

# NightConqueror 20µm Pitch for UAV

Date Revised: 27 JAN 04

## VENDOR DESCRIPTION

**The next generation of performance in infrared thermal imaging.**

The latest NightConqueror family of advanced thermal imaging modules, available in 3Q'04, enhances situational awareness...provides a common clear view of the battlespace...extends the reach of the warfighter – all at smaller size, weight, and power.

This developmental Thermal Imaging Module is ideal for gimbal sensor assemblies and Unmanned Aerial Vehicles in particular. The smaller pixel pitch reduces FPA size, making cooler and other components correspondingly smaller, lighter, and less power-thirsty. These properties are an ideal match with UAV and other high-end applications.

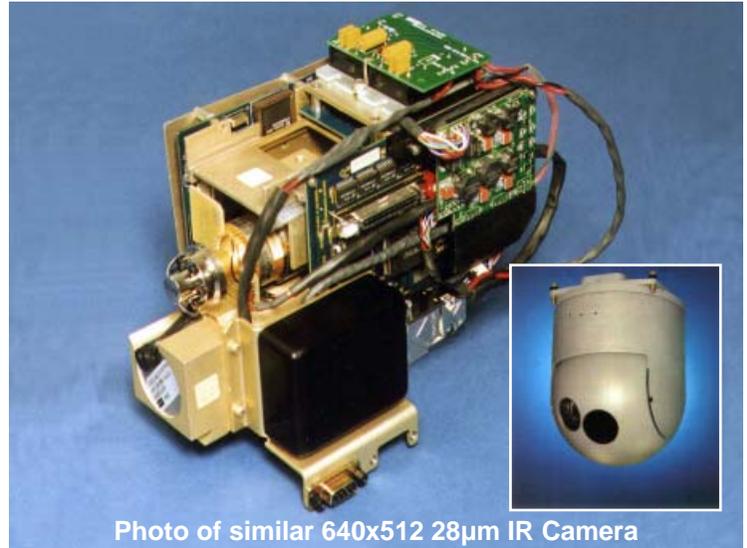


Photo of similar 640x512 28µm IR Camera

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Business Category: Large Business

All specifications subject to change.

PIR

Power Source		Environmental	
Sensors	10 W operation, 28VDC required	High Temp	+85°C (Storage) +45°C (Operating)
Supplemental Battery Box	Determined by system requirements	Low Temp	-55°C (Storage) -55°C (Operating)
Monitor	Determined by UAV (or other application) system's operation base design; a display is typically not located with sensor on UAV.	Altitude	10,000 ft (operating) 50,000 ft (transit)
		Humidity	95% relative humidity per MIL-STD-810E
		Immersion	N/A; passes Drip Proof and Rain 20"/hour (Typ. enclosed unit)
		Sand/Dust	Determined by enclosure selected
		Salt	48 hours exposure per MIL-STD-810E
		Fungus	Determined by enclosure selected
		Shock/Vibe	Random vibration, shock, cargo & drop test/MIL-STD-810E
		EMI/EMC	MIL-STD-461, Level CE101, CE102, RE101, RE102

Sensor	Description	Detection	Size/Weight	Features
Passive Infrared	Long distance thermal imaging using temperature differential between targets and background. 24-hour operation.  InSb 640x512 FPA for full video display resolution (RS-170, NTSC or PAL). Full digital output.  MWIR (3 to 5 µm) thermal band typically with CO <sub>2</sub> notch filter for ultimate long distance and high humidity performances.	Detection (Wide FOV) NATO Target 16.74 km  Recognition (Narrow FOV) NATO Target 4.44 km  Identification (Narrow FOV) NATO Target 2.31 km  Target Size & Delta Temp: - NATO Target (2.3 x 2.3m) = 1.25°C 50% Probability	7" x 8" x 4" Weight: <4 lbs  (Dimensions and weight include mounting adaptor plate. Lens is not included.)	<ul style="list-style-type: none"> <li>■ 640 x 512 FPA</li> <li>■ White &amp; black hot video</li> <li>■ AGLC (Auto Gain &amp; Level Control)</li> <li>■ Three FOV lens (typical)</li> <li>■ Electronic zoom</li> <li>■ RS-422/232 serial control</li> <li>■ Winter to tropic scenes</li> <li>■ 14-bit serial image data</li> <li>■ MRTD approx. 20 mK</li> <li>■ F/5 for minimum size, weight &amp; system cost (typical)</li> <li>■ Low lifetime sensor costs</li> </ul>