FEATUERES

- Industry Leading Reliability
- Exceptional Long-Range Performance
- 640 x 480 Focal Plane Array
- FOV, f/# 4 Lens: .44°, .88°, 1.8°, 4.6°
- Auto and Manual Focus
- Auto Gain Control
- High Performance 1/3 Format HD Sensor
- Continuous Zoom 60x HD Lens
- Auto Exposure Control
- Fog Filter
- Full HD Capable with IP Option
- Multiple User-Defined Presets
- 2-Axis Gyro-Stabilization*
- Laser Rangefinder*

* Optional

VZ-1010

Extreme Long-Range Multi-Sensor System

The VZ-1010 is an extreme long-range electro-optical/infrared (EO/IR) multi-sensor system capable of detecting a man-sized target at over 25 km. This system is designed for ground-based defense and homeland security missions that require unparalleled reliability and top performance. For over a decade, this series has proven its value, utility, and reliability for border and maritime security.

The EO camera offers demonstrated capability to read license plates at 1.6km. Its cooled sensor technology captures precise target signatures in Mid-Wave IR, day or night and in color during daylight and transition. The VZ-1010 includes an integrated precision 2-axis positioning system with high reliability direct drive architecture. The laser range finder provides target distance data out to 20 Km or 30 km with an available upgrade.
**System Specifications**

**Video Format**
- SD NTSC/PAL/Differential (Standard)
- HD TCP/IP Video Encoder (Optional)

**Serial Interface**
- RS-422 or Ethernet with IP Encoder

**Power Input**
- 18-28 VDC (normal direct to P/T)
- 100-240 VAC or 12 VDC (with DCU)

**Environmental**
- Cameras sealed and dry nitrogen backfilled
- IP67 Certified
- Front Element Defroster

**Temperature Range**
- -32°C to +60°C, Operating
- -40°C to +71°C, Non-Operating

**Controls**
- Joystick (Optional with DCU)
- Via PC through an RS-232/422 link
- TASS and Pelco-D Protocols
- Proportional Pan & Tilt speed controls
- Field of View & Focus Slaving
- Visual / Thermal Zoom
- Focus (Auto/Manual)
- Auto Scan with 100 presets,
- Variable speed, dwell, & camera selection
- Optional TCP/IP Interface

**Weight**
- ~170 lbs. (77 kg)(Pan/Tilt Head Sensors)

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**Visible Camera Characteristics**

**Sensor**
- 1/3" Format HD
- 1944(H) x 1092(V) Effective Pixels

**Lens Type**
- Continuous Zoom 60x HD Lens
- EFL 16.7mm-1000 mm, 2000mm with 2x
- Motorized Focus
- DC Iris Control
- Fog Filter
- Standard Definition PAL/NTSC
- Full HD Capable (With IP Option)

**Optical Zoom**
- 60X plus 2x extender

**Field of View**
- SD: 13.5" x 10.3" (Wide) to 0.11" x 0.09" (Narrow)
- HD: 18.2" x 10.3" (Wide) to 0.15" x 0.09" (Narrow)

**Resolution**
- Horizontal Resolution > 800 TV lines

**Min. Illumination**
- 0.2 lux (F1.2 AGC:48dB,
- Gamma: High, SENS UP: OFF)
- 0.007 lux (F1.2 AGC: 48dB,
- Gamma: High, SENS UP: x 60)

**Signal to Noise**
- SNR > 50dB

**Features**
- Automatic Integrated Exposure Control
- Scene Files
- Auto or Manual Focus
- Standard Definition and High Definition (IP Option) Outputs

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**Thermal Camera Characteristics**

**Detector**
- 640 x 480 HOT

**Cooler**
- Long Life Linear Stirling (>25,000 hour MTTF)

**Spectral Band**
- MWIR 3-5 µm

**Lens Type**
- Motorized Quad Step Zoom (1000/500/250/95mm EFL)
- Motorized Focus
- f/# 4

**Optical Zoom**
- 10.5x Quad Step

**Field of View**
- 4.6° x 3.5° (Extra Wide)
- 1.8° x 1.3° (Wide)
- 0.88° x 0.66° (Mid)
- 0.44° x 0.33° (Narrow)

**Features**
- Multimode Automatic Gain and Level Control
- Manual Gain and Level Control
- High Sensitivity Mode
- Integration Time
- Multiple Color Palettes
- Inverse Polarity
- Auto and Manual NUC
- Auto and Manual Focus
- Digital Zoom 2X

**Laser Ranger Finder**
- Laser: Class 1, Eye Safe per ANSI/IEC
- Wavelength: 1.5 µm
- Range Accuracy: 5 meters
- MAX Range: 20,000 or optional 30,000 meters

**Pan/Tilt Head**
- Mechanism: DC Brushless Direct Drive
- Pan Range: 360° Continuous, Mechanical and soft limits optional
- Tilt: ±60°, Mechanical and soft limits optional
- Accuracy: 0.05°
- Repeatability: 0.01°
- Position Rate: Pan < 0.01° to >120°/second
- Tilt < 0.01° to >120°/second

*Manufacturer reserves the right to change specifications to reflect latest changes in technology and improvements at any time without notice. Export is subject to US Government regulations.*