30.
         6. Capability: 16 x 1080P at 30.
         7. Capability: 32 x 960P at 25.
      2. Hard Disk:
         1. SATA: 4 interfaces.
         2. Capacity: Up to 8 Tb for each disk.
      3. External Interface:
         1. Network Interface: One, RJ-45 10M/100M self-adaptive Ethernet Interface.
         2. Serial Interface: One RS485.
         3. USB Interface:

Front Panel: Two USB2.O.

Rear Panel: One USB3.O.

* + - * 1. Alarm In: 16 channels.
        2. Alarm Out: 4 channels.
        3. Power Output: 12 Vdc.
      1. POE:
         1. Interface: 16 independent 100 Mbps PoE network interfaces.
         2. Maximum Power:

For Single Port: 30 Watt.

Total: 200 Watts; 12/5 Watts for each.

* + - * 1. Supported Standard: IEEE 802.3at.
      1. General:
         1. Power Supply: 100 to 240 Vac.
         2. Power Consumption of NVR w/o HDD: 20 Watts or less.
         3. Power Consumption of HDD: Approximately 5.5 Watts per 6 Tb HDD.
         4. Working Temperature: 14 to 131 degrees F (-1 to 55 degrees C)
         5. Working Humidity:10 to 90 percent.
         6. Dimensions: 3.4 x 17.4 x 16.7 inches (86 x 442 x 425 mm)
         7. Weight without HDD: 11.55 lbs (5.24 kg) or less.
    1. Basis of Design: NVR 416, 32 Channel IP NVR with Built-In PoE as manufactured by EnviroCams.
       1. Video/Audio/Power over Cat5e; Exclusive EnviroCams Extended Mode: 820 feet.
       2. Plug and Play: With 16 independent PoE network interfaces and a secondary PoE switch for additional cameras.
       3. Third-Party IP Camera Support: With ONVIF conformance.
       4. Support 2 channel HDMI, 1 channel VGA, HDMI at up to 4K (3840x2160) resolution.
       5. Accurate and instant live access of all cameras.
       6. Simultaneous retrieval of recorded footage for 16 cameras.
       7. Remote access capable for P2P, UPnP, NTP, DHCP and PPPoE.
       8. VMS Software: With unlimited access to smart device app; Droid and iPhone.
       9. Incoming Bandwidth: 160 to 320 Mbps available.
       10. Alarm In and Out; standard.
       11. Video / Audio Input:
           1. IP Video Input: 32 channels.
           2. Two Way Audio Input: 1 Channel, RCA. Audio capabilities built-in.
       12. Network:
           1. lncoming Bandwidth: 32 Channels: 320 Mps.
           2. Outgoing Bandwidth: 320 Mps.
           3. Remote Users: 128 users. 64 active users may be logged in at any given time.
       13. Video / Audio Output:
           1. HDMI / VGA Output:

HDMl1 / VGA: 1920 x l080p - 60 Hz.

HDMl1 / VGA: 1920xl080p - 50 Hz.

HDMl1 / VGA: 1600xl200 - 60 Hz.

HDMl1 / VGA: 1280xl024 - 60 Hz.

HDMl1 / VGA: 1280x720 - 60 Hz.

HDMl1 / VGA: 1024x768 - 60 Hz.

HDMl2: 4K (3840x2160) - 60 Hz.

HDMl2: 4K (3840x2160) - 30 Hz.

HDMl2: 1920xl080p - 60 Hz.

HDMl2: 1920xl080p - 50 Hz.

HDMl2: 1600xl200 - 60 Hz.

HDMl2: 1280x1024 - 60 Hz.

HDMl2: 1280x720 - 60 Hz.

HDMl2: 1024x768 - 60 Hz.

* + - * 1. Recording Resolution: 12MP, 8MP, 6MP, SMP, 4MP, 3MP, 1080p, 960p, 720p, D1, 2CIF, and CIF.
        2. Audio Output: 1 channel, RCA.
        3. Synchronous Playback: 16 channel.
      1. Decoding:
         1. Compression: H.265 and H.264 video formats.
         2. Live View / Playback: 12MP, 8MP, 6MP, SMP, 4MP, 3MP, 1080p, 960p, 720p, D1, 2CIF, and CIF.
         3. Capability: 3 x 12 MP at 25.
         4. Capability: 4 x 4K at 30.
         5. Capability: 8 x 4MP at 30.
         6. Capability: 16 x 1080P at 30.
         7. Capability: 32 x 960P at 25.
      2. Hard Disk:
         1. SATA: 4 interfaces.
         2. Capacity: Up to 8 TB for each disk.
      3. External Interface:
         1. Network Interface: One, RJ-45 10M/100M self-adaptive Ethernet Interface.
         2. Serial Interface: One RS485.
         3. USB Interface:

Front Panel: Two USB2.O.

Rear Panel: One USB3.O.

* + - * 1. Alarm In: 16 channels.
        2. Alarm Out: 4 channels.
        3. Power Output: 12 Vdc.
      1. POE:
         1. Interface: 16 independent 100 Mbps PoE network interfaces.
         2. Maximum Power:

For Single Port: 30 Watt.

Total: 200 Watts; 12/5 Watts for each.

* + - * 1. Supported Standard: IEEE 802.3at.
      1. General:
         1. Power Supply: 100 to 240 Vac.
         2. Power Consumption of NVR w/o HDD: 20 Watts or less.
         3. Power Consumption of HDD: Approximately 6.5 Watts per 8 Tb HDD.
         4. Working Temperature: 14 to 131 degrees F (-1 to 55 degrees C).
         5. Working Humidity:10 to 90 percent.
         6. Dimensions: 3.4 x 17.4 x 16.7 inches (86 x 442 x 425 mm).
         7. Weight without HDD: 11.55 lbs (5.24 kg) or less.
    1. Basis of Design: NVR 104, 4 Channel IP NVR with Built-In PoE as manufactured by EnviroCams.
       1. Video/Audio/Power over Cat5e (Exclusive Enviro Cams Extended Mode): 820 feet (250 m).
       2. Plug and Play with 4 independent PoE network interfaces.
       3. Third-Party IP Camera Support: With ONVIF conformance.
       4. Support 1 channel HDMI, 1 channel VGA, HDMI at up to 4K (3840x2160) resolution.
       5. Accurate and instant live access of all cameras.
       6. Simultaneous retrieval of recorded footage for all cameras.
       7. Remote access capable for P2P, UPnP, NTP, DHCP and PPPoE.
       8. VMS Software: With unlimited access to smart device app; Droid and iPhone.
       9. Incoming Bandwidth: 40 to 60 Mbps available.
       10. Alarm In and Out; standard.
       11. Video / Audio Input:
           1. IP Video Input: 4 channels.
           2. Two Way Audio Input: 1 Channel, RCA. Audio capabilities built-in.
       12. Network:
           1. lncoming Bandwidth: 40 Mps.
           2. Outgoing Bandwidth: 64 Mps
           3. Remote Users: 128 users. 64 active users may be logged in at any given time.
       13. Video / Audio Output:
           1. HDMI / VGA Output:

HDMl: 4K (3840x2160) - 30 Hz.

HDMl: 1920xl080p - 60 Hz.

HDMl: 1920xl080p - 50 Hz.

HDMl: 1600xl200 - 60 Hz.

HDMl: 1280x1024 - 60 Hz.

HDMl: 1280x720 - 60 Hz.

HDMl: 1024x768 - 60 Hz.

VGA: 1920xl080p - 60 Hz.

VGA: 1920xl080p - 50 Hz.

VGA: 1600xl200 - 60 Hz.

VGA: 1280x1024 - 60 Hz.

VGA: 1280x720 - 60 Hz.

VGA: 1024x768 - 60 Hz.

* + - * 1. Recording Resolution: 8MP, 6MP, SMP, 4MP, 3MP, 1080p, 960p, 720p, D1, 2CIF, and CIF.
        2. Audio Output: 1 channel, RCA.
        3. Synchronous Playback: 4 channel.
      1. Decoding:
         1. Compression: H.265 and H.264 video formats.
         2. Live View / Playback: 8MP, 6MP, SMP, 4MP, 3MP, 1080p, 960p, 720p, D1, 2CIF, and CIF.
         3. Capability: 1 x 4K at 30.
         4. Capability: 2 x 4MP at 30.
         5. Capability: 4 x 1080p at 30.
         6. Capability: 8 x 720p at 30.
         7. Capability: 16 x D1.
      2. Hard Disk:
         1. SATA: 1 interface.
         2. Capacity: Up to 8 Tb for each disk.
      3. External Interface:
         1. Network Interface: One, RJ-45 10M/100M self-adaptive Ethernet Interface.
         2. USB Interface:

Front Panel: One USB2.O.

Rear Panel: Two USB2.O.

* + - * 1. Alarm In: 4 channels.
        2. Alarm Out: 1 channel.
      1. POE:
         1. Interface: 4 independent 100 Mbps PoE network interfaces.
         2. Maximum Power:

For Single Port: 30 Watt.

Total: 54 Watts; 13.5 Watts for each.

* + - * 1. Supported Standard: IEEE 802.3at and IEEE 802.3af.
      1. General:
         1. Power Supply: 48 Vdc.
         2. Power Consumption of NVR w/o HDD: 5 Watts or less.
         3. Power Consumption of HDD: Approximately 5.5 Watts per 6 Tb HDD.
         4. Working Temperature: 14 to 131 degrees F (-1 to 55 degrees C).
         5. Working Humidity:10 to 90 percent.
         6. Dimensions: 1.7 x 10.2 x 9.4 inches (44 x 260 x 240 mm).
         7. Weight without HDD: 2.47 lbs (1.12 kg) or less.
    1. Basis of Design: NVR 108, 8 Channel IP NVR with Built-In PoE as manufactured by EnviroCams.
       1. Video/Audio/Power over Cat5e (Exclusive Enviro Cams Extended Mode): 820 feet.
       2. Plug and Play with 8 independent PoE network interfaces.
       3. Third-Party IP Camera Support: With ONVIF conformance.
       4. Support 1-ch HDMI, 1-ch VGA, HDMI at up to 4K (3840x2160) resolution.
       5. Accurate and instant live access of all cameras.
       6. Simultaneous retrieval of recorded footage for all cameras.
       7. Remote access capable for P2P, UPnP, NTP, DHCP and PPPoE.
       8. VMS Software: With unlimited access to smart device app; Droid and iPhone.
       9. Incoming Bandwidth: 40 to 60 Mbps available.
       10. Alarm In and Out; standard.
       11. Video / Audio Input:
           1. IP Video Input: 8 channels.
           2. Two Way Audio Input: 1 Channel, RCA. Audio capabilities built-in.
       12. Network:
           1. lncoming Bandwidth: 60 Mps.
           2. Outgoing Bandwidth: 64 Mps.
           3. Remote Users: 128 users. 64 active users may be logged in at any given time.
       13. Video / Audio Output:
           1. HDMI / VGA Output:

HDMl: 4K (3840x2160) - 30 Hz.

HDMl: 1920xl080p - 60 Hz.

HDMl: 1920xl080p - 50 Hz.

HDMl: 1600xl200 - 60 Hz.

HDMl: 1280x1024 - 60 Hz.

HDMl: 1280x720 - 60 Hz.

HDMl: 1024x768 - 60 Hz.

VGA: 1920xl080p - 60 Hz.

VGA: 1920xl080p - 50 Hz.

VGA: 1600xl200 - 60 Hz.

VGA: 1280x1024 - 60 Hz.

VGA: 1280x720 - 60 Hz.

VGA: 1024x768 - 60 Hz.

* + - * 1. Recording Resolution: 8MP, 6MP, SMP, 4MP, 3MP, 1080p, 960p, 720p, D1, 2CIF, and CIF.
        2. Audio Output: 1 channel, RCA.
        3. Synchronous Playback: 8 channel.
      1. Decoding:
         1. Compression: H.265 and H.264 video formats.
         2. Live View / Playback: 8MP, 6MP, SMP, 4MP, 3MP, 1080p, 960p, 720p, D1, 2CIF, and CIF.
         3. Capability: 1 x 4K at 30.
         4. Capability: 2 x 4MP at 30.
         5. Capability: 4 x 1080p at 30.
         6. Capability: 8 x 720p at 30.
         7. Capability: 16 x D1.
      2. Hard Disk:
         1. SATA: 1 interface.
         2. Capacity: Up to 8 Tb for each disk.
      3. External Interface:
         1. Network Interface: One, RJ-45 10M/100M self-adaptive Ethernet Interface.
         2. USB Interface:

Front Panel: One USB2.O.

Rear Panel: Two USB2.O.

* + - * 1. Alarm In: 4 channels.
        2. Alarm Out: 1 channel.
      1. POE:
         1. Interface: 8 independent 100 Mbps PoE network interfaces.
         2. Maximum Power:

For Single Port: 30 Watt.

Total: 108 Watts; 13.5 Watts for each.

* + - * 1. Supported Standard: IEEE 802.3at and IEEE 802.3af.
      1. General:
         1. Power Supply: 52 Vdc.
         2. Power Consumption of NVR w/o HDD: 5 Watts or less.
         3. Power Consumption of HDD: Approximately 6.5 Watts per 8 Tb HDD.
         4. Working Temperature: 14 to 131 degrees F (-1 to 55 degrees C).
         5. Working Humidity:10 to 90 percent.
         6. Dimensions: 1.7 x 10.2 x 9.4 inches (44 x 260 x 240 mm).
         7. Weight without HDD: 2.47 lbs (1.12 kg) or less.

\*\* NOTE TO SPECIFIER \*\* Delete Article if not required or delete basis of design options not required.

* 1. CAMERA TYPE; DOME
     1. Basis of Design: Micron-IR 4K Pocket Domeas manufactured by EnviroCams. 4K Infrared IP Camera with Fixed Lens.
        1. Video, Audio, Power over normal Cat5e; Exclusive Enviro Cams Extended Mode: 820 ft.
        2. Narrow View Hallway Mode Menu option; 9:16 ratio.
        3. Supports POE and/or 12 Vdc; will fail-over to 12 V if POE is lost. Wide voltage range of +/- 25 percent.
        4. Digital Noise Reduction: 2D and 3D.
        5. Cameras:
           1. Sensor: 1/3 inch, 8 mega pixel, progressive scan CMOS.
           2. Lens: 2.8 mm at F2.0.
           3. Iris: Auto/Manual, F2.0.
           4. Shutter: Auto/Manual, 1 - 1/100000s.
           5. Minimum Illumination: Color: 0.05 Lux (F2.0, AGC ON) / 0 with IR on.
           6. Infrared Range: 100 ft with intensity controlled smart IRs.
           7. Day/Night: IR-cut filter with auto switch (ICR).
           8. S/N: Greater than 56 dB.
           9. Wide Dynamic Range (WDR): Optical WDR; up to 120 dB.
           10. Video / Noise Reduction: 20 / 3D.
        6. Video:
           1. Maximum Resolution: 3840 x 2160.
           2. Video Compression: H.265+, H.265, H.264, and MJPEG. Triple stream capable.
           3. Frame Rate:

8MP (3840x2160): Maximum. 20 fps.

5MP (2944x1656): Maximum. 30 fps.

* + - * 1. 9:16 Corridor Mode: Supported.
        2. Video Streaming: Triple.
        3. Region of Interest: Up to 2 areas.
        4. Evaluative Metering: Supported.
        5. OSD: Up to 4.
        6. Privacy Mask: Up to 4 areas.
      1. Smart:
         1. Intelligent Identification: Face detection, defocus, scene change.
         2. Statistical Analysis: People counting.
      2. Network:
         1. Protocols: 1Pv4, IGMP, ICMP, ARP, TCP, UDP, DHCP, PPPoE, RTP, RTSP, RTCP, DNS, DONS, NTP, FTP, UPnP, HTTP, HTTPS, SMTP. SIP, and 802.lx.
         2. Compatible Integration: ONVIF and API.
      3. Interface Network: 10M/100M Base-TX Ethernet.
      4. General:
         1. Power: 12 Vdc or PoE (IEEE802.3 af).
         2. Power Consumption: Max 5.5 Watts.
         3. Dimensions (Diameter x H) 4.28 x 3.2 inches (109 x 81 mm).
         4. Weight: 1 lbs (0.45 kg).
         5. Working Environment:

Operating Temperature: -31 to 140 degrees F (-35 to 60 degrees C).

Relative Humidity, Non-Condensing: 95 percent or lower.

* + - * 1. Vandal Resistant: IK10.
        2. Ingress Protection: IP67. Weatherproof, indoor, or outdoor.
        3. Mount: Electronically isolated.

Direct to wall.

Pole mount available for wall mount.

* + 1. Basis of Design: Occulus-4K Moto-Dome as manufactured by EnviroCams. 8 Mp Infrared IP Camera with Motorized Lens.
       1. Video, Audio, Power over normal Cat5e; Exclusive EnviroCams Extended Mode: 820 ft.
       2. Narrow View Hallway Mode Menu Option: 9:16 ratio.
       3. Supports POE and/or 12 VDC; will fail-over to 12 V if POE is lost. Wide Voltage Range: +/- 25 percent.
       4. Digital Noise Reduction: 2D and 3D.
       5. Cameras:
          1. Sensor: 1/2 inch, 8 mega pixel, progressive scan CMOS.
          2. Lens: 2.7 to 12 mm - AF motorized zoom lens.
          3. Angle if View, Height: 114.8 to 47.3 degrees.
          4. Shutter: Auto/Manual, 1 - 1/100000s.
          5. Minimum Illumination: Color: 0.003 Lux (F1.5, AGC ON) / 0 Lux with IR.
          6. Infrared Range: 98 ft (30 m).
          7. Day/Night: IR-cut filter with auto switch (ICR).
          8. S/N: Greater than 52 dB.
          9. Wide Dynamic Range (WDR): Optical WDR; up to 120 dB.
          10. Video / Noise Reduction: 20 / 3D.
       6. Video:
          1. Maximum Resolution: 3840 x 2160.
          2. Video Compression: H.265, H.264, and MJPEG. Triple stream capable.
          3. Frame Rate:

Main Stream:

8 MP (3840x2160): Maximum 15 fps.

5 MP (2592x1944): Maximum 30 fps.

5 MP (2944x1656): Maximum 30 fps.

4 MP (2560x1440): Maximum 30 fps.

2 MP (1920x1080): Maximum 30 fps.

Sub Stream:

2 MP (1920x1080): Maximum 30 fps.

Third Stream:

D1 (720x576): Maximum 30 fps.

* + - * 1. 9:16 Corridor Mode: Supported.
        2. Video Streaming: Triple.
        3. Region of Interest: Up to 8 areas.
        4. BLC and HLC: Supported.
        5. OSD: Up to 8.
        6. Privacy Mask: Up to 8 areas.
        7. Motion Detection: Up to 8 areas.
        8. Smart Options:

Behavior Detection.

Intrusion.

Cross Line.

Motion Detection.

Recognition.

Intelligent Identification.

Statistical Analysis.

General Function..

* + - 1. Storage:
         1. Edge Storage: Micro SD, up to 128 GB.
      2. Network:
         1. Protocols: 1Pv4, IGMP, ICMP, ARP, TCP, UDP, DHCP, PPPoE, RTP, RTSP, RTCP, DNS, DONS, NTP, FTP, UPnP, HTTP, HTTPS, SMTP. SNMP, and 802.lx.
         2. Compatible Integration: ONVIF and API.
      3. Interface:
         1. Built-In Mic: Supported.
         2. Suppression: Supported.
         3. Network: 10M/100M Base-TX Ethernet.
      4. General:
         1. Power: 12 Vdc or PoE (IEEE802.3 af).
         2. Power Consumption: Max 8.16 Watts.
         3. Dimensions (Diameter x H) 5.08 x 4.3 inches (129 x 110 mm).
         4. Weight: 1.8 lbs (0.82 kg).
         5. Working Environment:

Operating Temperature: -40 to 140 degrees F (-40 to 60 degrees C).

Relative Humidity, Non-Condensing: 10 to 95 percent.

* + - * 1. Vandal Resistant: IK10.
        2. Ingress Protection: IP67. Weatherproof, indoor, or outdoor.
        3. Reset Button: Supported.
        4. Mount: Electronically isolated.

Direct to wall.

Pole mount available for wall mount.

* + 1. Basis of Design: PSYCLOPS 180. SKU: EC-Psyclops-180-5MP. Security Dome Camera as manufactured by EnviroCams.
       1. High quality image with 4 MP, 1/2.9 inch CMOS sensor.
       2. Human Body Detection off: 4 MP (3840x1080) at 25 fps.
       3. Human Body Detection on: 4 MP (3840x1080) at 20 fps.
       4. Double Lens Splicing Technology: Horizontal viewing angle of 160 degrees, +/-10 degrees.
       5. ColorHunter Technology: Ensures 24-hour full-color images.
       6. Built-in speaker and dual mics.
       7. Support 256 GB micro SD card.
       8. Camera:
          1. Sensor: 1/2.9 inch, 5.0 megapixel, progressive scan, CMOS.
          2. Minimum Illumination: Color: 0.01 lux (F2.0, AGC ON). 0 lux with IR on.
          3. Day/Night: IR-cut filter with auto switch (ICR).
          4. Shutter: Auto/Manual, 1 to 1/100000s.
          5. Adjustment Angle:

Pan: 0 to 360 degrees.

Tilt: 0 to 75 degrees.

Rotate: 0 to 360 degrees.

* + - * 1. WDR: 120 dB.
        2. S/N: Greater than 56 dB.
        3. Lens: 1.68 mm at F2.0.
        4. Iris: Fixed.
        5. Field of View (H): 180 degrees.
        6. Field of View (V): 100 degrees.
        7. Field of View (O): 180 degrees.
      1. DORI Distance.
         1. Lens: (1.68 mm).
         2. Detect: 124 ft (37.8 m).
         3. Observe: 49.6 ft (15.1 m).
         4. Recognize: 24.8 ft (7.6 m).
         5. Identify: 3.8 ft (12.4 m).
      2. Illuminator:
         1. IR Range: Up to 66 ft (20 m).
         2. Wavelength: 850 nm.
         3. IR On/Off Control: Auto/Manual.
      3. Video:
         1. Video Compression: Ultra265, H.265, H.264, MJPEG.
         2. H.264 code profile: Baseline profile, Main profile, High profile.
         3. Frame Rate:

Main Stream: 5MP (2880x1620) Max 30 fps. 4MP (2560x1440) Max 30 fps. 1080P (1920x1080) Max 30 fps.

Sub Stream: 1080P (1920x1080) Max 30fps. 720P (1280x720) Max 30 fps. D1 (720x576) Max 30 fps. 640x360 Max 30 fps. 2CIF(704x288) Max 30 fps. CIF(352x288) Max 30 fps.

Third Stream: D1 (720x576) Max 30 fps. 640x360 Max 30 fps. 2CIF (704x288) Max 30 fps. CIF (352x288) Max 30 fps.

* + - * 1. Video Bit Rate: 128 Kbps to 10 Mbps.
        2. U-Code: Support.
        3. OSD: Up to 8 OSDs.
        4. Privacy Mask: Up to 4 areas.
        5. ROI: Up to 8 areas.
        6. Video Stream: Triple streams.
      1. Image:
         1. White Balance: Auto/Outdoor/Fine Tune/Sodium Lamp/Locked/Auto2.
         2. Digital Noise Reduction: 2D/3D DNR.
         3. Smart IR: Support.
         4. Flip: Normal/ Flip Vertical/ Flip Horizontal/180 degrees.
         5. Dewarping: Support.
         6. HLC: Support.
         7. BLC: Support.
         8. Defog: Digital Defog.
      2. Intelligent:
         1. Smart Intrusions Prevention: Support false alarm filtering: Cross Line detection, Intrusion detection, Enter Area detection, Leave Area detection.
      3. Events:
         1. Basic Detection: Motion detection, ultra motion detection, tampering alarm, audio detection.
         2. General Function: Watermark, IP address filtering, Tampering alarm, Access policy, ARP protection, RTSP authentication, User authentication.
      4. Audio:
         1. Audio Compression: G.711U, G.711A.
         2. Audio Bitrate: 64 Kbps.
         3. Two-way audio: N/A.
         4. Suppression: Support.
         5. Sampling Rate: 8 kHZ.
      5. Storage:
         1. Edge Storage: Micro SD, up to 256 GB.
         2. Network Storage: ANR, NAS(NFS).
      6. Network:
         1. Protocols: IPv4, IPv6, IGMP, ARP, TCP, UDP, DHCP, PPPoE, RTP, RTSP, RTCP, RTMP, DNS, DDNS, NTP, FTP, UPnP, HTTP, HTTPS, SMTP, 802.1x, SNMP, and QoS.
         2. Compatible Integration: ONVIF (Profile S, Profile G, Profile T), API,SDK.
         3. User/Host: Up to 32 users. 3 user levels: administrator, common user, and administrator.
         4. Security: Password protection, Strong password, HTTPS encryption, Export operation logs, Basic and digest authentication for RTSP, Digest authentication for HTTP, TLS 1.2, WSSE and digest authentication for ONVIF.
         5. Client: EZStation, EZView, and EZLive.
         6. Web Browser:

Plug-In Required Live View: IE10 and above, Chrome 45 and above, Firefox 52 and above, Edge 79 and above.

Plug-In Free Live View: Chrome 57.0 and above, Firefox 58.0 and above, Edge 16 and above.

* + - 1. Interface:
         1. Audio I/O: N/A.
         2. Alarm I/O: N/A.
         3. Serial Port: N/A.
         4. Built-in Mic: Support.
         5. Built-in Speaker: N/A.
         6. WIFI: N/A.
         7. Network: One, RJ45 10M/100M Base-TX Ethernet.
         8. Video Output: N/A.
      2. Certifications:
         1. EMC:

CE-EMC: EN 55032, EN 61000-3-3, EN IEC 61000-3-2.

FCC: FCC CFR 47 part 15 B.

* + - * 1. Safety:

CE LVD: EN 62368-1.

CB: IEC 62368-1.

UL/CUL: UL 62368-1, CAN/CSAC22,2 No. 62368-1.

* + - * 1. Environment:

CE-RoHS: 2011/65/EU; (EU)2015/863.

WEEE 2012/19/EU.

Reach: Regulation (EC) No 1907/2006.

* + - * 1. Protection:

IP67: IEC 60529.

IK10: IEC 62262.

* + - 1. General:
         1. Power: 12 Vdc +/- 25 percent. PoE; IEEE 802.3af.
         2. Power Consumption: 5.5 Watts maximum.
         3. Power Interface: Coaxial power plug, 5.5 mm diameter.
         4. Dimensions (Diameter x H): 4.4 x 3.7 inch (111 x 93 mm).
         5. Weight: 1.06 lbs (0.48 kg).
         6. Material: Metal.
         7. Working Environment:

Operating Temperature: -22 to 140 degrees F (-30 to 60 degrees C).

Relative Humidity, Non-Condensing: 95 percent or less.

* + - * 1. Storage Environment:

Temperature: -22 to 140 degrees F (-30 to 60 degrees C).

Relative Humidity, Non-Condensing: 95 percent or less.

* + - * 1. Surge Protection: 4 kV.
        2. Reset Button: Support.

\*\* NOTE TO SPECIFIER \*\* Delete article if not required or delete basis of design options not required.

* 1. CAMERA TYPE; BULLET
     1. Basis of Design: N-Range 4K Bullet as manufactured by EnviroCams. 8MP Infrared IP Camera with Motorized Lens.
        1. Video, Audio, Power over normal Cat5e (Exclusive EnviroCams Extended Mode): 820 ft (250 m).
        2. Digital Noise Reduction: 2D and 3D.
        3. Infrared Illumination with Intensity-Controlled Smart IR's: Up to 150 ft.
        4. Cameras:
           1. Sensor: 1/2 inch, 8 mega pixel, progressive scan CMOS.
           2. Lens: 2.8 to 12 mm, Varifocal Auto-Focus Megapixel zoom lens.

Front Lens Protection: Optically clear glass

* + - * 1. Angle of View (Height): 114.8 to 47.3 degrees.
        2. Zoom / Focus: Motor drive
        3. Shutter: Auto/Manual, 1 - 1/100000 s.
        4. Minimum Illumination: Color: 0.003 Lux (F1.5, AGC ON) 0 Lux with IR on.
        5. Infrared Range: 150 ft with intensity controlled smart IRs.
        6. Day/Night: IR-cut filter with auto switch (ICR).
        7. S/N: Greater than 52 dB.
        8. Wide Dynamic Range (WDR): Optical WDR; up to 120 dB.
        9. Video / Noise Reduction: 20 / 3D.

\*\* NOTE TO SPECIFIER \*\* The SD card is optional. Delete if not required.

* + - * 1. Onboard Micro SD Card for stand-alone or POE loss Recording - with Automatic Download to NVR when POE is restored.
      1. Video:
         1. Maximum Resolution: 3840 x 2160.
         2. Video Compression: H.265, H.264, and MJPEG. Triple stream capable.
         3. Frame Rate:

5MP (2592x1944): Maximum. 30 fps.

5MP (2944x1656): Maximum 30 fps.

4MP(2560x1440) : Maximum 30 fps; 2 MP.

(1920x1080): Maximum 30 fps.

Sub Stream: 2 MP (1920x1080): Maximum 30 fps.

Third Stream: Dl (720x576): Max. 30 fps.

* + - * 1. 9:16 Corridor Mode: Supported. For hallways and narrow alleys.
        2. Video Streaming: Triple.
        3. Region of Interest: Supported.
        4. Evaluative Metering: Supported.
        5. OSD: Up to 8.
        6. Privacy Mask: Up to 8 areas.
      1. Smart:
         1. Behavior Detection: Intrusion, crossing line, motion detection.
         2. Exception Detection: Audio Detection.
         3. Intelligent Identification: Face detection, defocus, scene change.
         4. Statistical Analysis: People counting.
      2. Audio:
         1. Audio Compression: G.711.
         2. Two-way Audio: Supported.
      3. Storage: Edge Storage: Micro SD, up to 128 GB.
      4. Network:
         1. Protocols: 1Pv4, IGMP, ICMP, ARP, TCP, UDP, DHCP, PPPoE, RTP, RTSP, RTCP, DNS, DDNS, NTP, FTP, UPnP, HTTP, HTTPS, SMTP, SNMP, and 802.lx.
         2. Compatible Integration: ONVIF and API.
      5. Interface:
         1. Audio Input and Output (I/O):

Audio Cable: 1 / 1.

Input: Impedance 35 kOhms; Amplitude: 2 V (p-p).

Output: Impedance 6000; Amplitude: 2 V (p-p).

* + - * 1. Network: 10 M / 100 M Base-TX Ethernet.
      1. General:
         1. Power: 12 Vdc or PoE (IEEE802.3 af). Will fail-over to 12 Vdc if POE is lost with a wide voltage range of +/- 25 percent.
         2. Power Consumption: Max 10 Watts.
         3. Dimensions (Length x Diameter x H) 9.98 x 3.4 x 2.8 inches (254 x 86 x 71 mm).

Weight: 2.2 lbs (1.0 kg).

* + - * 1. Working Environment:

Operating Temperature: -31 to 140 degrees F (-35 to 60 degrees C).

Relative Humidity, Non-Condensing: 10 to 95 percent or lower.

* + - * 1. Vandal Resistant Impact Rating: IK10. Represents more than 20 joules of impact.
        2. Ingress Protection: IP67. Weatherproof, indoor, or outdoor.
        3. Mount: Electronically isolated.

Junction box mount.

Pole mount.

* + 1. Basis of Design: SKU: EC-Pano2K-160. Panoramic Bullet IP Security Camera as manufactured by EnviroCams. 8 MP Infrared IP Camera with Motorized Lens.
       1. High quality image with 4 MP, 1/2.9 inch CMOS sensor.
       2. Human Body Detection off: 4 MP (3840x1080) at 25 fps.
       3. Human Body Detection on: 4 MP (3840x1080) at 20 fps.
       4. Double Lens Splicing Technology: Horizontal viewing angle of 160 degrees, +/-10 degrees.
       5. ColorHunter Technology: Ensures 24-hour full-color images.
       6. Built-in speaker and dual mics.
       7. Support 256 GB micro SD card.
       8. Camera:
          1. Sensor: 1/2.9 inch, 4.0 megapixel, progressive scan, CMOS.
          2. Minimum Illumination: Color: 0.0005 lux (F1.0, AGC ON).
          3. Shutter: Auto/Manual, 1 to 1/100000s.
          4. Adjustment Angle:

Pan: 0 to 360 degrees.

Tilt: 0 to 90 degrees.

Rotate: 0 to 360 degrees.

* + - * 1. WDR: DWDR.
        2. S/N: Greater than 56 dB.
        3. Lens: 2 x 4.0 mm at F1.0.
        4. Iris: Fixed.
        5. Field of View (H): 160 degrees +/- 10 degrees.
        6. Field of View (V): 43.22 degrees.
        7. Field of View (D): 180.13 degrees +/- 10 degrees.
      1. DORI Distance:
         1. Lens: (4.0 mm).
         2. Detect: (64.3 m).
         3. Observe: (25.7 m).
         4. Recognize: (12.9 m).
         5. Identify: (6.4 m).
      2. Illuminator:
         1. LED Distance: Up to 98 ft (30 m).
         2. LEDs Number: 2.
         3. LED On/Off Control: Auto and manual.
      3. Video:
         1. Video Compression: Ultra265, H.265, H.264, MJPEG.
         2. H.264 Code Profile: Baseline profile, Main profile, High profile.
         3. Frame Rate:

Main Stream: 4MP (3840 x 1080), Max 25 fps Human Body Detection off).

Sub Stream: 1920 x 540, Max 25 fps.

* + - * 1. Video Bit Rate: 128 Kbps to 16 Mbps.
        2. U-Code: Support.
        3. OSD: Up to 8 OSDs.
        4. Privacy Mask: Up to 4 areas.
        5. ROI: Up to 8 areas.
        6. Video Stream: Double streams.
      1. Image:
         1. White Balance: Auto/Outdoor/Fine Tune/Sodium Lamp/Locked/Auto2.
         2. Digital noise reduction: 2D/3D DNR.
         3. Smart Illumination: Support.
         4. Flip: N/A.
         5. Dewarping: N/A.
         6. HLC: Support.
         7. BLC: Support.
         8. Defog: Digital Defog.
      2. Events:
         1. Basic Detection: Human Body Detection ,motion detection, tampering alarm, audio detection.
         2. General Function: Watermark, IP address filtering, Alarm input, Alarm output, access policy, ARP protection, RTSP authentication, user authentication.
      3. Audio:
         1. Audio Compression: G.711.
         2. Audio Bitrate: 64 Kbps.
         3. Two-Way Audio: Support.
         4. Suppression: Support.
         5. Sampling Rate: 8 kHZ.
      4. Storage:
         1. Edge Storage: Micro SD, up to 256GB.
         2. Network Storage: ANR, NAS(NFS).
      5. Network:
         1. Protocols: IPv4, IGMP, ICMP, ARP, TCP, UDP, DHCP, PPPoE, RTP, RTSP, RTCP, DNS, DDNS, NTP, FTP, UPnP, HTTP, HTTPS, SMTP, 802.1x, SNMP, QoS, RTMP,SSL/TLS, SSH.
         2. Compatible Integration: ONVIF (Profile S, Profile G, Profile T), API,SDK.
         3. User/Host: Up to 32 users.

Two User Levels: Administrator and common user.

* + - * 1. Security: Password protection, Strong password, HTTPS encryption, Export operation logs, Basic and digest authentication for RTSP, Digest authentication for HTTP, TLS 1.2, WSSE and digest authentication for ONVIF.
        2. Client: EZStation, EZView, and EZLive.
        3. Web Browser:

Plug-In Required Live View: IE9+, Chrome 41 and below, Firefox 52 and below.

Plug-In Free Live View: Chrome 57.0+, Firefox 58.0+, Edge 16+.

* + - 1. Interface:
         1. Audio I/O:

Input: Impedance 3, 5 kOhms; amplitude 2 V peak-to-peak.

Output: Impedance 600 Ohms; amplitude 2 V peak-to-peak.

* + - * 1. Alarm I/O: 1/1.
        2. RS485: N/A.
        3. Built-in Mic: Built-in two mics.
        4. Built-in Speaker: Support.
        5. WIFI: N/A.
        6. Network: 1, RJ45 10M/100M Base-TX Ethernet.
        7. Video Output: N/A.
      1. Certifications:
         1. EMC:

CE-EMC:

EN 55032, 2015+A1, 2020.

EN 61000-3-3, 2013+A1, 2019.

EN IEC 61000-3-2, 2019+A1, 2021.

EN 55035, 2017+A11, 2020.

FCC: FCC CFR 47 part15 B and ANSI C63.4-2014.

* + - * 1. Safety:

CE LVD: EN 62368-1, 2014+A11, 2017.

CB: IEC 62368-1, 2014.

UL: UL 62368-1, 2nd Ed., Issue Date: 2014-12-01.

* + - * 1. Environment:

CE-RoHS: 2011/65/EU; (EU)2015/863

WEEE 2012/19/EU

Reach: Regulation (EC) No 1907/2006

* + - * 1. Protection:

IP67: IEC 60529, 1989+AMD1, 1999+AMD2, 2013.

IK10: IEC 62262, 2002.

* + - 1. General:
         1. Power: 12 Vdc +/- 25 percent. PoE; IEEE 802.3af.
         2. Power Consumption: 6.5 Watts maximum.
         3. Power Interface: Coaxial power plug, 5.5 mm diameter.
         4. Dimensions (L x W x H): 10.7 x 5.1 x 3.0 inch (273 x 130 x 76 mm).
         5. Weight: 2.09 lbs (0.95kg).
         6. Material: Metal.
         7. Working Environment:

Operating Temperature: -22 to 140 degrees F (-30 to 60 degrees C).

Relative Humidity, Non-Condensing: 95 percent or less.

* + - * 1. Storage Environment:

Temperature: -22 to 140 degrees F (-30 to 60 degrees C).

Relative Humidity, Non-Condensing: 95 percent or less.

* + - * 1. Surge Protection: 4 kV.
        2. Reset Button: Support.
    1. Basis of Design: SKU: EC-DT2K-Dual. DuoTherm-2K Thermal IP Security Cameras as manufactured by EnviroCams. 2 Cameras in One with One IP Address using 2 channels on your NVR. 4 MP Dual-Spectrum Optical / Thermal.
       1. 1/1.8 inch target surface, high sensitivity sensor, satisfy the need of starlight monitoring.
       2. Thermal and Optical dual-spectrum image, dual video with single IP address, adaptable to more various scenes.
       3. Support audio and light alarm, with red and blue warning lights built in
       4. Thermal Module:
          1. Sensor Type: Vanadium Oxide Uncooled Focal Plane Arrays.
          2. Original Resolution: 256 x 192.
          3. Field of View (HxV): 57.0 x 42.0 degrees.
          4. Video Resolution: 720P (1280x720) Max 30 fps.
          5. Response Waveband: 8 to 14 micrometers.
          6. Pixel Size: 12 micrometers pv.
          7. IFOV: 3.75 mrad.
          8. NETD: Less than or equal to 55 mk at f/1.0 at 25 degrees C.
          9. Lens (focal length): 3.2 mm at F1.1
          10. Palette: Up to 20 palettes of optional color, including: white hot, lava, iron oxide red, hot iron, medical, arctic, rainbow 1, rainbow 2, rainbow 3, depict hot, ice hot, black hot, mazarine, fusion, red hot, green hot, color 1, color 2, rain, and puce.
          11. Detection Distance:

Vehicle: 316 m (target size 4 x 1.4 m).

Human: 126 m (target size 1.8 x 0.5 m).

* + - * 1. Recognition Distance:

Vehicle: 79 m (target size: 4 x 1.4 m).

Human: 32 m (target size: 1.8 x 0.5 m).

* + - * 1. Identification Distance:

Vehicle: 45 m (target size: 4 x 1.4 m).

Human: 18 m (target size: 1.8 x 0.5 m).

* + - 1. Optical Module:
         1. Sensor: 1/1.8 inch, 4.0 megapixel, progressive scan, CMOS.
         2. Lens: 4 mm at F1.6.
         3. Iris: Fixed aperture.
         4. DORI Distance:

Lens: 4 mm.

Detect: 203.6 ft (62.1 m).

Observe: 81.5 ft (24.8 m).

Recognize: 40.7 ft (12.4 m).

Identify: 20.4 ft (6.2 m).

* + - * 1. Field of View(HxV): 89.9 x 49.1 degrees.
        2. Video Resolution: 4 MP (2688x1520) Max 30 fps.
        3. Shutter: Auto/Manual, 1 to 1/100000s.
        4. Min. Illumination:

Color: 0.001 lux (F1.6, AGC ON).

B/W: 0.0005 lux (F1.6, AGC ON).

0 lux with IR.

* + - * 1. WDR: 120 dB.
        2. Day/Night: IR-cut filter with auto switch (ICR).
        3. IR Range: Up to 50 m (164 ft) IR range.
        4. Wavelength: 850 nm.
        5. IR On/Off Control: Auto/Manual.
        6. BLC: Supported.
      1. Smart: Thermal module.
         1. Fire Detection: Support the detection of fire point in the environment and up to 10 fire points can be detected.
         2. Smoking Detection: Support the detection of smoking in the environment and link to alarm.
         3. Temperature Detection:

Support area detection, and link to alarm. The temperature value can be added to the alarm picture.

Support cold and hot point tracking, timely and clearly showing the abnormal points.

Up to 12 rules can be set.

Temperature Range: -4 to 302 degrees F (-20 to +150 degrees C)

Temperature Accuracy: Max +/- 8 degrees C, +/- 8 percent.

* + - * 1. Smart Intrusion Prevention:

Support false alarm filtering. Line crossing detection, Intrusion detection, Enter Area, Leave Area.

Support motor vehicle and pedestrian detection capture and plan arming.

* + - 1. Smart: Optical module.
         1. Exception Detection: Object left behind detection, Object removed detection, Scene change detection.
         2. Smart Intrusion Prevention:

Support False Alarm Filtering: Line crossing detection, Intrusion detection, Enter Area, Leave Area.

Support motor vehicle, non-motor vehicle and pedestrian detection capture and plan arming.

* + - 1. Event:
         1. Audio and Light Alarm: Support audio and light warning function, with red and blue warning lights built in.
         2. Basic Detection:

Optical Module: Motion detection, Audio detection, Tampering alarm.

Thermal Module : Audio detection.

* + - * 1. General Function: Watermark, IP Address Filtering, Alarm input, Alarm output, Access Policy, ARP Protection, RTSP Authentication, and User Authentication.
      1. Video:
         1. Compression: Ultra265, H.265, H.264, MJPEG.
         2. Video Stream: Triple streams.
         3. OSD: Up to 8 OSDs.
         4. Privacy Mask: Up to 8 areas per scene.
      2. Audio:
         1. Audio Compression: G.711U,G.711A.
         2. Two-way audio: Supported, Built in mic and speaker.
         3. Sampling Rate: 8 kHZ.
      3. Storage:
         1. Edge Storage: Micro SD, up to 256 GB.
         2. Network Storage: ANR.
      4. Network:
         1. Protocols: IPv4, IGMP, ICMP, ARP, TCP, UDP, DHCP, PPPoE, RTP, RTSP, RTCP, DNS, DDNS, NTP, FTP, UPnP, HTTP, HTTPS, SMTP, 802.1x, SNMP, and QoS.
         2. Compatible Integration: ONVIF; Profile S, Profile G, and Profile T.
         3. Web Browser: Plug-in required live view. IE9+, Chrome 41 and below, Firefox 52 and below.
      5. Interface:
         1. Audio I/O: 1/1.
         2. Alarm I/O: 2/2.
         3. Serial Port: One, RS485.
         4. Network: One, RJ45 10M/100M Base-TX Ethernet.
      6. General:
         1. Power:

12 Vdc +/- 25 percent, PoE (IEEE802.3af).

Power Consumption: Max 12 W.

Support reverse polarity protection, Overvoltage and overcurrent protection, Input short circuit protection.

* + - * 1. Dimensions: 13.9 x 4.1 x 4.6 inches (354 x 104 x 116 mm)/

Weight: 1.85kg (4.08 lbs).

* + - * 1. Temperature Detection Working Environment:

-14 to 122 degrees F (-10 to 50 degrees C).

Relative Humidity Non-Condensing: 95 percent or less.

* + - * 1. Working Environment: -40 to 158 degrees F (-40 to 70 degrees C).

Relative Humidity Non-Condensing: 95 percent or less.

* + - * 1. Ingress Protection: IP67.
        2. Vandal Resistant: N/A.

\*\* NOTE TO SPECIFIER \*\* Delete article if not required. or delete basis of design options not required.

* 1. CAMERA TYPE; PAN, TILT, ZOOM (PTZ)
     1. Basis of Design: IPC66125R-X25-VG Scout-25X PTX Camera as manufactured by EnviroCams.
        1. LightHunter technology ensures ultra-high image quality in low illumination environment.
        2. Cameras:
           1. Sensor: 1/2.8 inch, 20 megapixel, progressive scan CMOS. High quality imaging.
           2. Shutter: Auto/Manual, 1 - 1/100000s.
           3. Minimum Illumination: Color: 0.001 Lux (F1.5, AGC ON) / 0 with IR.
           4. Day/Night: IR-cut filter with auto switch (ICR).
           5. S/N: Greater than 52 dB.
           6. Optical Wide Dynamic Range (WDR): UP to 120 dB.
        3. Lens:
           1. Lens Type: 5 to 125 mm, AF automatic focusing and motorized zoom lens.
           2. Optical Zoom: 25x.
           3. Iris: Auto; F1.5 to F3.0.
           4. Field of View (H): 54.37 to 2.68 degrees.
           5. Field of View (V): 32.23 to 1.51 degrees.
           6. Field of View (D): 66.88 to 3.16 degrees.
        4. DORI: Distance.
           1. Lens: 5 to 125 mm.
           2. Detect: 280.0 to 5600.1 ft (85.3 to 1706.9 m).
           3. Observe: 112.0 to 2240.0 ft (34.1 to 682.8 m).
           4. Recognize: 56.0 to 1120.0 ft (17.1 to 341.4 m).
           5. Identify: 28.0 to 560.0 ft (8.5 to 170.7 m).
        5. Illuminator:
           1. IR Range: Up to 492 ft (150 m) IR range.
           2. Wavelength: 850 nm.
           3. IR On/Off Control: Auto/Manual.
        6. Video:
           1. Video Compression: Ultra 265, H.265, H.264, and MJPEG.
           2. Frame Rate:

Main Stream: 2MP(1920x1080), Max 30 fps.

Sub Stream: 720P (1280x720), Max 3 0fps.

Third Stream: D1 (720x576), Max 30 fps.

* + - * 1. Video Bit Rate: 128 Kbps to 16 Mbps.
        2. U-code: Support.
        3. ROI: Up to 8 areas.
        4. Video Stream: Triple streams.
        5. OSD: 8 OSDs.
        6. Privacy Mask: 24 areas, up to 4 areas per scene.
      1. Image:
         1. White Balance: Auto/Outdoor/Fine Tune/Sodium Lamp/Locked/Auto2.
         2. Digital Noise Reduction: 2D/3D DNR.
         3. Smart IR: Supported. IR Distance: 492 ft (1450 m).
         4. Flip: Normal / Flip Vertical / Flip Horizontal /180 degrees / 90 degrees Clockwise / 90 degrees Anti-clockwise.
         5. HLC: Support.
         6. BLC: Support.
         7. Defog: Digital Defog.
      2. Intelligent:
         1. Smart intrusion Prevention: Support false alarm filtering: Cross Line detection, Intrusion detection, Enter Area detection, Leave Area detection
      3. Events:
         1. Basic Detection: Motion detection, Audio detection, Tampering Alarm.
         2. Auto Tracking: Support.
         3. General Function: Watermark, IP Address Filtering, Alarm input, Alarm output, Access Policy, ARP Protection, RTSP Authentication, and User Authentication.
      4. Audio:
         1. Audio Compression: G.711U,G.711A.
         2. Audio Bitrate: 64 Kbps.
         3. Two-way Audio: Support.
         4. Suppression: Support.
         5. Sampling Rate: 8 kHz.
      5. Storage:
         1. Edge Storage: Micro SD, up to 256 GB.
         2. Network Storage: ANR,NAS(NFS).
      6. Network:
         1. Protocols: IPv4, IGMP, ICMP, ARP, TCP, UDP, DHCP, PPPoE, RTP, RTSP, RTCP, DNS, DDNS, NTP, FTP, UPnP, HTTP, HTTPS, SMTP, 802.1x, SNMP, QoS, RTMP, SSL/TLS.
         2. Compatible Integration: ONVIF (Profile S, Profile G, Profile T), API,SDK.
         3. User/Host: Up to 32 users. 3 user levels: administrator, operator, and common user.
         4. Security: Password protection, strong password, HTTPS encryption, Export operation logs, basic and digest authentication for RTSP, digest authentication for HTTP, TLS 1.2, WSSE and digest authentication for ONVIF.
         5. Client: EZStation, EZLive, and EZView.
         6. Web Browser:

Plug-in Free Live View: Chrome 57.0+, Firefox 58.0+, Edge 16+, and Safari 11+.

Plug-in Required Live View: IE 10 and above, Chrome 45 and above, Firefox 52 and above, Edge 79 and above.

* + - 1. Pan Tilt:
         1. Pan Range: 360 degrees (endless).
         2. Pan Speed: 2 to 75 degrees per sec. Preset speed: 180 degrees per sec.
         3. Tilt Range: -15 to 90 degrees (auto reverse).
         4. Tilt Speed: 2 to 75 degrees per sec. Preset speed: 80 degrees per sec.
         5. Number of Presets: 1024.
         6. Preset Patrol: 16 patrols, up to 64 presets for each patrol.
         7. Route Patrol: 16 patrols, up to 32 actions for each patrol.
         8. Recorded Patrol: 16 patrols, up to 128 actions for each patrol.
         9. Patrol Stay Time: 15 to 1800 seconds.
         10. Preset Image Freeze: Support.
         11. Home Position: Support.
      2. Interface:
         1. Audio I/O: 1/1.
         2. Alarm I/O: 2/1.
         3. Serial Port: One, RS485.
         4. Built-in Mic: N/A.
         5. Built-in Speaker: N/A.
         6. WIFI: N/A.
         7. Network: One, RJ45 10M/100M Base-TX Ethernet.
         8. Video Output: N/A.
      3. Certification:
         1. EMC:

CE-EMC: EN 55032:2015+A11:2020; EN IEC 61000-3-2:2019; EN 61000-3-3:2013+A1:2019; EN 55035:2017+A11:2020.

FCC: FCC CFR 47 part15 B, ANSI C63.4-2014.

* + - * 1. Safety:

CE LVD: (EN 62368-1:2014+A11:2017).

CB: IEC 62368-1:2014.

UL: UL 62368-1-14, 2nd Ed., Issue Date: 2014-12-01.

* + - * 1. Environment: CE-ROHS: 2011/65/EU; (EU)2015/863.
        2. Protection: IP66: IEC 60529: 1989+AMD1: 1999+AMD2: 2013.
      1. General:
         1. Power: 12 Vdc or PoE (IEEE802.3 at).
         2. Power Consumption: Max 25 Watts.
         3. Power Interface: Coaxial Power Plug: 5.5 mm diameter.
         4. Dimensions (Diameter x H) 8.7 x 14.6 inches (220 x 370 mm).
         5. Weight: 7.26 lbs (3.3 kg).
         6. Working Environment:

Operating Temperature: -40 to 149 degrees F (-40 to 65 degrees C).

Relative Humidity, Non-Condensing: 95 percent or lower.

* + - * 1. Storage Environment:

Operating Temperature: -40 to 158 degrees F (-40 to 70 degrees C).

Relative Humidity, Non-Condensing: 95 percent or lower.

* + - * 1. Ingress Protection: IP66.
        2. Surge Protection: 6 kV.
        3. Reset Button: Support.
      1. Mounting Options:

\*\* NOTE TO SPECIFIER \*\* Delete options not required.

* + - * 1. Pendent Mount.
        2. Wall Mount.
        3. Pole Mount.
        4. Corner Mount.
        5. Junction Box.

\*\* NOTE TO SPECIFIER \*\* Delete article if not required.

* 1. CAMERA MOUNTING BRACKETS AND JUNCTION BOXES
     1. Basis of Design: as manufactured by EnviroCams.

\*\* NOTE TO SPECIFIER \*\* Delete mounting brackets and junction boxes not required.

* + 1. The following is for the Micron IR.
       1. Electrically Isolated Junction Box: SKU: EC-JB03-M. For the Micron-IR 4K Pocket Dome.
          1. Rubber isolation grommets,
          2. For all types of mounting locations.
          3. Keeps camera safe from transient voltage or ground problems when mounted on a metal structure.
          4. Foam insulating/isolating pad on the back.
          5. Large hole for passing cables through to whatever it's mounted on.
          6. One 3/4 inch NPS conduit fitting connection in the bottom.
          7. Screws: For mounting, with sheetrock inserts.
          8. Machine Screws: For mounting the Micron-IR Dome to it.
          9. Overall Measurements: Diameter: 4.2 inches (107 mm). Deep: 1.5 inches(38 mm).
          10. Warranty: 1 Year.
          11. Weight: 1 lbs (0.454 kg).
       2. Junction Box: SKU: EC-JB07VF. For N-Range, I-Patrol and Outpost Bullet Security Cameras
          1. Two, 3/4 inch NPS conduit fitting connection in the bottom.
          2. Screws: For mounting with Sheetrock inserts.
          3. Machine Screws: For mounting the camera to it.
          4. Outside Measurements: 5 x 5 x 2-1/4 inch (127 x 127 x 57 mm).
          5. Warranty: 1 Year.

\*\* NOTE TO SPECIFIER \*\* Delete pole mount options not required.

* + - * 1. Pole Mount: N/A.
        2. Pole Mount: 4 inch (102 mm) diameter.
        3. Pole Mount: 8 inch (203 mm) diameter.
      1. Electrically Isolated Junction Box: SKU: EC-KB03. For the Occulus Moto Dome Camera.
         1. For all types of mounting locations.
         2. When mounted on Metal Structures: Keeps camera safe from transient voltage or ground problems.
         3. Rubber isolation grommets.
         4. Foam insulating / isolating pad on the back.
         5. Large hole for passing cables through to whatever it's mounted on.
         6. Conduit Fitting Connection in the Bottom: 3/4 inch NPS connection in the bottom.
         7. Screws: For mounting the junction box, with sheetrock inserts.
         8. Machine Screws: For mounting the Occulus Moto-Dome to it.
         9. Outside Measurements (Diameter x Depth): 5.9 x 1.6 inches (150 x 41 mm)
         10. Weight: 1 lbs (0.454 kg).
         11. Warranty: 1 Year Warranty.
      2. Wall Mount with Integrated Junction Box: SKU: EC-SDWM03C. For Micron Pocket Dome Camera. Allows more severe viewing angles than a regular wall mount. If your view needs to be almost straight down, or straight to the side, such as a Hallway mounting, then this mount is perfect.
         1. Comes with hardware to mount it to a wall, plus Sheetrock inserts.
         2. Machine Screws: For mounting the Micron Pocket Dome to it.
         3. Junction Box Portion:

Contains two down facing 3/4 inch Conduit threaded fittings connections.

Access hole in the back of the junction box for cable passage if needed; normally sealed by foam isolation pad on back of junction box.

* + - * 1. Measurements: 10 inches (254 mm) from the top front, back to the wall.

Junction Box Portion: 4.9 x 4.9 inches (125 x 125 mm) square.

* + - * 1. Weight: 3 lbs (1.361 kg).
        2. Warranty: 1 year.
      1. PTZ Camera Parapet Mount: SKU: SP-Parapet.
         1. Can be ordered with a variety of attachments.
         2. Material: Formed 1-1/2 inch (1.9 inch OD) schedule 40 pipe.

3/4 inch to 1-1/2 inch fitting

Mounting bracket: 1/4 inch thick welded plates with mounting holes.

* + - * 1. Attaches to a Parapet Wall with the included anchors.
        2. Can be rotated 360 degrees to accommodate any mounting angle.
        3. Back Flip design allowing for easy installation, maintenance, cleaning, and adjustments without using man-lifts.
        4. Warranty: 1 year.
      1. Pole Mount: SKU: EC-UP06BPM. For N-Range, I-Patrol, Outpost, and Bantam bullet cameras.
         1. Steel Bracket: For camera mount.
         2. Available with Bands for Poles Up To: 4 inches (102 mm) in diameter.
         3. Available with Bands for Poles Up To: 8 inches (203 mm) in diameter.
         4. Warranty: 1 year.
      2. Wall Mount with Integrated Junction Box: SKU: N/A. For Occulus Moto-Dome. Allows more severe viewing angles. If your view needs to be almost straight down, or straight to the side, such as a Hallway mounting, then this mount is perfect.
         1. Comes with hardware to mount it to a wall, plus Sheetrock inserts.
         2. Machine Screws: For mounting the Occulus Moto-Dome to it.
         3. Junction Box Portion:

Contains two down facing 3/4 inch Conduit threaded fittings connections.

Sealed with conduit caps when not in use.

Access hole in the back of the junction box for cable passage if needed; normally sealed by foam isolation pad on back of junction box.

* + - * 1. Measurements: 10 inches (254 mm) from the top front, back to the wall.

Junction Box Portion: 4.9 x 4.9 inches (125 x 125 mm) square.

* + - * 1. Weight: 2 lbs (0.907 kg).
        2. Material: Aluminum alloy.
        3. Warranty: 1 year.
      1. ChoiceLight Junction Box: SKU: EC-JB3-CL2K. For the ChoiceLight Security Camera. An electronically isolated mount. Provides plenty of room for wire connections to be tucked inside and out of sight.
      2. Pipe Drops: SKU: N/A. With 1.5 to 1.5 inches (38 x 38 mm) double aluminum pipe coupler with two set screws. Pipe drops can be combined with any accessory, mount or other pipe drops to achieve exactly what you need and the height or length that is desired.
         1. Material: 1-1/2 inch NPT Aluminum pipe.
         2. Finish: Powder Coated.

\*\* NOTE TO SPECIFIER \*\* Delete color and length options not required.

* + - * 1. Color: Black.
        2. Color: White.
        3. Length: 8 inches (203 mm).
        4. Length: 19-1/2 inches (4905 mm).
        5. Length: 4 ft (1219 mm).
        6. Length: 6 ft (1829 mm).
        7. Length: 8 ft (2438 mm).
        8. Length: 10 ft (3048 mm).
      1. Ceiling Mounts:
         1. Pendant Type Ceiling Mount:

Cast aluminum mount that comes with concrete anchors.

Source Lag Screws if attaching to a wood beam.

Ideally, would be bolted to a steel plate or beam with bolts.

Capacity: Limited to suspending 200 lbs total weight.

Color: White.

Color: Black.

* + - * 1. Egyptian Type Ceiling Mount: Steel ceiling mount used in q Pipe Drop Suspensions, and can be found paired with a Pipe Clamp, a Strong Strut Beam Clamp, and others.

Can attach to existing struts.

Use with lag bolts to attach it to a wood beam.

Bolt it onto a steel plate or beam.

Capacity: Limited to suspending 250 lbs (113.4 kg) total weight.

No bolts provided.

* + - * 1. Beam Clamps with Egyptian Mount Attached: A quick-attach, attachment for mounting Pipe and Suspension Components.

Use a 14 inch (356 mm) long section of Strong Strut.

Two clamps can accommodate any Beam up to 11 inches (279 mm) wide.

Color: Black.

* + - * 1. Beam Clamp with Pendant Mount attached: A quick-attach Beam Clamp with Cast Aluminum Pendant Mount

Capacity: 200 lbs (90.7 kg).

Use a 14 inch (356 mm) long section of Strong Strut.

Two clamps can accommodate any Beam up to 11 inches (279 mm) wide.

\*\* NOTE TO SPECIFIER \*\* Delete color option not required.

Color: Black.

Color: White.

* + - * 1. Pipe or Conduit Clamp with Egyptian Mount Attached: Allows the use of any Heavy Duty pipe or conduit in the facility to quickly start a short chain of suspension components.

Clamp Material: Aluminum.

Be sure pipe or conduit will support the total weight you will be hanging from it.

Will attach to any pipe or conduit that is between 1-1/2 and 2-1/2 inch (38 and 64 mm) outside diameter (OD).

Capacity: Weight of suspended equipment is not to exceed 200 lbs (90.7 kg).

Color: Black.

* + - 1. HD Parapet Wall Camera Mount: SKU: SP-ParapetHD.
         1. Can be ordered with a variety of attachments.
         2. Material: Formed 1-1/2 inch (1.9 inch OD) schedule 80 pipe.

3/4 inch to 1-1/2 inch fitting.

Mounting bracket: 1/4 inch thick welded plates with mounting holes.

* + - * 1. Attaches to a Parapet Wall with the included anchors.
        2. Can be rotated 360 degrees to accommodate any mounting angle.
        3. Back Flip design allowing for easy installation, maintenance, cleaning, and adjustments without using man-lifts.
        4. Warranty: 1 year.
      1. PTZ Pendent Mount: SKU: EC-UF45PenPTZ.
         1. Material: Cast aluminum.

\*\* NOTE TO SPECIFIER \*\* Delete color option not required.

Color: White.

Color: Black.

* + - * 1. Capacity: Suspending 200 lbs total weight.
        2. Concrete Anchors for attaching to concrete ceilings.
        3. Source Lag Screws if attaching to wood beams.
        4. Ideally, bolted to a steel plate or beam with bolts.
        5. Warranty: 1 year.
      1. PTZ Wall Mount: SKU: EC-WE45PTZ. For mounting PTZ camera to wall. Comes with mounting template and necessary hardware.
         1. Weight: 5 lbs (2.27 kg).
         2. Dimensions: 14 x 11 x 8 inches (356 x (279 x 203 mm).
         3. Warranty: 1 year.
      2. 2D Bracket for 4K Panoramic Parking Lot Camera: SKU: EC-UV06C2D. An adjustable mounting platform for the 4K Panoramic Parking Lot Camera.
         1. Weight: 14 lbs (6.35 kg).
         2. Dimensions: 15 x 20 x 6 inches (381 x 508 x 152 mm).
         3. Warranty: 1 year.
      3. Wall Mount for 4K Panoramic Parking Lot Camera: SKU: EC-WE45DWM.
         1. A wall mount for the 4K Panoramic Parking Lot Camera.
         2. Weight: 14 lbs (6.35 kg).
         3. Dimensions: 15 x 20 x 6 inches (381 x 508 x 152 mm).
         4. Warranty: 1 year.
      4. PTZ Camera Junction Box: SKU: EC-JB12. Heavy Duty box for holding heavy PTZ's. Suitable for indoor or outdoor use. Perform maintenance by latching security door and swinging the entire door and camera out. Large enough for wiring, power supplies, and POE Injectors.
         1. Material: Aluminum alloy.
         2. Door: Pre-drilled to fit Enviro Cam Wall Mounts.
         3. On the Back: The removable mount allows you to mount the wall frame, attach the junction box, then remove the box for maintenance.
         4. On the Back and Bottom: Knock-outs and glands for passing cables and power in and out of the enclosure.
         5. On the Bottom: Threaded conduit fittings of several sizes.
         6. Locks securely against tampering, moisture, and weather with two allen screws.
         7. Comes with four 3/8 inch Masonry Anchors and four weatherproof cable gland fittings.
         8. Dimensions: 11.7 x 9.6 x 5 inches (296 x 244 x 127 mm).
         9. Weight: 5.5 lbs (2.5 kg).
         10. Warranty: 1 year.
      5. PTZ Pendant Mount Extensions: SKU EC-SE45.
         1. For EnviroCam's line of outdoor PTZ cameras.
         2. Extension Size: 8 inches (200 mm).

Weight: 0.9 lbs (0.42 kg).

* + - * 1. Extension Size: 20 inches (500 mm). Diameter: 2.3 inches (59 mm).

Weight: 2.1 lbs (0.93 kg).

* + - * 1. Material: Aluminum alloy.
        2. Indoor and outdoor.
        3. Warranty: 1 year.
      1. PTZ Pole Mount: SKU: EC-UP08PMalloy.
         1. For EnviroCam's line of outdoor PTZ cameras.
         2. Pole Sizes: Up to 4 inch (102 mm) diameter.
         3. Material: Aluminum alloy.
         4. Dimensions: 8.5 x 6.8 x 2.6 inches (215 x 172 x 65 mm).
         5. Weight: 1.2 lbs (0.55 kg).
         6. Warranty: 1 year.
      2. PTZ Corner Mount: SKU: EC-UC08CM.
         1. For EnviroCam's line of outdoor PTZ cameras.
         2. Allows PTZ Cameras to view 270 degrees around structures.
         3. Dimensions: 9.1 x 8.5 x 5 inches (230 x 215 x 127 mm).
         4. Material: Aluminum alloy.
         5. Warranty: 1 year.
      3. Recessed Ceiling Mount: SKU: EC-ICM.
         1. For the Indy-22 Indoor PTZ Camera. Camera body is recessed up into the ceiling.
         2. Weight: 2 lbs (0.91 kg).
         3. Dimensions: 13 x 13 x 13 inches (330 x 330 x 330 mm).
         4. Warranty: 1 year.
      4. Pole Mount: SKU: EC-UP06PM. For Occulus, Sentinel-IR, and Mikcron-IR cameras.
         1. Available with bands for poles up to 4 or 8 inches (102 or 203 mm) in diameter.
         2. Weight: 2 lbs (0.91 kg).
         3. Dimensions: 7 x 7 x 4 inches (178 x 178 x 102 mm).
         4. Warranty: 1 year.

1. EXECUTION
   1. EXAMINATION
      1. Do not begin installation until the substrates have been properly constructed and prepared.
      2. If substrate preparation is the responsibility of another installer, notify Architect in writing of unsatisfactory preparation before proceeding.
   2. PREPARATION
      1. Clean surfaces thoroughly prior to installation.
      2. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
   3. INSTALLATION
      1. Install in accordance with manufacturer's instructions, approved submittals, and in proper relationship with adjacent construction.
   4. FIELD QUALITY CONTROL
      1. Field Inspection: Coordinate field inspection in accordance with appropriate sections in Division 01.

\*\* NOTE TO SPECIFIER \*\* Include if manufacturer provides field quality control with onsite personnel for instruction or supervision of product installation, application, erection, or construction. Delete if not required.

* + 1. Manufacturer's Services: Coordinate manufacturer's services in accordance with appropriate sections in Division 01.
  1. CLEANING AND PROTECTION
     1. Clean products in accordance with the manufacturers recommendations.
     2. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION