

GRYPHON R1810

MULTI-MISSION/DOMAIN RADAR

Long range surveillance of **air, ground & sea targets** with **fire-control accuracy**

The *Gryphon*™ R1810 radar is a single-panel, 3-D, fully active electronically scanned array (AESA) fire-control and multi-mission surveillance radar that delivers exceptional range, accuracy and threat discrimination in a highly compact form factor. The R1810 is part of the *Gryphon* family of radars that use the same advanced hardware, software and signal processing architecture.

With twice the power-aperture and more precise track accuracy of the *Gryphon* R15xx radar series, the *Gryphon* R1810 enables earlier threat detection, longer-range engagements, and reliable tracking of both agile airborne targets and high-speed munitions. Its advanced Extended Kalman Filter and Interacting Multiple Models tracker provide extremely precise target coordinates and high-update-rate tracking necessary for closed-loop fire control missions, including counter-UAS, SHORAD, counter-RAM and convoy protection.

The *Gryphon* R1810 simultaneously detects and tracks manned and unmanned aircraft systems, ground vehicles, personnel, watercraft and rocket, artillery and mortar threats. Its AI-based target classifier reduces operator workload by accurately distinguishing aircraft, small airborne systems, ground targets and maritime threats, even in cluttered environments.

Designed for ultimate flexibility, the *Gryphon* R1810 can be mounted on tripods, towers, mobile platforms or integrated with weapon systems.

Delivering high-end fire-control performance in a compact single-panel configuration, the *Gryphon* R1810 is the ideal solution for customers seeking an affordable, precise and rapidly deployable radar capability across air, ground and maritime defense missions.

The *Gryphon* R1810 serves as the foundational element of the multi-panel R1840, which connects multiple R1810 panels together to achieve full 360-degree hemispherical coverage and maximum long-range performance.

APPLICATIONS

- Air surveillance
- Counter-UAS (including swarms)
- Short-range air defense (SHORAD)
- Fire control
- RAM detection and counter-battery
- Ground surveillance
- Maritime surveillance
- Border and coastal security
- Cueing for weapon systems
- Sensor and camera cueing
- High-clutter operations



**THE GRYPHON R1810 RADAR
DETECTS, TRACKS AND
CUES INTEGRATED WEAPON
SYSTEMS FOR LONG RANGE
PRECISION EFFECTS**



ABOVE: A rendering of the *Gryphon* R1810 radar.

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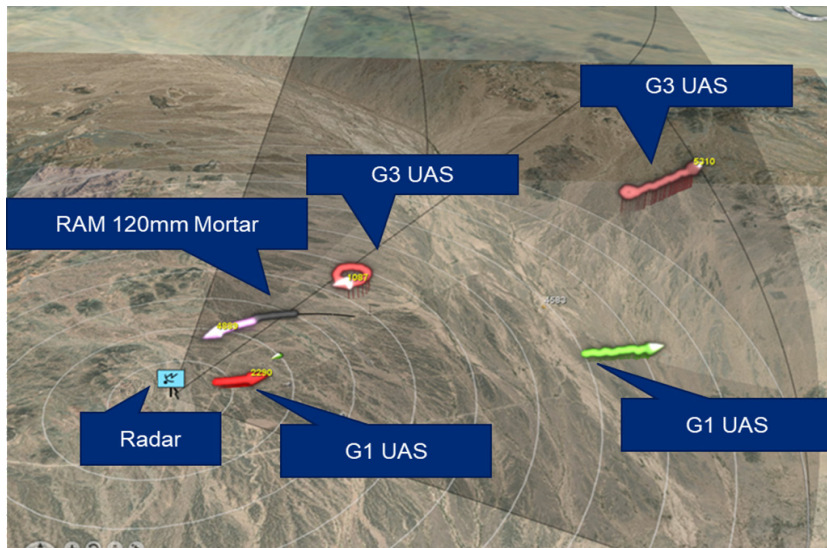
MULTI-MISSION/DOMAIN RADAR

BENEFITS

- High accuracy fire-control performance
- Enhanced range and sensitivity
- Simultaneous multi-domain tracking
- AI-supported target classification
- High update-rate precision tracking
- Integration with a wide range of effectors
- Compact single-panel flexibility
- Reliable performance in harsh environments
- Built-in GPS/INU makes for easy emplacement and accurate operation
- Integrated logistics support

SPECIFICATIONS

- Size: 106.9cm x 86.4cm x 46.9cm (42.1in x 34in x 18.1in)
- Weight: 148 kg (325.6 lbs)
- Input power: 6 kw
- Detection range
 - 21.6 km (13.4 mi) for small UAS
 - 49.4 km (30.7 mi) for large UAS
 - 41.9 km (26 mi) for single person
 - 57.9 km (36 mi) for small vehicles and boats
- Azimuth coverage: 90°
- Elevation coverage: 90°
- Operating frequency: X band
- Operating temperature: -40° C to +49° C
- Designed to meet Mil-STD-810 and Mil-STD-461



FEATURES

- 3-D AESA radar with fire control accuracy
- High accuracy tracking
- AI-supported classification
- Interfaces:
 - ASTERIX, RES, TCUT, SAPIENT
- C2s:
 - FAAD, Lattice, IBCS, MSCT, MEDUSA, Vigilant Halo, AFATDS and more
- Open architecture
- Flexible mounting (tripod, tower, vehicle)
- Effector and sensor cueing (weapons, EW, EO/IR)
- Air-cooled, non-rotating design
- Tracks 1,000+ targets, such as swarms, simultaneously
- Electronic protection against interference and jamming
- Advanced 3-D user display with pan & zoom features
- Automatic data recording with playback
- Built-in test for automatic fault detection & Isolation
- Integrates with cameras, weapon systems, and other sensor systems



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