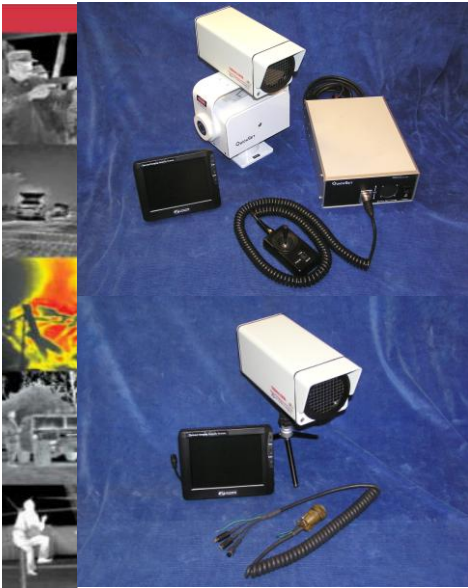


Thermal Viper 4500 Series

- 50 deg, 25 deg, 12 deg HFOV lens options available
- Proven Amorphous Silicon Microbolometer Detector Technology (30µm 320 x 240 pixel array) plus state-of-the-art thermal sensitivity and dynamic range
- Best-In-Class Power Consumption (~2.0W)
- Best-In-Class Image Quality (Advanced Histogram-Based Image Processing 640 x 480 video output)
- 30Hz Frame Rate State-of-the-Art Sensitivity & Dynamic Range
- Reliable Solid State Construction
- Ambient Temperature Operation
- Rugged Weather and Corrosion Protective Enclosure
- Mil-Spec Connectors
- Shielded Weather Protected Cable
- Pan/Tilt Control Box (optional)
- Polarity Switch for White Hot/Black Hot Operation (optional)
- Stainless Steel Window Protection Mesh (optional)
- Small and Light Weight
- Simple User Friendly Point-and-View Operation
- Stealth, Quiet Operation



The **Thermal Viper** thermal imaging system is designed for rough and demanding operation. It delivers high performance Digital Signal Processing imagery in a lightweight rugged weather and corrosion protective enclosure. The Thermal Viper features completely quiet point-and-view operation. Its specially coated enclosure offers maximum protection against weather and corrosive environments such as marine and corrosive gasses associated with petrochemical facilities.

Basic model is supplied with standard monochrome (gray scale) display in white hot mode where higher temperature objects appear whiter on the display. Contrast and brightness is automatic with advanced image processing. The Thermal Viper can also be factory set to display the following:

- Temperature Bar
- Temperature Measurement Display (with saturation temperature of 1100°F (600°C) +/-10% w/ automatic electronic iris)
- Crosshair Display (center point for temperature display)
- Scene Colorization (3 factory set color points can be mapped to absolute temperatures; temperatures below the first absolute temperature threshold and above the saturation point are shown as shades of gray)
- Digital Zoom (1 to 11X)

External user control can be provided with an optional Camera Control Box. External controls include Polarity (white/black hot modes) and Digital Zoom (1 to 11X).

APPLICATIONS

Military

The Thermal Viper's rugged, reliable, simple and quiet operation provides reliable thermal imagery for demanding military operations.

Public Safety

Protect officers while searching and pursuing suspects. Detect prowlers.

Search and Rescue

Spot lost and stranded boaters and accident victims. Navigate dangerous waterways. Respond to natural and man-made disasters.

Marine

Off Shore Oil Spills, Search & Rescue, Navigation

Security

Provide day/night visual surveillance. Protect critical infrastructure such as ports and waterways, nuclear power sites, and petrochemical facilities. Monitor perimeters to prevent intrusion.

Wild land and Fire Fighting

Provide the most efficient fire attack for wild land direct firefighting. Detect hot spots and see escape routes through darkness and thick smoke. Scan large areas for heat sources and flare-ups.

Industrial

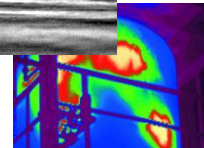
Perform thermal analysis to detect heat loss points in structures. Detect wet areas signifying possible water leaks in roofs. Perform preventive maintenance to identify possible component failure in electrical components and machinery.

Standard Equipment

- Thermal Camera with Enhanced Digital Video Processing
- Weather Sealed and Camera Enclosure with Corrosion Protective Coating
- Fully EMI Shielded Video/Power Cable (coiled cable; extends to 6')
- Operator manual

Optional Equipment

- High Definition TFT 6.4 inch Flat Panel Display
- Stainless Steel Mesh for Protection Against Rocks and Other Debris
- Weatherproof Variable speed Pan/Tilt Unit and P/T Controller
- Roof Bar Mount Kit
- Camera Control Box



ASPECT TECHNOLOGY & EQUIPMENT, INC

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Thermal-EYE

SPECIFICATIONS

Physical

- Dimensions: 8.375" L x 4.0" W x 4.0" H (excluding sun shroud)
- Weight: 3.4 lbs
- 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 Marring, Chipping, Weathering and Solar Exposure
- Hard Carbon Coated IR Window Resistant to Corrosive Alkalitic, Acidic and Salty Environments
- Stainless Steel Mesh for Lens Protection Against Debris (optional)

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 on Camera and Video/Power Cable
- Optional Pan-Tilt Kit (provides Pan and Tilt Control)
- 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 (with saturation temperature of 1100°F (600°C) +/-10% w/ automatic electronic iris)
- Optional Digital Zoom (1X to 11X)
- Saturation Temperature: 1100° F/600° C
- Output Resolution: 640 x 480 pixels for higher clarity thermal images

Model	FOV (H x V)	Person Detect (3 Pixels) (1.8m Tall)	Person Categorize (9 Pixels) (1.8m Tall)	Object (Ship) Detect (3 Pixels) (30m Tall)	Object (Ship) Categorize (9 Pixels) (30m Tall)
ATE/TV4550	~ 50 x 37.5 deg	~775ft (236m)	~258ft (79m)	~12917ft (3937m)	~4300ft (1311m)
ATE/TV4525	~ 25 x 19 deg	~1465ft (447m)	~488ft (149m)	~24417ft (7442m)	~8133ft (2479m)
ATE/TV4512	~ 12 x 9 deg	~3330ft (1015m)	~1110ft (338m)	~55500ft (16917m)	~18500ft (5639m)

Subject to change without notice

Please call for additional information

PAN/TILT/CONTROL

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°
speed) Tilt Rotation:	1° - 23° +/- 1° per sec (variable +/- 90° in vertical plane
speed) Dimensions:	1° - 3° +/- .5° per sec (variable 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)
Control	
Pan/tilt Control:	Desktop or rack mount w/ remote joystick control
Scan:	Variable speed
Electrical	
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:	960 (W) x 234 (H)
Screen Size:	6.4" diag
Dot Pitch:	0.136 (W) x 0.416 (H)
Dimensions:	5.31"(H) x 6.875"(W) x 1.1"(D)
Power Source:	12 - 24 VDC

CAMERA SYSTEM (Field of View)	SYSTEM NUMBER
Thermal Viper System 1 (12 deg)	ATE/TV4512-SYS
Thermal Viper System 2 (25 deg)	ATE/TV4525-SYS
Thermal Viper System 3 (50deg)	ATE/TV4550-SYS
EACH SYSTEM INCLUDES: Thermal Viper Camera Flat Panel LCD (8" Diag) Video/Power Cable (6' coil)	
OPTIONAL EQUIPMENT	
Pan-Tilt Kit: Includes PT Unit, PT Control Box with Remote Joy Stick, 20 ft Interphase Cable	ATE/TVPTK
Camera Control Box Kit: Control Box & 20 ft Interphase Camera Cable	ATE/TVCAMCTLBXK



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