

► DIVISION *ELECTRONIC SOLUTIONS*

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Rheinmetall's solutions for the digitized battlefield showcased at DSEI 2023

As one of the world's foremost system integrators, Rheinmetall has the expertise necessary for networking a whole panoply of different entities on the digitalized battlefields of the future. At DSEI 2023, Rheinmetall will reveal ways of lifting the "fog of war" through the interplay of sensors, effectors and advanced human-machine interfaces.

An extensive network of partners forms the basis of Rheinmetall's step-by-step approach to digitizing the armed forces of Germany, its friends, and allies. Visitors to Rheinmetall's stand at DSEI 2023 can see for themselves what a completely digitized battlefield will look like and how the "fog of war" can be lifted.

Digitization starts with the individual fighting vehicle. As the original equipment manufacturer of the fire control unit of the Leopard 2 main battle tank, the Challenger 3 MBT, and the new Lynx family of infantry fighting vehicles, Rheinmetall enjoys world-leading expertise in networking sensors and effectors. A vital advantage here: new sensors and subsystems can be integrated into the vehicle via digital architectures like the NATO Generic Vehicle Architecture (NGVA), without having to install additional displays or control consoles. The interplay of the latest systems with an advanced human-machine interface will be clearly illustrated at DSEI.



Securing, watching, reconnoitring – the vehicle crew can see and hear farther and better; has command of the entire electromagnetic spectrum; and can instantly view the current situation of all actors on the battlefield. Rheinmetall's advanced fighting vehicles are fully digitized, making it easier for crews to perform their tasks in combat situations. The "view through the armour" encompasses more than just a view of the surrounding terrain. It is enriched with information from every one of the vehicle's sensors as well as those of other friendly elements. Going from alert to countermeasure takes just one click. Installed in every Rheinmetall combat vehicle, the panoramic Situational Awareness System (SAS) collects and organizes data 24/7. Already today, artificial intelligence evaluates this information in ways that even the best soldier could never do. The transparent battlefield starts exactly here and now as a fully-fledged system.

► Key facts

- Rheinmetall possesses comprehensive expertise in networking different echelons and actors on the digitized battlefield
- Networking starts with digitizing individual vehicles and subsystems
- Integration of robotics and unmanned systems
- The Gladius 2.0 soldier system directly embeds individual troops in Joint Overall Domain Operations

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In addition to unmanned tactical reconnaissance systems, Rheinmetall augments the situational awareness of modern fighting vehicles in built-up terrain and at close quarters by integrating unmanned, air-supported reconnaissance systems into vehicle platforms. Consequently, the vehicle crew can conduct reconnaissance operations on its own through the intuitive use of integrated mission systems, sharing information with other actors in its network – with no need to leave the safety of the armoured fighting compartment. Fully integrated into existing vehicle mission systems, advanced reconnaissance UAVs of various sizes and ranges have been integrated into several manned and unmanned fighting vehicles on display at the Rheinmetall stand at DSEI 2023.

On future battlefields, robotics is also poised to play a key role on the ground. Visitors can inspect the Mission Master SP and XT models. A Mission Master SP robotic vehicle will be on hand at DSEI, configured as a carrier platform for cableless charging technology for unmanned systems jointly developed with Quaze Technologies. The larger Mission Master XT will be in London, too, in a version designed for counter-drone operations. The Group's line-up also includes mission pods for deploying small UAVs from combat vehicles for reconnaissance and target engagement missions.

Furthermore, Rheinmetall has comprehensive know-how as a system supplier of soldier systems, network solutions, and C4I systems. At DSEI 2023 Rheinmetall will be presenting all current configurations of the Gladius 2.0 soldier system, including ways of networking them with manned and unmanned systems and subsystems.