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## **Rheinmetall Presents Next Gen “Wiesel Wingman” solution for Robotic Combat Vehicle – Light at AUSA 2019**

### ***Company Showcases Advanced Remote and Autonomous Vehicle Technology Developments***

Rheinmetall Defence is one of the world’s leading providers of combat and tactical vehicles and is a global leader in developing next generation robotic, remote and autonomous combat vehicle capabilities. Rheinmetall will showcase its capabilities at the largest land warfare tradeshow in North America: the Association of United States Army annual meeting (AUSA 2019) taking place in Washington DC, 14-16 October 2019. On display will be a Wiesel/Weasel fighting vehicle, the platform that forms the basis for Rheinmetall’s innovative “Wiesel Wingman” autonomous combat vehicle concept for the US Army Robotic Combat Vehicle – Light program. The Wiesel Wingman brings together capabilities of Rheinmetall’s “Wiesel Digital” and Mission Master UGV vehicle platforms.

The Wiesel Wingman is based on Rheinmetall’s Wiesel Digital, a fully digitalized version of the Wiesel that has been refined over the past years. This includes the full digitalization of the vehicle and the replacement of all mechanical and hydraulic transmission elements with a digitized transmission. In addition, the Wiesel Wingman is equipped with Drive by Wire (DbW) with triple redundancy. This DbW system has gone through rigorous testing, making the Wiesel Wingman the very first armored tracked vehicle certified for on-road use with DbW. The vehicle retains the high mobility found in existing variants of the Wiesel, with a top speed of 43mph and excellent maneuverability on various terrain due to its low GVW and low ground pressure.

The Wiesel Wingman armored hull protects all critical components against fragmentation and small arms fire. The vehicle can be equipped with a variety of systems; for the RCV-L the Wiesel Wingman includes a CROWS-J; other lethal variants are also possible, based on the payload capability of the Wiesel chassis. The vehicle has outstanding reconnaissance capabilities due to its superior mobility and its integrated tethered drone, which highly increases its surveillance and target identification capabilities. The Wiesel Wingman can be air-transported in a CH-47 and a CH-53 as an internal or external load. Two of the vehicles can easily fit into a C-130. This vehicle has been tested and proven during various exercises and trials by the US and German Army.

The Mission Master UGV, developed by Rheinmetall Canada, contributes its autonomous technologies to the Wiesel Wingman platform. This provides the Wiesel Wingman with a tried and true suite of sensors, universal platform control and navigation software. The Artificial Intelligence (AI) kit enables the vehicle to conduct semi-autonomous and autonomous operations, from remote-controlled steering to leader-follower operation and waypoint navigation. Obstacle avoidance, operation in environments lacking GPS and remote sensor/effector control make the Wiesel Wingman smartest, most robust vehicle in its class. Its open software architecture and the sizable internal volume provides the US Army with significant growth potential for future technology.

Rheinmetall Canada's Mission Master UGV will be on display along with the Wiesel at AUSA, in both cargo and protection (armed) configurations. The Mission Master platform is a world leading autonomously operating UGV showcasing Rheinmetall's advanced developments in autonomous combat vehicle operating capabilities. The Mission Master features all-terrain and amphibious mobility, as well as silent drive mode. It can operate autonomously or semi-autonomously.

In addition to a flexible storage system, the Mission Master — Cargo can be fitted to suit both high and low profile operations. Its robust design can shoulder over a half-ton payload of supplies, equipment, and materials.

The Mission Master – Protection will feature the unique Rheinmetall Fieldranger Multi weapon station, armed with a 70 mm rocket launcher from Thales that recently demonstrated the ability to fire a salvo of 14 rockets, delivering 60 kg of explosives on objective in 1.6 seconds. The Mission Master – Protection can also support .50 cal. machine guns and 40 mm grenade launchers.

For more details about how Rheinmetall is developing robotic, remote and autonomous vehicles and its proposal for the US Army RCV-L program, meet our team of specialists on Rheinmetall's booth No. 6618 at AUSA 2019.

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**WIESEL WINGMAN RCV-L**  
 COMBINING 2 TECHNOLOGIES FOR A NEXT GEN ROBOTIC COMBAT VEHICLE

Wiesel Wingman combines two Rheinmetall technologies: Wiesel Digital as the fully digitalized base platform and UGV Mission Master artificial intelligence for vehicle autonomy and weapon control. This unique package will provide the Army with a genuine Next Gen Robotic Combat Vehicle.

**WIESEL WINGMAN RCV-LIGHT**

- Autonomous and semi-autonomous capabilities
- Top speed 43 mph; silent watch functionality
- Armored hull; internal volume >40 ft<sup>3</sup>
- Air transportable in CH-47 (internal/external)
- Sensor suite, tethered drone and CROWS-J
- Open system architecture; growth potential

**WIESEL DIGITAL PLATFORM**

- Combat proven platform
- Digital backbone, NGVA
- Drive-by-Wire

**MISSION MASTER TECHNOLOGY**

- Autonomy kit
- Sensor suite
- Weapon control

RCV Light conceptual design