

c2023 v1

RAPTOR[™] Border Security





Features

- Human detection up to 12 km (radar) and 20 km (EO/IR)
- Vehicle detection up to 32 km
- Human identification up to 6 km
- EO/IR automatic slew-to-cue
- User-defined radar scan up to 360°
- System can be deployed in one hour
- Field replacement of components in under two minutes without tools
- Configurable size, weight, and power (SWaP) to match fixed and mobile operational requirements
- Control and output from all sensors integrated into a single screen
- Point-and-click interface requires only one operator and is easy to learn
- Ruggedized, portable command station available

Export of these systems is ITAR-controlled pursuant to 22 CFR 120-130. U.S. Department of State licensing is required prior to shipment.



RAPTOR[™] Configurations

Representative systems shown. Additional system configurations are available to address particular use cases.			
	RAPTOR™ LT	RAPTOR™ MX	RAPTOR™ XR
Capabilities	Detection ranges will vary based on sensors and environmental conditions.		
Detection Range		20 km	30 km
Technical			
Radar	 User-definable horizontal coverage up to 360° Ku band pulse-Doppler, 55° vertical FOV Rotation/update rate up to 1 Hz Laser rangefinder (optional) 		
Infrared sensor	Cooled MWIR640 x 480 (standard definition)	Cooled MWIR640 x 480 (standard definition)	Cooled MWIR1280 x 1024 (SVGA)
Infrared optics	 40–825 mm f/4 Horizontal FOV 13.7° to 0.7° 	 60–900 mm f/4 continuous zoom Horizontal FOV 9.2° to 0.61° 	 100–1200 mm f/4 continuous zoom Horizontal FOV 7.3° to 0.61°
Visible sensor	 640 x 480 CMOS (std definition) Minimum sensitivity 0.009 lux (≈ night with quarter moon) 	 640 x 480 CMOS (std definition) Minimum sensitivity 0.009 lux (≈ night with quarter moon) 	 1920 x 1080 CMOS (full HD) Minimum sensitivity 0.001 lux (≈ illumination only by starlight)
Visible optics	 3.4–122.4 mm (36x) cont. zoom Horizontal FOV 57.8° to 1.7° Auto focus 	 20–800 mm f/4 continuous zoom Horizontal FOV 27° to 0.7° Auto focus 	 20–800 mm f/4 continuous zoom Horizontal FOV 22° to 0.55° Auto focus
Positioner	 Coverage 360° pan and ±90° tilt Maximum pan/tilt speed 100°/sec, ensuring slew-to-target in under 2 seconds Minimum pan/tilt speed 0.002°/sec, equivalent to 0.6 km/hr at 5 km Zero-backlash drive train for maximum precision and accuracy (±0.009° or better) Tool-free and cable-free payload attachment and removal 2-axis gyro stabilization (optional) 		
Control	Available with either serial or IP control architecture		IP architecture only
Physical			
Power	Normal operation kW @ 120 VAC Max (fully heated) kW @ 120 VAC	Normal operation kW @ 120 VAC Max (fully heated) kW @ 120 VAC	Normal operation kW @ 120 VAC Max (fully heated) kW @ 120 VAC
Mounting	1.8 m high on tripod	6 m high tower on trailer	18 m high on mobile tower(s)
Weight	91 kg, plus tripod	101 kg, plus trailer & tower	113 kg, plus tower
Temperature	-40 °C to +60 °C (operational) / -46 °C to +85 °C (storage)		
Ratings	IEC components ≥IP66, MIL-STD-810F/G, MIL-STD-463, 1000-hour ASTM B117, ≥30000-hour MTBCF		
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