GLADIUS**2.0**

DIGITAL CONNECTIVITY: LIGHT. MODULAR. EFFECTIVE.

TAKING RESPONSIBILITY IN A CHANGING WORLD

RHEINMETALL

NETWORK SOLUTIONS FOR THE DIGITIZED BATTLEFIELD

INTRODUCTION

Joint Task Forces are highly reliant on information to ensure they dominate the battlefield. Multidomainoperations and strong alliances are more relevant than ever before. Interoperable network and digitalisation bring the decisive advantage. With a real time common operational picture we enable our forces to act faster, earlier, autonomous and more precise. As an expert for digitalisationand systems integration with a huge partner network we bring your force to the next level.

The Rheinmetall Soldier System GLADIUS 2.0 is an important pillar within a digital network.

Rheinmetall is the competence center for network solutions for the digitized battlefield. We have more than 15 years of experience delivering modern digitized soldier systems into service and, most important, their capabilities are battle proven.

GLADIUS 2.0
MODULAR ARCHITECTURE FOR FLEXIBLE USER SOLUTIONS

GLADIUS 2.0

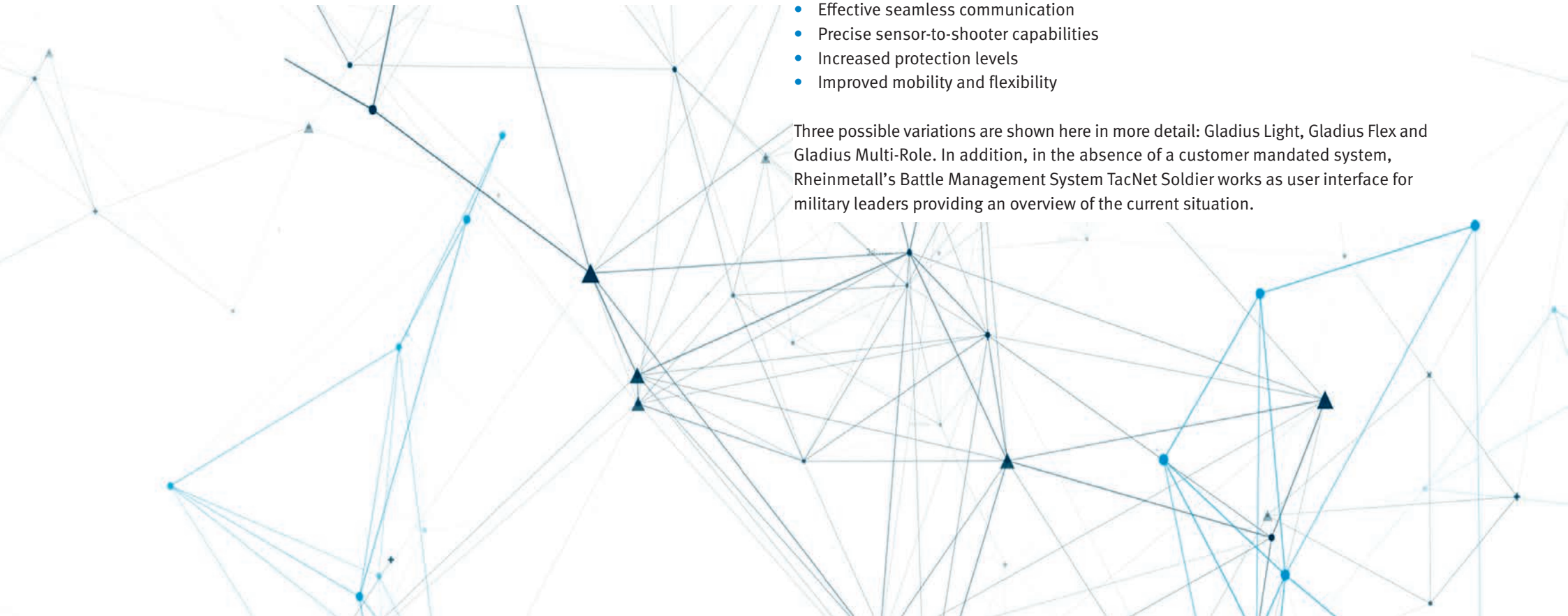
Rheinmetall's Soldier System GLADIUS 2.0 combines highest standards of firepower, mobility, protection and information into one system for mechanized and dismounted troops. GLADIUS 2.0 integrates high-end technology components into one system to provide the newest genera- tion and fully modular soldier system capability designed to meet the most demanding user requirements.

OPEN ARCHITECTURE

GLADIUS 2.0 follows a holistic approach enabled by **open architecture** to provide high scalability, modularity and flexibility. This allows for user-specific configuration dependent on operational need. At its core, it aims to enhance soldier's basic capabilities via:

- Sophisticated situational awareness
- Effective seamless communication
- Precise sensor-to-shooter capabilities
- Increased protection levels
- Improved mobility and flexibility

Three possible variations are shown here in more detail: Gladius Light, Gladius Flex and Gladius Multi-Role. In addition, in the absence of a customer mandated system, Rheinmetall's Battle Management System TacNet Soldier works as user interface for military leaders providing an overview of the current situation.




GLADIUS
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MODULAR ARCHITECTURE FOR FLEXIBLE USER SOLUTIONS

GLADIUS LIGHT

FOR LIGHT INFANTRY FORCES

Based on the proven architecture of GLADIUS 2.0, Rheinmetall has created additional variants and adapted configurations. We have taken into account the need for **lightweight and flexible** systems with highest mobility required for light infantry soldiers.

The result is a lightweight soldier system configured to a baseline, with flexibility to add components as required for specific missions.

- The GLADIUS Light configuration is centered on a **lightweight plate carrier** with scalable **ballistic protection**.
- The **radio** provides voice and data communication and GPS tracking for blue force information.
- A **modern headset** with different variants of operation (wired and/or Bluetooth connectivity) enables **voice** communication.
- The **End User Device**, either ruggedized tablet, smartphone or smartwatch, facilitate tactical maps, seamless information exchange and improves situational awareness overall.

GLADIUS FLEX

FOR SPECIAL FORCES

Based on GLADIUS Light with plate carrier, radio, headset and display unit, GLADIUS Flex meets the requirements of Special Forces by adding additional components.

- **A Smart HUB** enables the integration of a large number of additional components as well as intelligent energy and data management for this particular variant.
- **Central batteries** supply the subcomponents with power in order to reduce logistic burden. **Alternative power supply concepts** can be integrated.
- A **helmet display** uses **augmented reality** to display important information in the soldier's field of view. This can be used in a night vision mode with fused technology.
- The **vehicle connection cable** connects the soldier system directly to the vehicle and enables features including access to power supply, data exchange, vehicle communication, sensors and effectors.

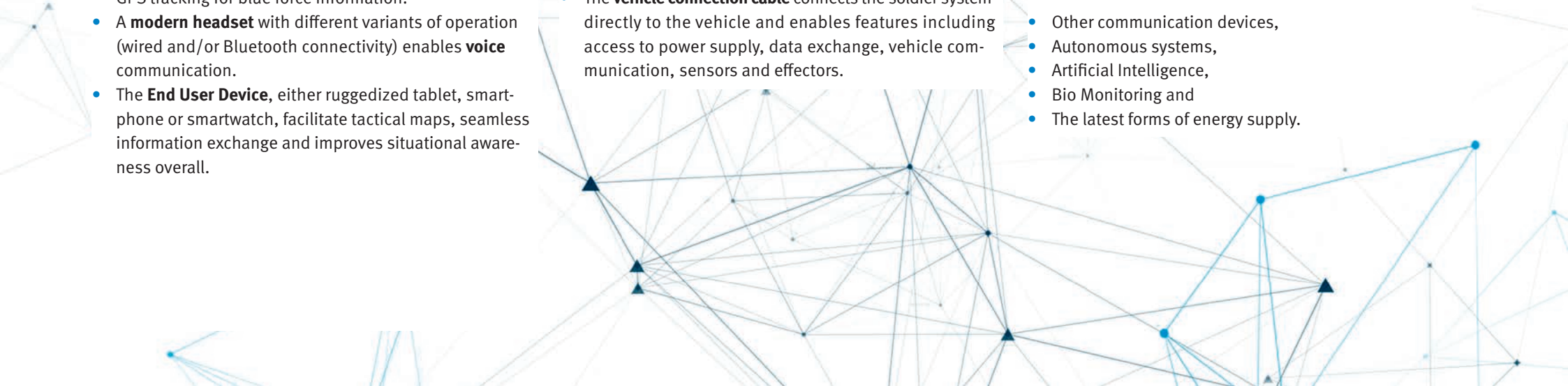
GLADIUS MULTI-ROLE

FOR MILITARY LEADERS AND SPECIALISTS

In close cooperation with the German Armed Forces, Rheinmetall developed the GLADIUS Multi-Role variant in studies, workshops, iterative trials and field tests. Today it represents the **most extensive soldier system in the world**. GLADIUS Multi-Role fully integrates **over 130 in-service analogue and digital components** from more than 30 partners. The soldier retains the option to customise the configuration, depending on the mission profile. GLADIUS 2.0 sets a standard that is unrivalled worldwide.

The open architecture of GLADIUS 2.0 offers **enormous growth potential and can remain current and relevant through the integration of**:

- Other communication devices,
- Autonomous systems,
- Artificial Intelligence,
- Bio Monitoring and
- The latest forms of energy supply.



GLADIUS 2.0

360° INTEGRATION

C4I:

- End-User-Device
- UHF Radio
- VHF Radio
- Smart Hub
- Push-to-talk
- Headset with active hearing protection
- Central batteries
- Computer
- Battle Management System

HEADSYSTEM:

- Helmet mounted display
- Night vision capabilities
- Fused night vision devices

WEAPONS:

- G36
- G82
- MP7
- MG4
- AG36

VEHICLE INTEGRATION:

- Tactical Core and BMS for C4I connectivity
- Integration into vehicle platform

LOGISTIC:

- Battery charging and storage system

PROTECTION/ CLOTHING:

- Helmet
- Protective eyewear
- Protective vest
- Combat suit

VISION MODULES:

- Fire Control Unit
- Thermal imaging devices
- Laser Light Modules
- IR night vision devices
- Residual light amplifier
- Fused night vision devices
- Target optics

RECONNAISSANCE EQUIPMENT:

- Thermal imaging devices
- Fused optics
- Laser Range Finder
- Spotting Scope

VEHICLE INTEGRATION

Seamless integration of the soldier system into the platform is of fundamental importance for a battlefield operational communication network. GLADIUS 2.0 can be fully integrated into combat vehicles and has already achieved such integration with the PUMA, LYNX and BOXER platforms. In the combat vehicle, the soldier connects to the vehicle via a cable, to deliver the soldier important additional functionalities:

- Centralized data exchange for all soldiers
- Centralized energy supply
- Utilisation of the vehicle's communication infrastructure
- Access to the vehicle's sensors and visual aids
- Access to the vehicle's weapon station and effectors
- Optimised storage concept

Such integration enables a continuous connection of the dismounted forces with their vehicle and significantly increases combat effectiveness. Mission planning can be updated to in real time. Situational awareness is increased, command chains are accelerated through digital support and access to the necessary combat resources is optimised. All of this contributes to enhanced mission success.

SOLDIER CONNECTION HUB (SCH)

For vehicle platforms not yet enabled for full soldier systems integration, Rheinmetall has developed the Soldier Connection Hub (SCH). The SCH enables **connection to the vehicle's data network and power supply.** This element **can be integrated into almost all platforms on the battlefield** and thus offers comparable functionalities to the integration as realised in the PUMA, LYNX and BOXER.

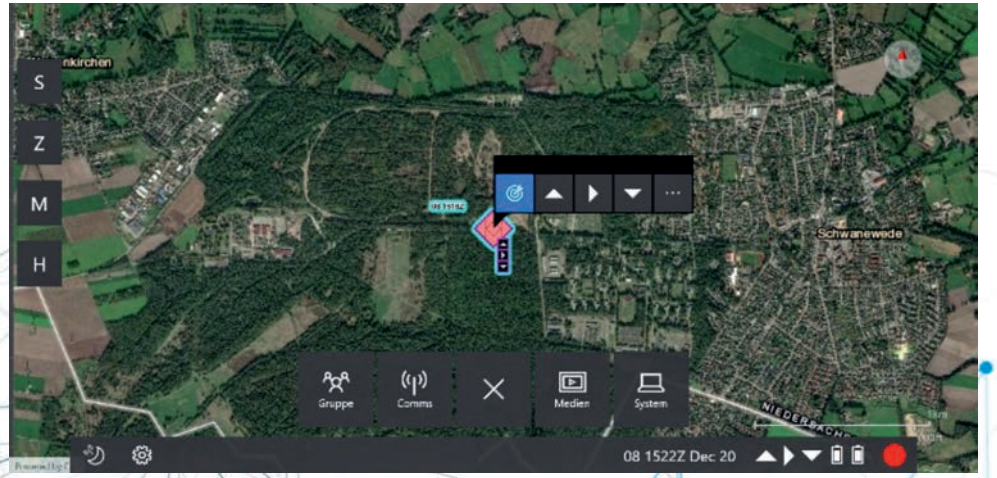

GLADIUS
2.0

DIGITAL BACKBONE
TACTICAL MANAGEMENT SYSTEM TACNET

TacNet, the Rheinmetall Battle Management System, is developed to meet the needs of the soldiers at the tactical level. TacNet was **designed together with the German Armed Forces** and is optimally adapted to the requirements of infantery, dismounted soldiers and special forces. Based on Rheinmetall's knowledge of several years of experience in the development of Battle Management Systems in different applications, we have created a powerful tool for information exchange and situational awareness.

TacNet is characterized by a **modern, modular and scalable architecture.** This enables adaption to different systems and operations, based on customer requirements, to **support and relieve the soldier with his challenges in the best way possible:**

- Communication is optimized for highly mobile, tactical missions
- Automated out-of-the-box solution and user-friendly installation
- Support and automation of military processes
- User-friendly mission preparation and radio network planning
- Comprehensive, seamless integration of soldier systems, unmanned systems and vehicles (e.g. Puma, Boxer, Lynx)
- Certified, standardized IT-Security solution
- Supports Windows and Android operating systems



About Rheinmetall Electronics GmbH

Digitalisation, networking, cyber – Rheinmetall Electronics covers the entire chain of effects in the system network: from sensors and the networking of platforms and soldiers to the (partially) automated connection of effectors. Simulation solutions comprise training, learning and engineering applications for individuals, teams and entire organisations.

Customers in more than forty countries rely on technology from Rheinmetall Electronics. The company has a significant international footprint with several subsidiaries close to customers around the globe and an extensive supplier network.

For more information, please visit: www.rheinmetall.com

www.rheinmetall.com/en/gladius

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