Long Range Camera Pan And Tilt System

The long range camera pan and tilt drive system shall consist of an integral, environmental, precise speed pan and tilt drive unit with continuous 360° rotation; integrated optics package, consisting of a lens and camera unit, mount with camera stabilization. Camera shall be housed in rugged environmental housing with wiper.
The long range camera, pan and tilt drive system, mount and environmental housing shall meet or exceed the following specifications:


   a) Image Sensor: 1/2” Super High Sensitivity Low-Light Color EMCCD Camera

   b) Resolution: 480 TVL

   c) Minimum Illumination: Color in full motion mode: 0.009 lux

   d) Color accumulation mode: 0.00015 lux

   e) Monochrome in full motion mode: 0.0005 lux

   f) Monochrome accumulation mode: 0.000008 lux

   g) Lens: 55X optical zoom 12-660mm/30-1680mm 2.5X electronic extender

   h) Angle of View: 31.7° - 0.6°, 12.0° - 0.2° (2.5X Extender In Use)

   i) Zoom: manual control

   j) Focus: manual control

   k) Iris: Automatic with manual override

   l) Control: Gain: auto or manual

   m) Shutter: OFF, 1/100, 1/125, 1/250, 1/500, 1/1000, 1/2000 sec

   n) Backlight Compensation: On/Off (9 selectable areas)


   p) DNR: Auto/manual (8 steps)
2) **Pan And Tilt Drive Unit Specifications**

   a) General Construction: Die-cast aluminum; stainless steel hardware
   b) Finish: Gray polyester powder coating
   c) Drive Unit: Precise 0.1° stepper motor
   d) Limit Stops: mechanical and Programming
   e) Wiring: prewired to the camera enclosure
   f) Protocol: Pelco-D, RS-485/422, TCP/IP
   g) Addressing: Selectable DIP Switches
   h) Pan Rotation: 360° continuous rotation
   i) Pan Speed: 0.1°~ 25°/sec,
   j) Tilt Speed: 0.1°~ 20°/sec
   k) Presets: 000~127(128 Presets)
   l) Remote Operation: Controlled via TCP/IP

3) **Enclosure**

   a) Enclosure Assembly: Part of pan tilt unit assembled at factory
   b) Temperature Protection: Standard with factory-installed defroster/defoggers, thermostatically controlled heaters, thermal insulation, and sun Shield
   c) Moisture protection: to be filled from within by dry nitrogen for prevention of condensation of moisture inside enclosure.
   d) Anti-Rust Anti Corrosion: Stainless Steel construction
   e) Viewing Window: thick optically clear tempered glass
   f) Camera and Lens Assembly: Installed in the enclosure at the factory
   g) Wiper: Heavy duty Wiper with washer reservoir
4) **Power**

a) Voltage: 120 VAC  
b) Power Consumption: Maximum 150 watt  
c) Operating Temperature: -40°F to 122°F  

**Camera Software**

A. IP-Surveillance software that works with supplied camera and pan, tilt, zoom unit to provide video monitoring, recording and event management functions upon a remote, networked Windows® based owner supplied computer. Software shall be capable of camera monitoring while at the same time record high quality digital video either continuously or on schedule, alarm and/or motion detection. Software offers easy ways to search for recorded events. The software shall have a multi-view playback feature that enables a user to view simultaneous recordings from different cameras to get a comprehensive picture of an event. Remote viewing and playback shall be possible with the use of a Web browser. The Windows® client shall also enables remote administration of the software and camera configuration. The software shall allow for scalability, with easy addition of licenses for up to 25 cameras. Specific software details are:

1. View and record live with 25 frames per second  
2. Scheduled and event driven recording  
3. Preset positions Pan/Tilt/zoom  
4. Control Zoom, Focus, IRIS, and 2X extender  
5. Control of PTZ camera  
6. Control Camera functions/setting  
7. Multi Remote viewing and control  
8. One client license required
Camera Image Stabilization

A. Video stabilizer that electrically corrects video shaking which occurs in a camera shall be supplied as follows:

1. Capable of correcting unsteady images in real time.
2. Capable of correcting live video.
3. Capable of correcting up to 40% in vertical/horizontal direction with respect to screen.
4. Correction accuracy measurable in sub-pixels is achieved.
5. Capable of setting Motion Detect Area for detecting motions in video to correct shaking.
6. Provides sub-pixel level correction precision.
7. Simple design—works just by connecting video cable without special connections.
8. Compact, DC operation.