

## HIGH-ENERGY LASER

# More than ready. Revolutionary.



### Fills critical gaps in existing air defenses.

- Rapidly detects, tracks, identifies and defeats swarming, asymmetric threats
- Plug & play with existing radar and C2 systems (including FAADC2, NASAMS Fire Distribution Center)
- 360-degree protection all day and all night for high-value military and civilian assets with minimal risk of collateral damage

### Scalable power and configurable for the mission.

- Modular architecture for stationary or mobile platforms
- End-to-end weapon system, optional radars & jammers
- Rechargeable: Never runs out of ammo. No logistical supply chain required.
- Operated by one person
- Military transportable
- Sets up in hours

### Proven and ready.

- U.S. factory production and global sustainment
- Built on Multi-Spectral Targeting System (> 4 million operational hours)
- Rapid, effective training qualifies users in days
- Ruggedized with 25,000 operational hours in combat environments
- MTBFs of 4,000+ hours

### Easy to operate. No matter the mission.

Our laser weapons deliver proven power in an intuitive package built around the user and the mission. Our deep mission and integration expertise ensures soldier-operated technologies that are easy to operate, no matter the conditions, mission needs, or operational environment.



Single User Human-Machine Interface (HMI)

### Concept of Operations

- 1 Remote hosting operation (up to 15km) on ruggedized laptop for target detection, engagement, surveillance and system monitoring
- 2 Programmable "no-shoot" zones are user configurable to ensure safe operations
- 3 Receives slew-to-cue from radars, surveillance sensors or battle management network
- 4 Automated target tracking; Operator selects aimpoint on target to maximize effectiveness
- 5 Target illuminator enables high-fidelity optical track day or night in challenging real-world conditions
- 6 Operator fires HEL to defeat targets in seconds



▲ 15kW palletized system



▲ 15kW configured for tactical vehicle



▲ 50kW configured for Stryker®



▲ Configured for Apache helicopter

## Scaled to the threat.

### High-Energy Laser



15kW

50kW

#### Performance/Specification

	15kW	50kW
UAS Targets (Group)	I, II	I, II, III
Additional targets	–	Rockets, artillery, mortars
Onboard radar & C2	Optional	Optional
Offboard radar & C2	Compatible	Compatible
Onboard EO detect	Yes	Yes
Track in open sky	Yes	Yes
Track in ground clutter	Yes	Yes
Max. Detect Range [km]	BVR*	BVR
Defeat Range [km]	BVR	BVR
HEL Power [kW]	15	50
HEL Battery Magazine [rechargeable]	180 sec	120 sec
Surveillance, Battery [hours]	8	8
Max. Slew Rate [rad/sec]	3.0	3.0

\*BVR, Beyond Visual Range

### Specifications

15kW System	Kilos	LxWxH (meters)
Beam Director	70	.5x.5x.5
Laser Module	310	1.5x1x.5
Laser Power Module	150	1x.5x.25
Thermal Module	130	1x.5x.5
System Power Module	100	1x.5x.25

50kW System	Kilos	LxWxH (meters)
Beam Director	135	.75x.75x.75
Laser Module	1,150	1.5x1x1.5
Laser Power Module	540	1.5x.75x1.5
Thermal Module	950	1.5x2x1
System Power Module	500	1.5x1.5x.5



▲ Raytheon has invested hundreds of millions of dollars in production capacity. HEL systems are in low-rate production in Texas today.