



# LANCE 2

**THE MODULAR MEDIUM-CALIBRE TURRET  
FOR ALL MISSIONS**

**TAKING RESPONSIBILITY** IN A CHANGING WORLD

 **RHEINMETALL**

## MISSION

Modern armed forces face an ever-expanding array of missions, with levels of complexity ranging from high-intensity combat to asymmetric threats during deployed operations. In order to accomplish the assigned missions combat vehicles need to be equipped with a wide array of electronics, sensors, optronics and effectors. As a system house, Rheinmetall develops, produces and continuously upgrades the LANCE 2 turret system for wheeled and tracked platforms to offer suitable responses to emerging threats, ultimately ensuring the accomplishment of any mission.

## REFERENCE CUSTOMERS

European and global customers use the LANCE 2 turret solution for their wheeled and tracked combat vehicles.

## TACTICAL CONCEPT

LANCE 2 is a highly protected, easy to operate, versatile 2-man turret system compatible with the LYNX KF41 and the BOXER. The turret is equipped with state-of-the-art search and tracking sensors, which enable a seamless 360° ground detection and alarm system. The tried-and-tested main

weapon 30 mm MK30-2/ABM provides high accuracy and long endurance firepower up to 3,000 m. In combination with the Air Burst Technology and KETF ammunition, the weapon develops its high lethality against air and ground targets with soft and hard protection. The integrated ATGM provides further firepower against MBTs.

Further tactical main characteristics of the LANCE 2 are:

- Independent observation for commander and gunner with an identification range up to 5,000 m (B3 armoured vehicle 2.3 m x 2.3 m in acc. with STANAG 4347)
- Two crew hatches for all around audio-visual orientation and quick ingress/egress
- Efficient collaboration between commander and gunner through digital system
- Full integration with BMS including target handovers & far target location
- Easy interaction with dismounts during all operation states
- Combined manual/electrical back-up mode
- Fully stabilized sights and weapons
- Hunter-Killer/Killer-Killer capability (enabled by RCWS)



## DESIGN CONCEPT

Designed to maintain the operational capabilities of the crew and systems the turret has a multi-layered protection structure and separates the crew from weapons and ammunition. In addition, there is NBC protective ventilation, the utilization of all operating modes by both turret operators and the ability to reload the main and secondary weapons under armour.

Further design advantages of the LANCE 2 are:

- Boxed ATGM launcher mission pod, interchangeable with other mission pods
- Modular Commander's Sight/RCWS Interface
- GVA-compliant core architecture for maximum compatibility



## SITUATIONAL AWARENESS

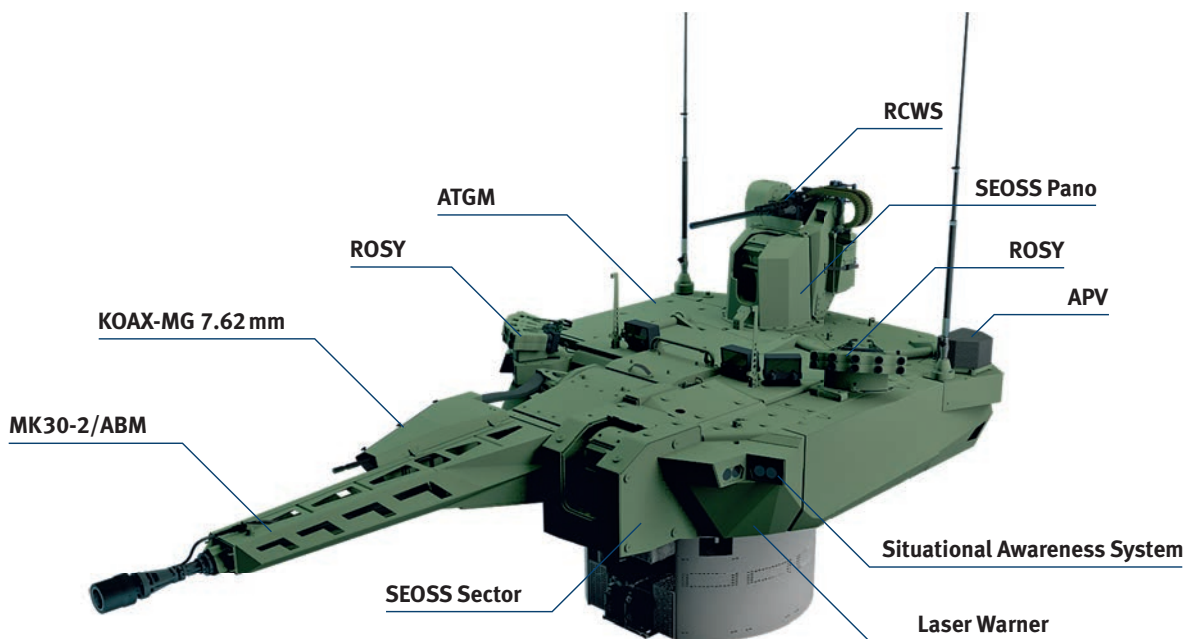
LANCE 2 enables the turret crew to have above-hatch enhanced audio-visual situational awareness, command and control. Augmenting the crew, the LANCE 2 turret is equipped with a suite of sensors and computing power to provide extensive situational awareness.

Key to the crew awareness and ability to respond rapidly to threats are the integrated 360 degree camera modules networked with the gunner and commander sights. Together with the laser warner and acoustic platform shot detection system, the crew can rapidly process battlefield information, make fast crucial decisions and prosecute battlefield targets.

The laser warner system provides a 360 degree vehicle coverage and alerts the crew of the direction of incoming laser beams, which may come from weapon systems.

The acoustic platform shot detection system consists of high fidelity acoustic sensors with integrated analysis capabilities. It detects supersonic small and medium calibre ballistic rounds passing close by the vehicle and identifies the direction and distance of the fired shots.

The LANCE 2 turret has fully integrated sensor suite that combines seamlessly with the fire control and crew display systems to provide the crew a single enhanced battlefield picture with simplified augmented decision support. Threats from 360 degrees are continuously scanned and identified to allow the crew to act rapidly and achieve a decisive combat edge.





## TECHNICAL DATA <sup>1)</sup>

### Armament

Primary weapon	Rheinmetall MK30-2/ABM 30 x 173 mm
Primary weapon magazine	252 rounds total; double belt feed
Primary weapon ammunition	APFSDS-T, KETF (Air Burst), Training ammunition
Primary weapon elevation arc	-10° to +45° <sup>2)</sup>
Secondary weapon	FN Herstal MAG 58 or other 7.62 x 51 mm
Secondary weapon magazine	625 rounds
ATGM (optional)	Rheinmetall Twin SPIKE LR/LR2 launcher
RCWS (optional)	FN Herstal M2 12.7 x 99 mm (other weapons on demand)
RCWS magazine	200 rounds
Drives/fire control	Fully stabilized sights and weapons

### Sensors

Targeting sights	Rheinmetall SEOSS 2 with 5 km day & infrared range; 6x zoom
Situational awareness system	360° day and infrared range, acoustic platform for vehicles, laser warmer

### Survivability

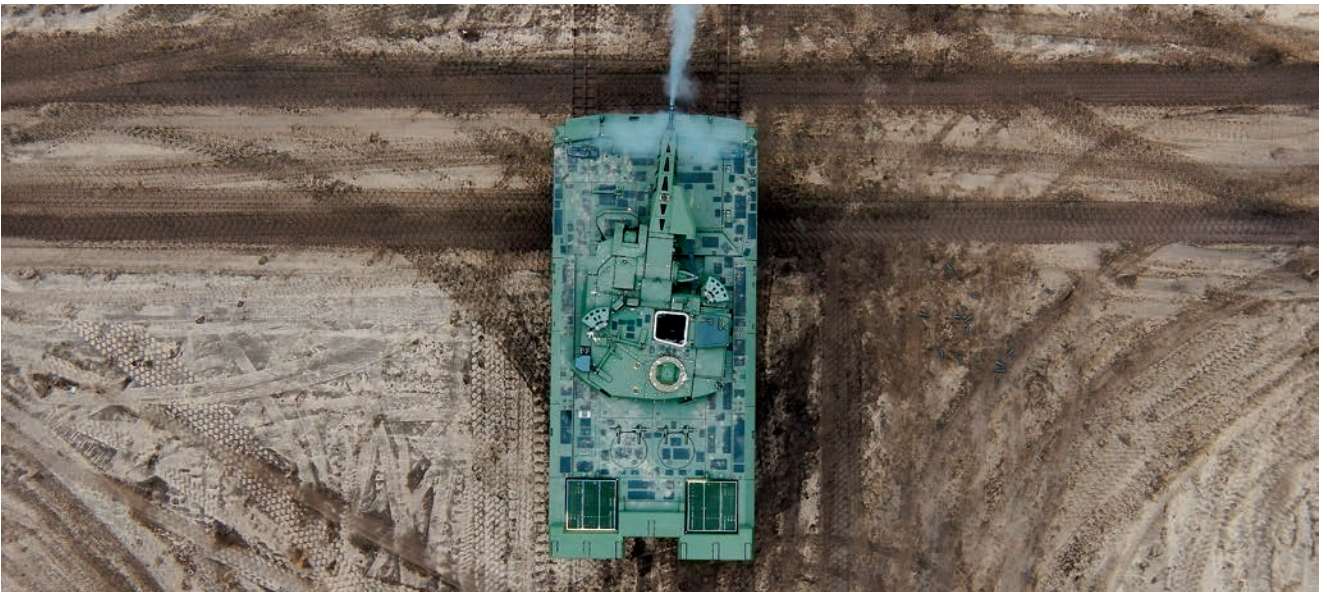
Smoke grenade launcher	Rheinmetall ROSY with 180° coverage, two salvos
Crew armour	Protection acc. STANAG 4569, medium calibre threats
Mission systems armour	Protection acc. STANAG 4569, small calibre threats
Back-up modes	Combined mechanical-electrical-electro optical back-up system

<sup>1)</sup> Subject to changes    <sup>2)</sup> Dependent on chassis

### FUTURE-PROOF DIGITAL ARCHITECTURE

An integral part of the LANCE 2 is its future-proof fully digital architecture and the resulting extensive growth potential. The entire system is based on the NATO GVA core structure, and the C4I framework facilitates the interoperability and communication between the various subsystems. This allows

the integration of new mission systems and effectors such as C-UAV radar reconnaissance, loitering munitions and AI-assisted OODA loop acceleration, without affecting the basic turret architecture. This is further supported by a range of ready-to-use data interfaces inside and outside the turret.



### SUMMARY

The LANCE 2 turret system stands for:

- Effective combat capabilities against ground and air targets
- Multiple configuration options featuring benchmark weapon systems, sensors and sights
- Future-ready digital architecture
- Vast upgrade potential due to GVA-compliant core architecture
- Supported by an international user community
- Compatible with tracked and wheeled platforms

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