Aspect Technology's Gen III Thermal Sentinel is the ultimate thermal vision advantage for demanding applications. Thermal Sentinel is an uncooled 7-14um camera with 320 x 240 pixel resolution. Thermal Sentinel uses proven Amorphous Silicon Microbolometer detectors with state-of-the-art thermal sensitivity and dynamic range imaging technology. Rated as the Best-in-Class Image Quality due to Advanced Histogram-Based Image Processing producing 640 x 480 quality thermal imaging video output. The Thermal Sentinel System is designed for rough and demanding operation. It delivers high performance digitally processed imagery in a lightweight rugged weather and corrosion protective enclosure, guaranteeing the best target detection and clearest image of objects in total darkness and in all types of weather conditions. Whether the application is military, security, surveillance, oil spill detection, mining or search and rescue, Thermal Sentinel offers a distinct advantage that no other type camera can provide. Its metal housing offers reliable weather protection and corrosion resistance and its bright 8.0 inch LCD display with remote control offers 307,200 pixel resolution. Thermal Sentinel combines impressive performance with Aspect Technology's reliability and ease of use, making it one of the most effective thermal imaging cameras currently available. Its time proven uncooled detector technology offers thousands of hours of maintenance free operation.

System Equipment Includes:
- Weatherproof Thermal Sentinel Camera with choice of field of view
- Weatherproof Pan-Tilt Unit
- Pan-Tilt Control Box
- 8 Inch Flat Panel LCD Display
- 20 ft Weather Sealed System Cable (custom lengths available)
- Magnetic Mount
- Instruction Manual

Thermal Sentinel Mobile Thermal Imaging Systems

- Best-In-Class Thermal Imaging Technology
- Corrosion and Weather Protected Enclosure and Connectors
- Automatic and Manual Camera Control
- Accurate Variable Speed Pan-Tilt Unit
- Remote Pan-Tilt and Camera Control Joystick (for gunner)
- Dual High Resolution 8 inch LCD Displays with Remote Control
- Single System Cable Interface Between Camera and Control Units
- Fused Component Protection with Blown Fuse Indicators
- Simple User Friendly Point-and-View Operation
**SPECIFICATIONS**  Subject to change without notice

**CAMERA**

**Physical**
- Dimensions: 10.5" L x 5.25" W x 7.0" H
- Weight: 6.25 lbs (with 50mm lens)
- Mounting Provisions: Standard Camera Mount and Tripod Mount
- Enclosure: Weather Sealed With Baked and Chemically Cured Coating That Provides Maximum Resistance To Severe Corrosive Environments Such as Acids, Alkalis and Salt Spray, Resistant To Marrin, Chipping, Weathering and Solar Exposure
- Hard Carbon Coated IR Lens/Window Resistant to Corrosive Alkali, Acidic and Salty Environments

**Environmental**
- Operating Temperature: -20°C to 85°C
- Storage Temperature: -40°C to 105°C
- Operating Humidity: 0-95 Percent Non-Condensing
- Environmental Enclosure (NEMA 4X)

**Electrical**
- Input Power: 8 – 32 VDC
- Power Consumption: ~2.0 watts (typical)
- Reverse Polarity Protection

**Interfaces**
- Mil-Spec Connectors for Video and Power to Camera and Video Display
- Electronic Power/Video/Pan/Tilt Control Box
- Optional Camera Control Box (provides polarity and digital zoom control)

**Performance**
- Detector Type: Uncooled Amorphous Silicon Microbolometer (320 x 240 Pixels)
- Pitch: 30.0 μm
- Spectral Response: 7 to 14 Microns
- Start-up Time: 2.4 Sec +/- 10% @25°C
- Thermal Sensitivity: <50mK
- Refresh Rate: Real-time 30Hz
- Contrast/Brightness: Automatic
- Operation Modes: White Hot/Black Hot (Optional Tri-Color Scene Colorization to Factory Set Absolute Temperatures)
- Optional Temperature Bar
- Optional Crosshair & Temperature Measurement Display
- Saturation Temperature: 1100°F/600°C +/-10%
- Optional Digital Zoom (1X to 11X)
- Output Resolution: 640 x 480 pixels for higher clarity thermal images

**PAN-TILT**

**Mechanical:** Cast and plate aluminum with all internal parts corrosion protected. Tilt shaft constructed of Type 304 stainless steel

**Electrical:** 12VDC 0.7 Amp (from control box)

**Environment:** Meets weather and dust-proof requirements for installation in salt-air environments. Meets NEMA 3R rating

**Pan Rotation:**
- 435° (+/- 217.5°)
- 1° - 23° +/- 1° per sec (variable speed)

**Tilt Rotation:**
- +/-90° in vertical plane
- 1° - 3° +/- .5° per sec (variable speed)

**Dimensions:**
- 9.12'(H) x 9.37'(W) x 5.24'(D)
- 23.2 cm (H) x 23.8cm (W) x 13.3 cm (D)

**Weight:**
- 13.1 lbs (5.94 kg)

**CONTROLLER**

**Pan/tilt Control:** Desktop or rack mount w/ remote joystick control

**Scan:** Variable speed

**Input:** 12VDC

**Output:** 12 VDC

**Dimensions:**
- 8.25'(W) x 12'(D) x 3.5'(H)
- 20.9 cm (W) x 30.48 cm (D) x 8.9 cm (H)

**Weight:**
- 5.5 lbs (2.49 kg)

**DISPLAY**

**Display Type:** TFT Flat panel LCD

**Resolution:** 640 x 480

**Screen Size:** 8.0" diag

**Dot Pitch:** 0.136 (W) x 0.416 (H)

**Dimensions:** 6 7/8" x 8 5/8" x 1 7/16"

**Power Source:** 12 VDC Nominal

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**Cameras System (Field of View)**

<table>
<thead>
<tr>
<th>Camera System</th>
<th>Field of View</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thermal Sentinel System 1</td>
<td>12deg</td>
</tr>
<tr>
<td>Thermal Sentinel System 2</td>
<td>25deg</td>
</tr>
<tr>
<td>Thermal Sentinel System 3</td>
<td>50deg</td>
</tr>
</tbody>
</table>

**System Number**

- Thermal Sentinel System 1: ATE/TS4512 – SYS
- Thermal Sentinel System 2: ATE/TS4525 – SYS
- Thermal Sentinel System 3: ATE/TS4550 – SYS

**Each System Includes:**

- Thermal Sentinel Camera
- Flat Panel LCD (8 inch Diag)
- Pan-Tilt Unit
- Pan-Tilt Control Box
- 20 ft Camera/Pan-Tilt System Cable

**Optional Equipment**

- Camera Control Box Kit: Control Box & Interface Camera Cable: ATE/TSCAMCTLBXK
- Magnetic Mount: ATE/MAGMNT

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Approximate Range Information (various factors affect actual range)

<table>
<thead>
<tr>
<th>Model</th>
<th>FOV (H x V)</th>
<th>Person Detect (3 Pixels)</th>
<th>Person Categorize (9 Pixels)</th>
<th>Object (Ship) Detect (3 Pixels)</th>
<th>Object (Ship) Categorize (9 Pixels)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATE/TS4550</td>
<td>~ 50 x 37.5 deg</td>
<td>~75ft (23m)</td>
<td>~258ft (79m)</td>
<td>~1291ft (393m)</td>
<td>~4300ft (1311m)</td>
</tr>
<tr>
<td>ATE/TS4525</td>
<td>~ 25 x 19 deg</td>
<td>~146ft (44m)</td>
<td>~488ft (150m)</td>
<td>~2441ft (744m)</td>
<td>~8133ft (2479m)</td>
</tr>
<tr>
<td>ATE/TS4512</td>
<td>~ 12 x 9 deg</td>
<td>~3330ft (1015m)</td>
<td>~1110ft (338m)</td>
<td>~55500ft (16916m)</td>
<td>~185000ft (5639m)</td>
</tr>
</tbody>
</table>

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