

THERMAL-EYE™



The Thermal-Eye Renegade-320

Multi-purpose Imager: Handheld, Weapon Mount, Tripod Mount
Product Description Document



communications

Infrared Products

"Cleared by DOD/OSR for Public Release Under 08-S-0376 on December 31, 2007."

See the Unseen™

Thermal-Eye Renegade-320



Product Description

The Thermal-Eye Renegade-320 is a versatile, multi-purpose and multi-use thermal imager intended for US domestic military and law enforcement markets for the purpose of:

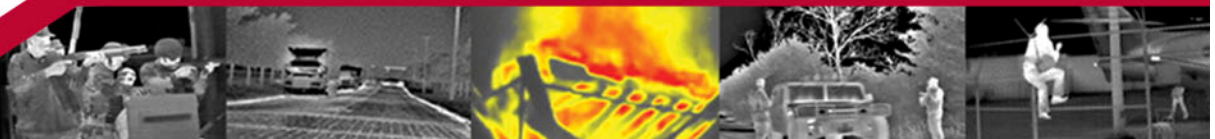
- Reconnaissance
- Fire direction and aim
- Covert missions
- Forward observation
- Law Enforcement

This Commercial Off-The-Shelf (COTS) offering has an **ITAR classification** – restricting international sales.

Specifications at a Glance

Material.....	a-Si
Resolution.....	320 x 240
FOV Alternatives.....	12°, 25°, 50°
Image Capture.....	70 images
Operation.....	3 hrs w/123 batteries(4)
Weight.....	32 oz
Mount.....	Picatinny Rail (MIL 1913)
Operating Temp.....	-4°F to 140°
Endurance.....	
.....	5,000 rounds of live fire
.....	48" drop (stand alone)
.....	24" drop (mounted)
.....	water immersion – 9 ft for 30 min
.....	water immersion – 3 ft for 120 min

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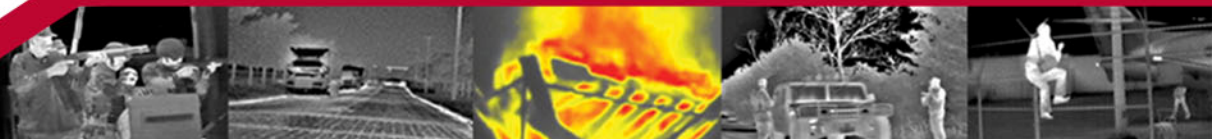


Product Description - Physical



Size	8.0 L x 2.5 W x 2.5 H inches* 20.3 L x 6.4 W x 6.4 H cm
Weight	32 oz. (680 grams) with 123 batteries installed
Mounting	Picitinny gun rail mount; ¼-20 tripod mount
Environmental	<p>Operating Temperature: -4°F to 140°F (-20°C to 60°C)</p> <p>Storage Temperature: -4°F to 176°F (-20°C to 80°C)</p> <p>Water Resistance: 9 ft (3m) submersion</p> <p>Shock Resistance: Shockproof to 4ft (1.2m) drop Shockproof to 2 ft (0.6m) on weapon</p> <p>EMC Compliance: FCC Part 15</p>

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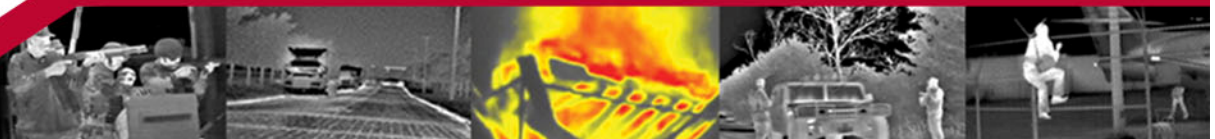
Product Description - Technical



Focal Plane Array	Material Amorphous Silicon Microbolometer Resolution320 x 240 Spectral Response..... 7-14µm Detector Thermal Sensitivity..... < 50mK
Optics	FOV Alternatives / Range to Detect Human Activity 50°750 ft 25 °1,500 ft 12°3,000 ft
Video/Image Capture	Output Format: Analog NTSC on rear outlet jack Viewfinder Dimming: User Adjustable Selectable/Adjustable Reticule USB download of 70 images max
Power	Power Source: 123 batteries (count: 4) Operating Time: 3 hours (77°F, 25°C Night Operation) Auxiliary Power: 9 to 12 VDC input on rear outlet jack



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Standard / Optional Equipment



The Renegade-320 Kit contains:

- Protective Carrying Case
- Four 123 Lithium Batteries
- Neck Lanyard & Hand Strap
- Lens Cover
- Lens Cleaning Cloth
- Tri-pod Mount
- User's Manual
- Quick Reference Card
- Soft Carrying Case
- Camera Interface Cable (three heads)
- Standard Picatinny Rail Mount

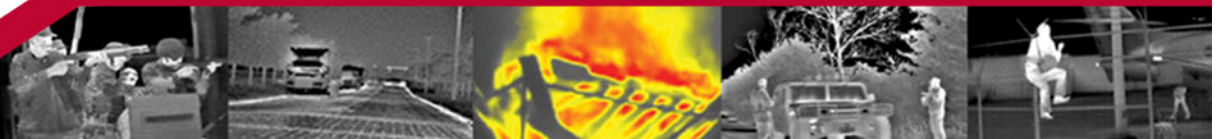


Renegade-320 Optional Accessories:

- Laser Pointer
- Shuttered Eye Piece

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Renegade-320 Value Proposition



- The Renegade-320 is intended for the rapidly deploying US military in need of 1) a hand held thermal imager and 2) the ability to mount the imager to a weapon or tripod.
- The Renegade-320 brings an adaptable thermal imager to the COTS portfolio:
 - COTS availability assures short production/delivery lead times
 - COTS disposable batteries ease field logistics and support supply chain concerns
- A rich feature suite delivers image quality in combination with long range detection and targeting.
 - Field of View options support close quarters combat and urban recognizance requirements
 - Size and weight support man portability and covert missions
- Tripod mounting and auxiliary power input support long term covert surveillance operations.
- Optional laser pointer and eye-cup allow user to make accessory selection based on unique demands

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