



DATA SHEET:

FIREFLY™

A next-generation, self-contained, palletized high-energy laser system that maximizes performance, reliability, maintainability and transportability.



Hostile or undesired events across the globe remind us that real-world threats can be found around practically every corner. And with the spread of small, low-cost-yet-capable unmanned aircraft systems (UAS), the U.S. government and private sector need a quick and sophisticated way to identify, classify and destroy any asymmetric threats to forward positions and key infrastructure. KORD's FIREFLY™ high-energy laser (HEL) weapon system, a self-contained directed energy solution, offers the latest in directed energy protection, no matter where defense is needed.*

THE FIREFLY™ ADVANTAGE

The FIREFLY™ is based on KORD's scalable high-energy laser architecture and is available in 10kW or 20kW options. The fully self-contained laser system includes power supply, thermal management, high-capacity batteries, and integrated radar and electronic warfare subsystems with significantly reduced size, weight, power, and cost affordability. Area protection is provided by advanced artificial intelligence (AI) detection and tracking algorithms which enable the operators to successfully detect, track, intercept and defeat incoming UAS threats at standoff ranges. This cutting-edge HEL system leverages a proven technical approach by employing subsystem hardware technology, complex weapon system level integration, integrated support equipment and a command, control and communication system (C3S).

- **Next-Gen Capabilities:** KORD provides next-generation HEL capabilities and lethality by packaging the subsystems into a modular Line Replacement Unit (LRU) design with open interfaces to maximize reliability, maintainability, transportability and ease of upgradability.
- **The Laser Advantage:** The FIREFLY™ system has an extended magazine depth and long, continuous laser-on-time. Its sensor payload has an independent camera system to enhance target-tracking effectiveness at extended ranges. The FIREFLY™ laser payload includes a simplified optical design for ease of use and is detachable for maintenance and transportability.
- **Countering Threats:** FIREFLY™ provides impressive flexibility and counter unmanned air systems (C-UAS) employment options in fixed, semi-fixed and mobile configurations. It is designed to easily and cost-effectively integrate with a limitless range of civilian and military vehicles or containers, which enables customers to arrange and employ the systems in a stand-alone setup or with multiple, integrated FIREFLY™ systems.

KORD has committed significant Independent Research and Development (IRAD) investments to build a state-of-the-art Directed Energy Center of Excellence and added, key personnel to directly accompany these efforts. KORD's focused investments have resulted in the design, development and delivery of a self-contained HEL weapon system. FIREFLY's robust capabilities can aid a vast array of civilian, commercial, government and military operational scenarios and locations including military bases, convoys, airports, VIP protection, outdoor venues, high-value targets, and key infrastructure and facilities.

KEY FEATURES

- 10kW or 20kW configurations
- >30mins magazine depth
- AI assisted target recognition
- 360° azimuth coverage
- VIS / SWIR / MWIR cameras
- High power target illuminator
- Eye-safe laser range finder
- Available Ka-band RADAR
- Compatible with FAAD, MEDUSA

DESIGN

- 463L pallet compatible
- Modular LRUs for multiple configurations
- Shoot on the pause capable
- Day / night operation
- -20°C to +50°C operation with full solar
- -40 °C to 85 °C storage
- IP56 environmental protection
- 3P208AC compatible

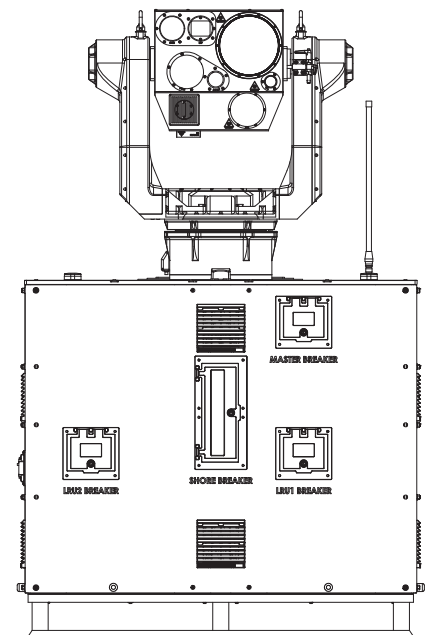
WHY KORD?

As a leading government and private sector defense contractor, KORD possesses a recognized, industry-leading Directed Energy (DE) capability that is one-of-a-kind. KORD's directed energy team has built and enhanced its capabilities while leading the U.S. Army's proof of concept and the development of its first fieldable high energy laser weapon system. KORD's unique collection of DE subject matter experts boasts extensive backgrounds in electro-optics, software engineering, artificial intelligence and machine learning, predictive avoidance, systems engineering and systems integration.

NEXT STEPS

Contact us to learn more about the FIREFLY™ system and KORD's scalable high-energy laser architecture at kevin.moore@us.kbr.com.

Description	Capability
HIGH ENERGY LASER	
Power	10 kW, 20 kW
Wavelength	1030 nm – 1080 nm
Aperture	100 mm
Operation	CW
Safety	Class IV
CAMERAS / OPTICAL	
Visible	1280x1024 @ 100Hz
SWIR (0.7um - 1.7um)	640x512 @ 400 Hz, TEC
MWIR (3.6um - 4.9um)	1280x1024 @100Hz, cooled
Beam director slew rate	200 degrees/s2
Beam director FOR	360o AZ, +90o, -45o EL
ELECTRICAL / THERMAL	
Magazine Depths	>40mins
Fluid	30/70 EGW
Charging	3Φ208 100A
MECHANICAL / ENVIRONMENTAL	
Dimensions (inches)	50.1 x 49.7 x 77.9
Weight (lbs)	<1500
Operating Temp (Storage)	-20° (-40°) to 50° (85°) C
Rain/Dust	IP56
INTEROPERABILITY	
C3S Supported	FAAD, MEDUSA
External Interfaces	ADSB, TLE-3



ABOUT KORD - A KBR COMPANY

KORD, a wholly owned subsidiary of KBR, is an integrated aerospace and defense company — connecting with customers and partners to create results in a fast-changing world. KORD provides an extensive portfolio of cyber, aerospace, defense technology, and integrated logistics and lifecycle solutions. We cultivate a diverse, skilled workforce adept at leveraging and integrating technologies to produce game-changing results.