



Built for Danger
Designed to protect

winner

NATO **DIANA**
Defence | Innovation | Adoption

PeK Logistic Unmanned Ground Vehicle

Robotic Logistics Manipulator Platform
A New Class of Field Logistics.



- Enter the Risk.
- Remove the Operator.
- Move the Load.

PeK LUGV is designed and manufactured around a clear operational requirement: to move and handle critical cargo where conventional forklifts cannot safely go and cargo robots cannot do the job. It combines autonomous mobility, pallet manipulation, and field-ready stability in one integrated platform.

Core Operational Requirements



■ Mobility & Terrain Access

- Operates where conventional forklifts lose effectiveness
- Built for soft, unstable, and hazardous outdoor terrain
- Designed for real field logistics, not warehouse conditions



■ Field Deployment Logic

- Compact, trailer-deployable concept
- Rapid deployment in operational environments
- Designed for conflict logistics, rescue logistics, and dangerous material movement



■ Personnel Protection

- Removes the operator from dangerous logistics zones
- Reduces exposure in frontline, night, and hazardous operations
- Enables logistics action where human presence creates unnecessary risk



■ Autonomous Logistics Integration

- Remote control capable
- Autonomous-capable architecture
- Native integration into robotic supply chains and UGV-supported logistics

■ Cargo Manipulation

- Full pallet handling capability
- Autonomous or remote cargo placement and retrieval
- Handles structured logistics loads, not just loose cargo

■ Operational Positioning

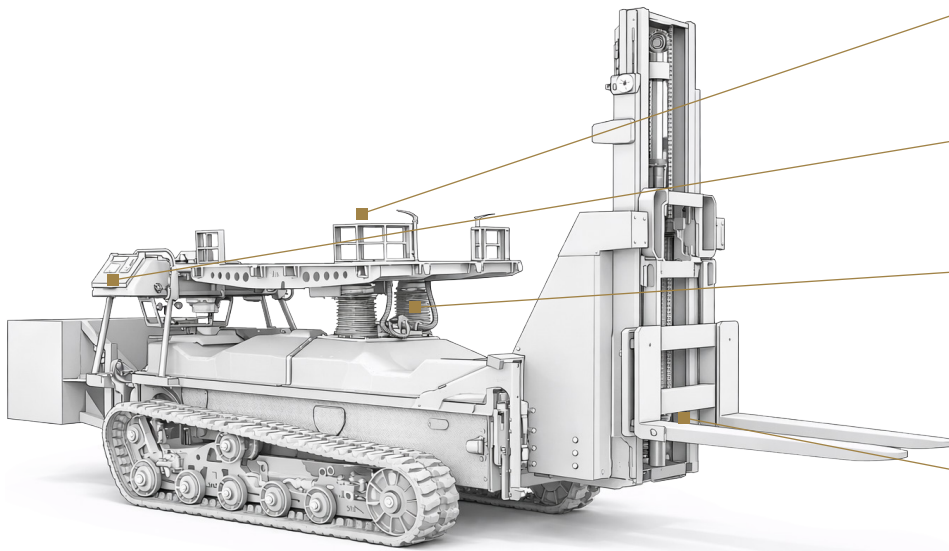
- Not a conventional forklift
- Not just a cargo robot
- A new robotic logistics node for autonomous field supply architecture

When Human Handling Is No Longer an Option

- Ammunition depots
- Hazardous materials warehouses
- Fortification logistics
- Frontline resupply points
- Disaster-response logistics bases
- Night operations in exposed areas

In these environments, cargo still has to move, but putting a human on the machine becomes the risk.





■ **Cargo Platform**

- Max payload 2,500 kg

■ **Display**

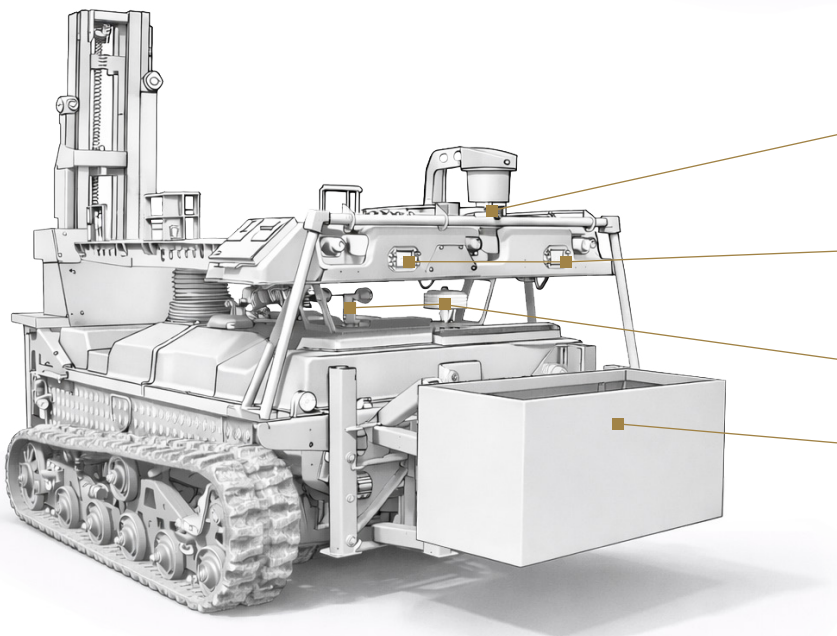
- remote control unit

■ **Gravity-Stabilized cargo platform**

- Self-adjust for perfect balance even on an incline

■ **FPV Camera**

- Front HD camera



■ **FPV Camera**

- Rear HD camera

■ **Reflectors**

- For Night drive

■ **Weather station**

■ **Counterweight (ratio 1:1)**

- 150 kg CW = ~150 kg payload
- 1000 kg CW = ~1000 kg payload

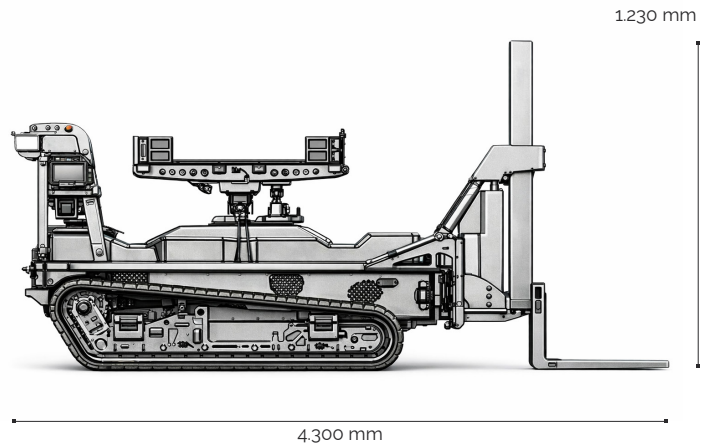
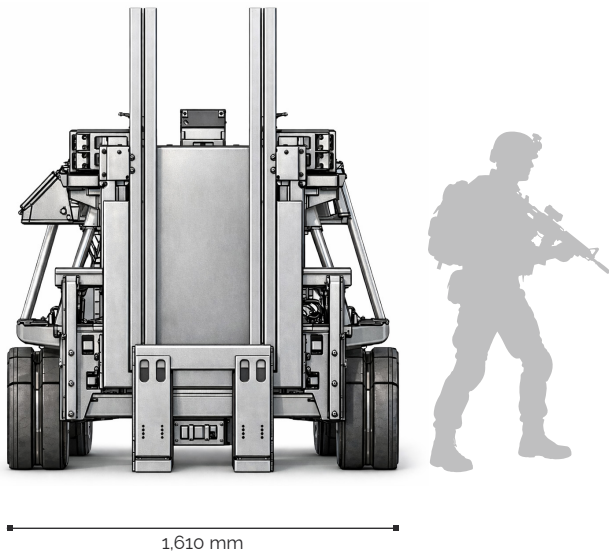
Personnel protection as a priority

Remote and autonomous operation remove the operator from the most exposed part of the logistics chain.

- **No onboard driver in hazardous zones**
- **Safe pallet handling without direct personnel exposure**
- **Suitable for dangerous cargo movement and ammunition logistics**
- **Supports night, frontline, and unmanned supply operations**

Modern field logistics cannot remain dependent on a human sitting at the point of risk. LUGV changes that architecture.





■ General

Height	1,230 mm
Length with counterweight	5,300 mm
Width	1,610 mm
Weight	2,000 kg
Counterweight	150 - 1,000 kg
Lift height	0-2000 mm

■ Electrical System

Battery	43 kWh Lithium Iron Phosphate (48V LiFePO4)
System Voltage	48V DC
Mission Duration	8-12 hours
Min. Recharge Time	3 hours

■ Mobility & Endurance

Maximum Transit Speed	5.0 km/h
Operational Speed	up to 3.0 km/h (loaded)
Slope Capability	up to 35°
Maximum Power	10 kWh
Navigation	GNSS High-res touch sensor
Front/back camera	FPV autonomous or "follow me" mode
Caterpillars	Dual Tracks

■ Cargo Platform

Length	1,213 mm
Width	1,020 mm
Max. payload	2.5 t
Angles	32° f/b - 21° side
Max. lift capacity	2.5 t

The Solution: LUGV



- Autonomous cargo transport
- Remote pallet handling
- Outdoor terrain mobility
- Reduced personnel exposure
- Logistics capability in hazardous zones
- Native fit for unmanned supply chains

LUGV acts as a force multiplier for field logistics, extending operational reach while keeping personnel out of the danger zone.



Application Scenarios

■ Frontline Resupply

- Moves palletized cargo in exposed environments
- Reduces operator exposure near forward positions
- Combines transport and pallet handling in one platform



■ Hazardous Logistics

- Suitable for ammunition depots and dangerous goods movement
- Enables unmanned transport and remote handling
- Supports operations where conventional forklifts create unacceptable risk



■ Disaster / Humanitarian Logistics

- Works in unstable or damaged environments
- Supports rapid movement of material without exposing personnel unnecessarily
- Bridges the gap between mobility and cargo handling



■ Autonomous Supply Chains

- Functions as a robotic logistics node
- Integrates with cargo UGV fleets and unmanned resupply systems
- Enables true robotic field logistics architecture



■ Engineering / Fortification Support

- Supports construction and logistics in conflict-adjacent zones
- Useful for contractors, engineering corps, and fortification operations
- Designed for operational urgency, not bureaucratic logistics routines



Electric

Fully electric platform designed for resilient operation in explosive environments.



Protective

Removes personnel from direct blast exposure while maintaining real operational capability.



Autonomous

Remote First Person View and RTK-guided navigation for precise, repeatable clearance with minimal human risk.

■ **PeK Civil Defence company is focused on the development of advanced electric and autonomous systems for high-risk and mission critical environments.**

Building on deep expertise in electric drive-trains, dynamic structural engineering, and autonomous robotic control, PeK Civil Defence develops platforms engineered around explosive interaction — enabling safe terrain stabilization where human presence is restricted or unsafe.



LUGV

Autonomous transport is not enough.
LUGV adds cargo manipulation to robotic mobility
and closes the last major gap in field logistics automation.

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