



Credit: U.S. Army



Credit: Redstone Test Center



Credit: Department of Defense

RIWP[®]

RECONFIGURABLE
INTEGRATED-WEAPONS PLATFORM

PROVEN CAPABILITY AND CAPACITY TO HOST MAXIMUM MULTI-DOMAIN LETHALITY PAYLOADS

RlWP is a proven, modular, and scalable remote turret providing unmatched capacity to host multi-domain payloads for current and future ground-combat platforms. It offers air defense, anti-armor, or multi-mission capabilities via world-class precision medium-caliber and indirect fires.

Designed to be weapon, sight, and platform agnostic, RlWP accommodates firepower growth to support future mission requirements. With survivability in mind the turret allows the warfighter to reload while under armor. The below illustration depicts popular configurations to meet the full spectrum of turret-related missions with the RlWP Base Assembly being the centerpiece to build tailorable and reconfigurable “plug-and-play” weapons solutions.



RIWP ADVANTAGES



PROVEN CAPABILITY

RlWP is the centerpiece for the Army's Maneuver Short Range Air Defense Increment 1 (M-SHORAD, Inc 1) program, the Army's mobile Counter-Unmanned Aerial Systems (C-UAS) program, and is supporting numerous other government operational needs.

FIELD RECONFIGURABLE

RlWP allows for pre-planned mechanical, electrical, and software interfaces to support the swapping of payloads. Payloads can be changed in minutes with organic maintenance personnel and minimal lift capability.



SURVIVABILITY

RlWP's design allows the warfighter to reload the direct fire weapons from inside the vehicle under full armor protection. Options for add-on armor are available.

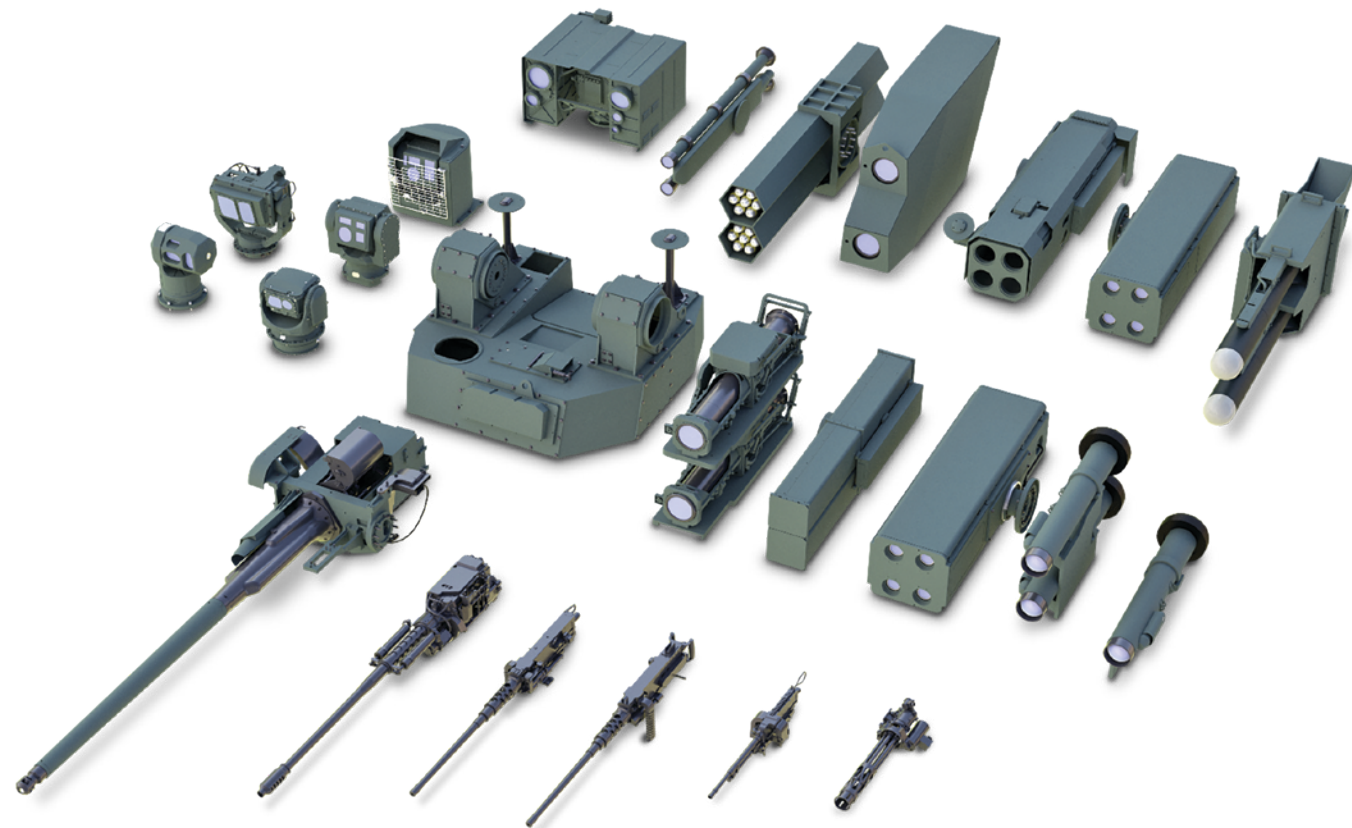
COMMONALITY

The RlWP family of turrets shares 85% commonality of subcomponents with all configurations thereby minimizing logistical footprint size and sustainment costs, maximizing training efficiency, and reducing total cost of ownership.



PAYLOAD AGNOSTIC

RlWP has the ability to support a wide range of weapons and sights. RlWP can be built to fit your mission's purpose from air defense, anti-armor, to multi-mission situations. It can be fully customized and reconfigured in the field. Build your RlWP with current payloads today, knowing this remote weapon station can accommodate firepower growth to support future mission needs.



DIRECT FIRE CAPABILITIES

The RlWP is designed for reload under armor for direct fire ammunition to allow for continuous fire.

Primary armament (100-250 ready rounds typical)	.50 cal: M2
	25mm: M242
	30x113mm: XM914
	30x173mm: Mk44, XM813
Secondary armament (250-500 ready rounds typical)	5.56mm: M249
	7.62mm: M240, M134
	.50 cal: M2
	Grenade launcher: Mk19

SIGHT CAPABILITIES

RlWP features independently stabilized sights for both gunner and commander. Sights can be armored for additional protection.

MX-GCS	IBAS
RV-TAS	PASEO
S3	PAAG

MISSILE CAPABILITIES

Missiles on the RlWP are reloaded under partial cover from vehicle hatch for added protection.

Stinger	Brimstone
StarStreak HVM	JAGM
Coyote	Mistral
SPIKE ER2	MMP
TOW	TALON
Javelin	70mm rocket (APKWS)
HELLFIRE	LMM
DAGR	Other laser guided missiles

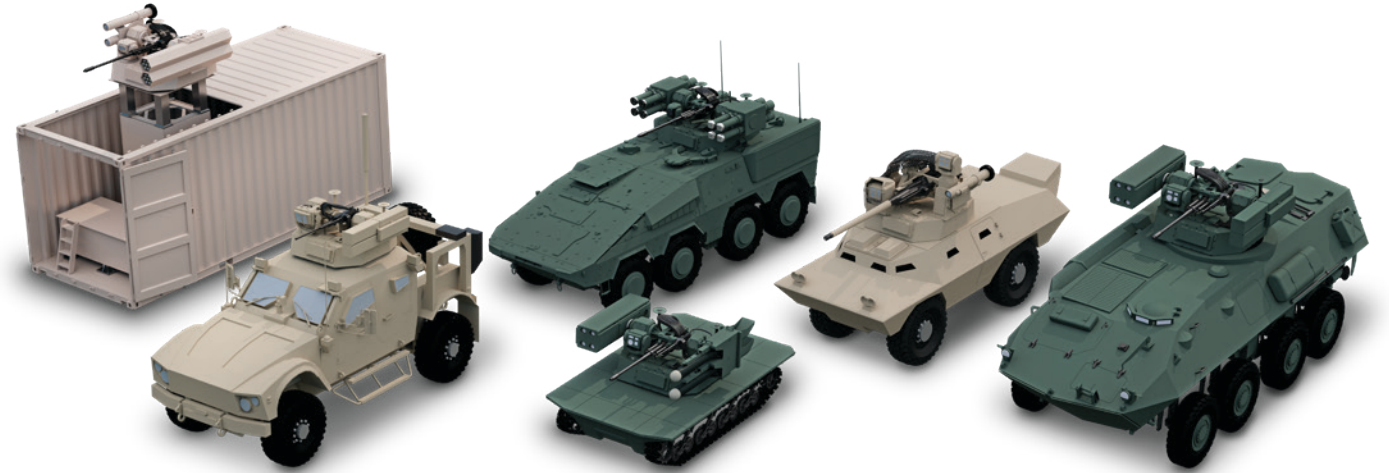
ADDITIONAL PAYLOADS

RlWP has the ability to integrate additional payloads outside of direct fire and missile capabilities.

Direct radar integration	Laser dazzler/designator
Tethered and untethered drone integration	Situational awareness camera
Directed Energy (DE)	Passive sensors
Electronic warfare effectors, including Counter-UAS defeat	Shooter detection system
Meteorological sensor	Smoke/projectile grenades
	Other non-lethal effectors

PLATFORM AGNOSTIC

RlWP can be easily integrated both mechanically and electrically onto the majority of tactical and fighting vehicle platforms using the standard RlWP Base Assembly. The unique design allows for multiple direct fire, missile, sight, and other payloads all on the same system increasing platform firepower and effectiveness.



RlWP has the ability to integrate onto a range of vehicles and other platforms used by the warfighter. This combined with the ability to carry multiple payloads gives the warfighter mission overmatch.

- Wheeled vehicles such as Stryker, MATV, MRAP, JLTV, Boxer, and Commando
- Tracked vehicles such as AMPV and M113
- Robotic combat vehicles
- Containerized platforms

PROTECTION

The RlWP offers base armor up to STANAG Level III for crew compartment with vehicle design. Sights and missiles can also be up-armored for additional protection.



Credit: Leonardo DRS

SYSTEM CAPABILITIES

RlWP has the ability to integrate many key capabilities:

- Full mission equipment capability
 - C2 integration to fire control
 - Direct radar integration to fire control
- New operational structures
 - Fiberoptic/Ethernet capabilities
 - Remote control capabilities
 - Hunter/Killer targeting system
- Slue-to-cue capabilities
- PABM rounds
- IFF integration to fire control
- Smoke/projectile grenades
- Next level system equipment
 - RlWP's easily reconfigurable platform allows for easy integration of future capability requirements
 - Non-line of sight tracking

FIRE CONTROL SYSTEM

RlWP's proven and tested weapons system solution provides highly accurate sighting and firing allowing gunners to engage targets under all operational scenarios; stationary/stationary, moving/stationary, stationary/moving, and moving/moving without halting to set, after receiving a cue from an on-board or off-board sensor.

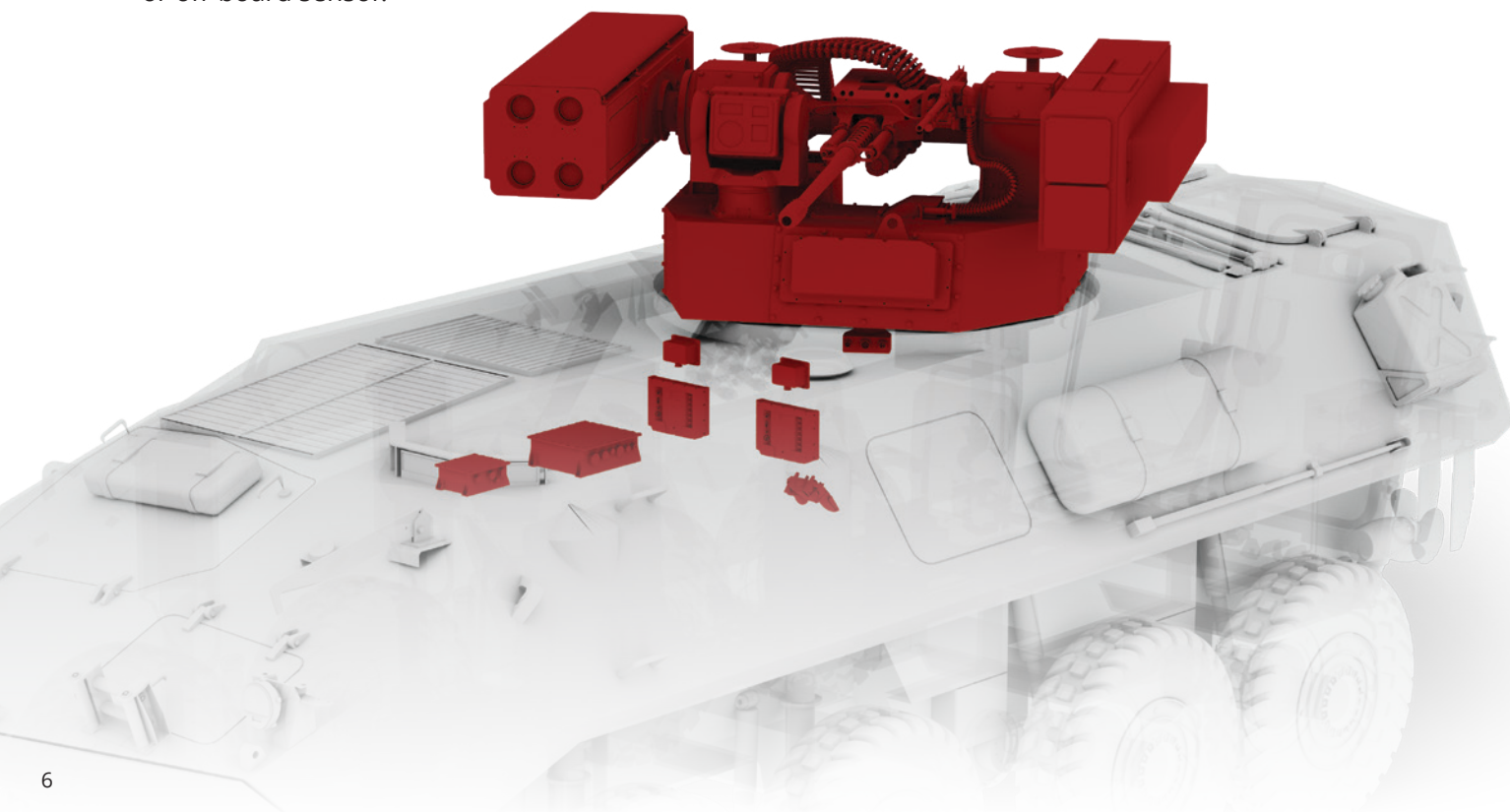
TARGET ACQUISITION SYSTEM

RlWP's sensors and cameras allow for a large array of capabilities:

- Cameras with significant detection, recognition, and identification
 - EO/IR camera
 - Optical camera
 - HD day camera
 - HD thermal camera
- Broad range of Field of View's (FOV's)
 - Panoramic FOV's
 - Ability to switch between FOV's during operation
- Autoscan capabilities
- Laser range finder/laser designator
- High accuracy gimbal stabilization
- Meteorological sensor inputs

WEAPON CONTROL SYSTEM

Features	Specifications	
	Azimuth	Elevation
Range	360° continuous rotation	-20° to +60° (optional +80°)
Minimum speed	0.15 mrad/s	0.20 mrad/s
Maximum speed	1 rad/s	
Acceleration	1 rad/s ²	
Firing stability	≤ 0.3 mrad (10)	
Backup	Manual (degraded performance alternative)	



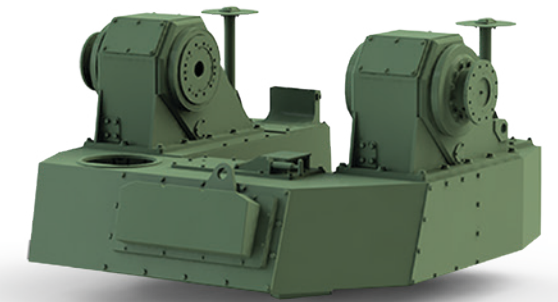
INTERFACE INFORMATION

ELECTRICAL INTERFACE

RlWP operates on a 28 VDC supply per MIL-STD-1275.

POWER REQUIREMENTS

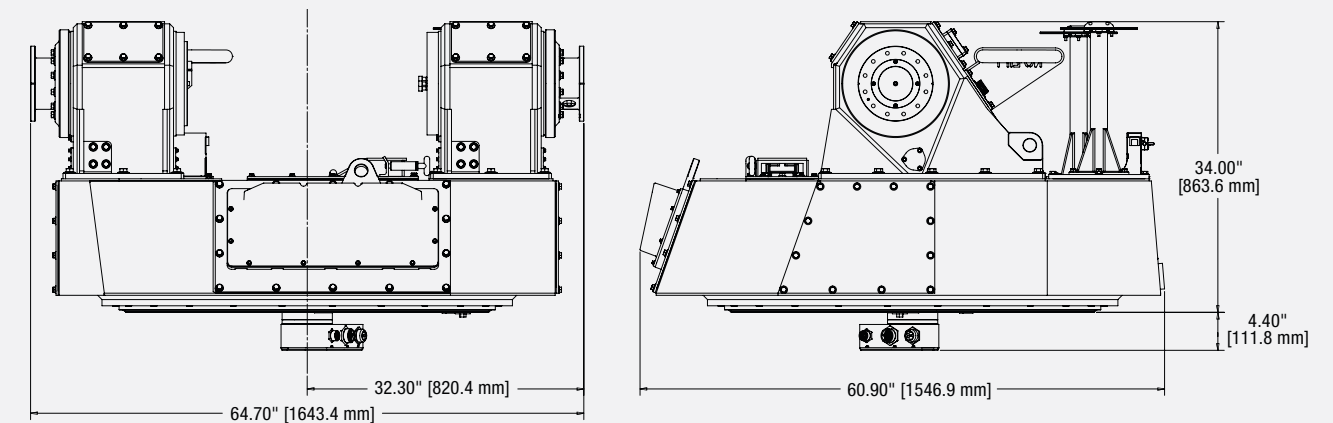
Features	Specifications
Quiescent	0.25 kW
Scanning	0.70 kW
Target engagement	3.20 kW (16 kW peak)



MECHANICAL INTERFACE

RlWP Base Assembly Weight (without Payloads): 2500 lbs (1134 kg)

ARCHITECTURAL AND DIMENSIONAL DRAWING



Vehicle opening for 1m bearing
Zero intrusion into cabin

COMMUNICATIONS INTERFACE

The RlWP has the ability to provide communication links to C2 and other system interfaces via ethernet.

USER INTERFACE

The RlWP crew station is a common user interface that is streamlined for the warfighter. A control station is used to turn the system on and arm the weapons. A touch screen display allows the user to easily select targets for tracking. The easy-to-use hand controller rounds out the user interface with the look and feel of a video game controller.



FACILITY CAPABILITIES



Moog has demonstrated turret production capacity to meet the combined needs of current production, development, and sustainment programs.

- Moog Agile Center of Excellence for the concept, design, rapid prototyping, and sustainment of Turreted Weapon Systems in Santa Barbara, CA
- Moog Turret Assembly Center (MTAC): Dedicated Turret Production Center of Excellence in Salt Lake City, UT
- Moog has delivered turrets at twice the current production rates
- Safe, efficient, and reliable build areas
- Comprehensive testing ensures product quality



EQUIPPING THOSE WHO DEFEND FREEDOM



RIWP

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