

THAR

DEFENSE ROBOTICS ·
CONFIDENTIAL

Tactical Quadruped Ground Robot

Precision. Power. Preservation of Life.

Version 2.0 · July 2026 · Investor &
Partnership Pitch

THAR TACTICAL QUADRUPED ROBOT

BUILT FOR THE MISSION.
DESIGNED FOR THE FUTURE.

THAR is an advanced all-terrain quadruped robot engineered for reconnaissance, security, transport, and tactical operations in the most demanding environments.



ALL-TERRAIN
Operates in all environments with unmatched agility and stability.



RECONNAISSANCE
Advanced sensors and real-time intelligence for situational awareness.



SECURITY
Force protection and surveillance missions with high reliability.



PAYLOAD VERSATILITY
Modular design for weapon systems, sensors, and mission-specific gear.



AUTONOMOUS 1
Intelligent navigation and autonomous operation capability.

01 · MISSION CONTEXT

OPERATIONAL PARADIGM

The Challenge

- **Harsh Terrains:** Mountains, soft sand, and extreme heat defeat wheeled/tracked UGVs
- **High-Risk Missions:** Border patrol and recon expose soldiers to lethal threat

The THAR Solution

- Agile, AI-driven quadruped built for Saudi

FRONT VIEW

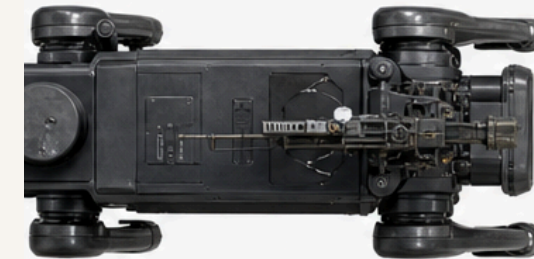


470 mm

SIDE VIEW



1090 mm



1090 mm

470 mm

DYNAMIC ISOMETRIC POSE



OUNT



LEG MECHANISM

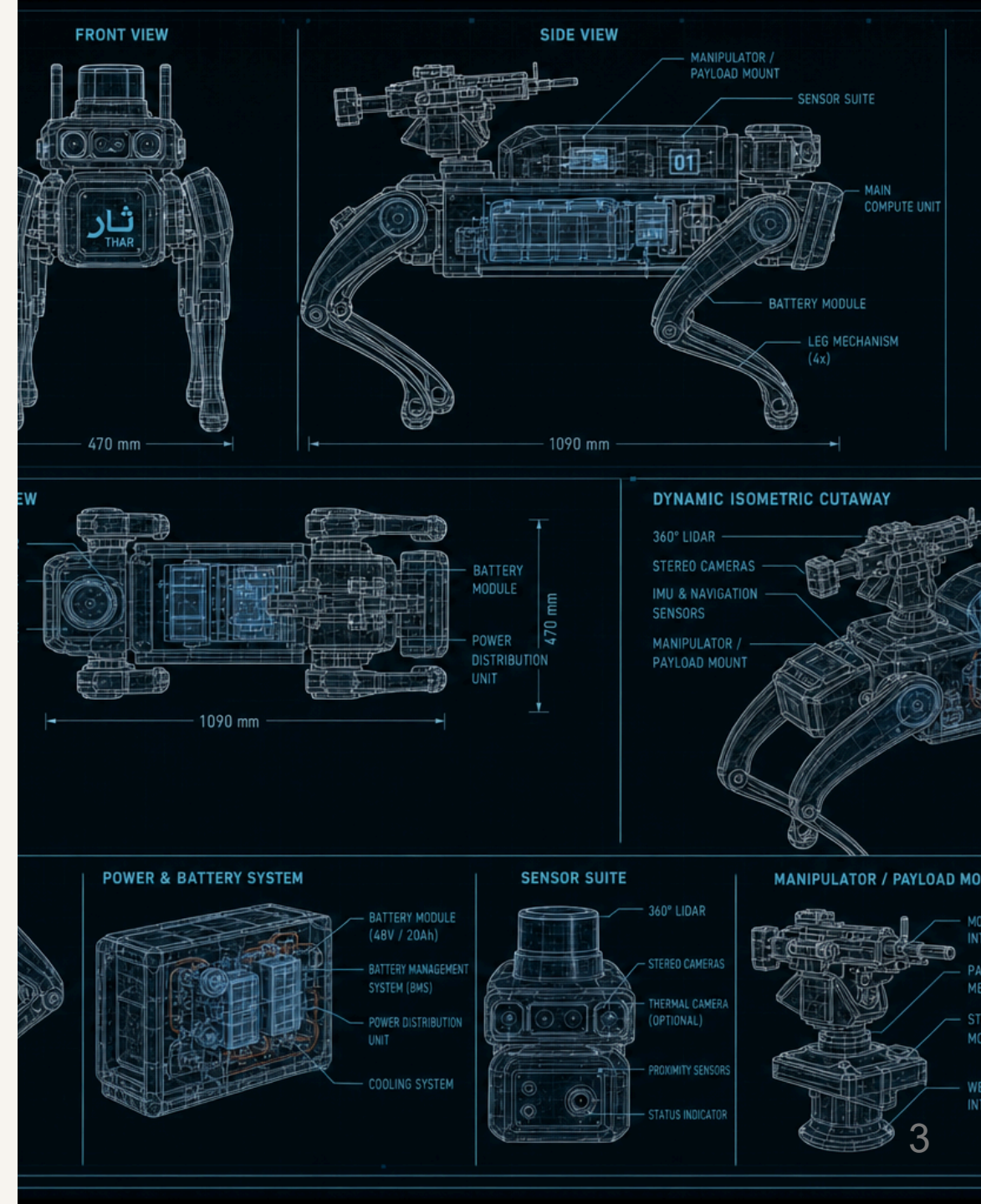


POWER / BATTERY MODULE

02 · STRUCTURE

ENGINEERING & MATERIALS

- **Chassis:** Aerospace Aluminum 7075-T6 + CFRP / Kevlar shielding
- **Dimensions:** 1.2 m L · 0.8 m W · 0.9 m H
- **Mass & Payload:** ~50 kg base · up to 20 kg tactical payload
- **Thermal:** Active liquid-cooling for continuous 50°C+ operation





03 · PERCEPTION

MULTI-MODAL SENSOR FUSION

Designed for zero-visibility operations (sandstorms, night).

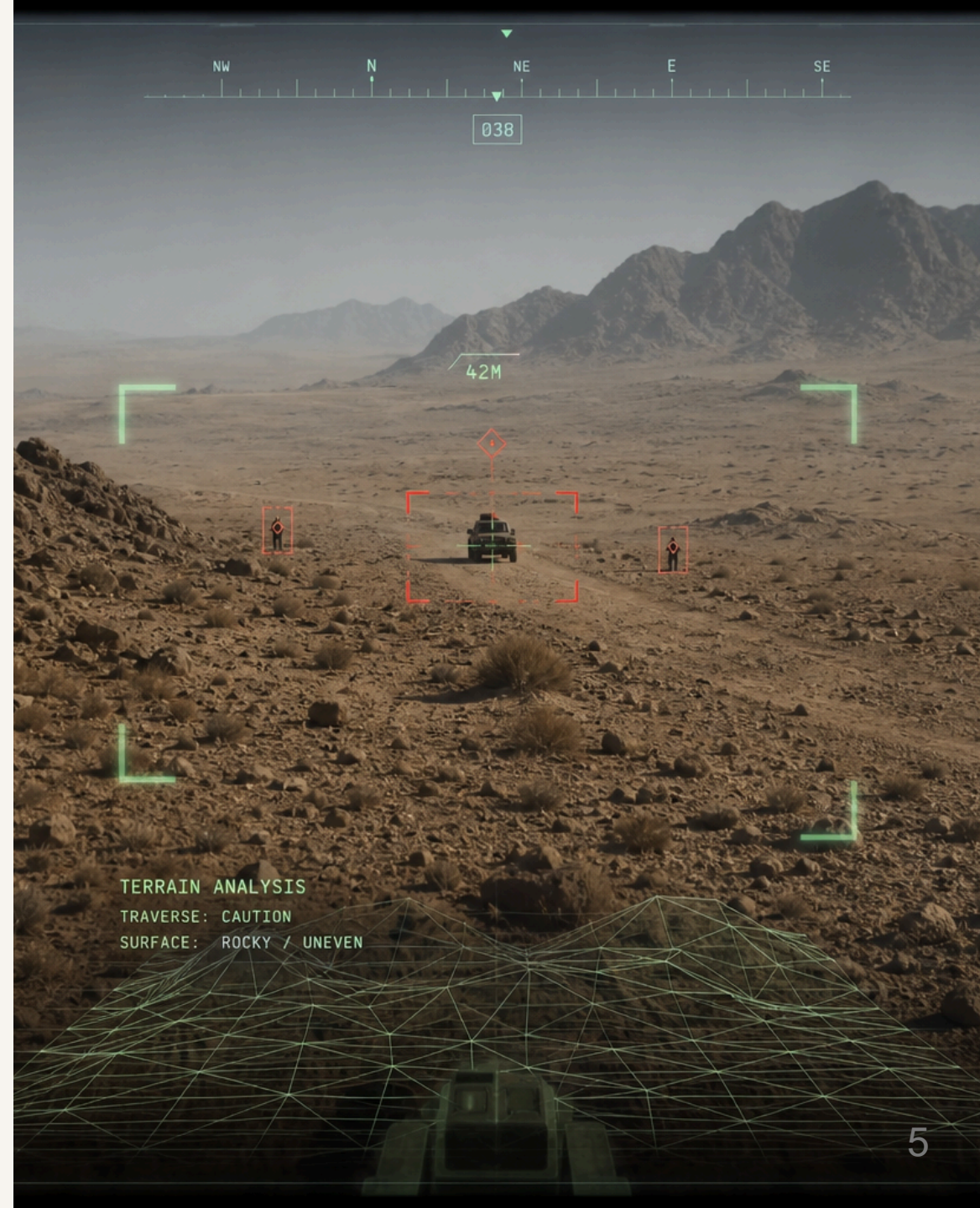
- **3D LiDAR:** Solid-state real-time mapping and SLAM
- **Thermal Imaging:** FLIR Boson long-range heat signatures
- **RGB-D Vision:** HDR stereo for close-quarters avoidance

04 · AUTONOMY

EDGE COMPUTING & AI

Zero Latency. Total Sovereignty.

- **Compute:** NVIDIA Jetson Orin NX — up to 100 TOPS
- **OS Stack:** Hardened Linux with ROS 2
- **Autonomy:** Waypoints, dynamic avoidance, threat classification
- **Tactical HUD:** Encrypted FPV with AI brackets & telemetry





05 · MOBILITY

KINEMATICS & ACTUATION

- **Quasi-Direct Drive:** 12 DoF high-torque BLDC actuators
- **Proprioception:** Motors feel terrain via current spikes
- **Reflexes:** Micro-second adjustments without optical-only sensing
- **Agility:** Steep inclines, rubble traversal, and fall recovery

06 · MISSION KITS

MODULAR PAYLOADS & POWER

- **Power:** 60V high-discharge Li-ion · hot-swap < 60s
- **Endurance:** Up to 3 hours mixed-terrain operation
- **Rails:** NATO Picatinny for ISR, logistics, LRWS
- **BMS:** Dynamic power routing by



07 · PRODUCTION INTENT

ADVANCED 3D VISUALIZATION

Cinematic and isometric renders
highlighting subsystems, thermal vents,
and payload rails.



08 · MANUFACTURING VIEWS

ORTHOGRAPHIC PROJECTIONS

Precision engineering from every angle —
rapid manufacturing and maintenance
access.



DEPLOYMENT ROADMAP

- **Phase 1 (Current):** Prototype design, simulation, engineering specs
- **Phase 2 (Q3 2026):** 3–5 physical prototypes for Saudi field testing
- **Phase 3 (2027):** Advanced military payloads and deployment trials
- **Objective:** Secure strategic partnerships for Phase 2 manufacturing



THAR

THE FUTURE OF GROUND OPERATIONS

Thank You.

Ready for Technical Deep-Dive.

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