TMSI Tactical Mobility Solutions International

TAC-6 MK II GDAMS

Highly Mobile. Lightly Armoured. Heavily Armed.



DOCTRINE · CONTEXT

The Battlefield Has Changed. Has Your Vehicle?

Three years of conflict in Ukraine have confirmed what the Middle East and Sahel have long shown: the modern battlespace is transparent, drone-saturated, and deeply hostile to large, slow, high-signature platforms. Armoured columns once considered dominant have been destroyed by persistent aerial surveillance, loitering munitions, and precision-guided systems at range.

The force that moves quickly, disperses rapidly, reduces its signature, and delivers accurate organic fires without waiting for higher echelon support holds the decisive advantage. The limiting factor is no longer firepower — it is the kill chain.

Static positions, mortar lines, command posts, and heavy vehicles have a life expectancy measured in minutes once a drone observes them. Mobility, precision, and the shortest possible kill chain are now decisive attributes.

MOBILITY

- Project fast. Operate independently. Get off the X.
- C-130, C-390 and CH-47 deployable. 160 km/h road speed.

FIRES

- Organic 120mm indirect fire capability.
- No allocation. No queue. No delay.
- Responsive to the platoon commander.

SURVIVABILITY

- Shoot and scoot. Mobile before counter-battery can respond.
- Low signature. Reduced acoustic and thermal footprint.

DOCTRINAL SHIFT

The limiting factor is no longer firepower.
It is the kill chain.

TAC-6 MK II GDAMS — Platform Overview

6×6 Light Fighting Vehicle · Heli-Portable · Multi-Role

7,000 kg
Combat Weight (GVM)

160 km/h
Max Road Speed (governable)

1,200+ km
Operational Range (standard fuel)

Drive Configuration	6×6 Permanent All-Wheel Drive
Payload Capacity	Up to 4,000 kg (mission configuration dependent)
Operational Range	1,200 km minimum. 2,000 km + extended fuel
Fording Depth	700 mm without preparation
Air-Deployable	C-130 Hercules ×2 per aircraft. C-390. CH-47



One acquisition. Three vehicle categories replaced LMV + LAV + IFV - within a single 7,000 kg platform. One logistics chain. One training baseline.

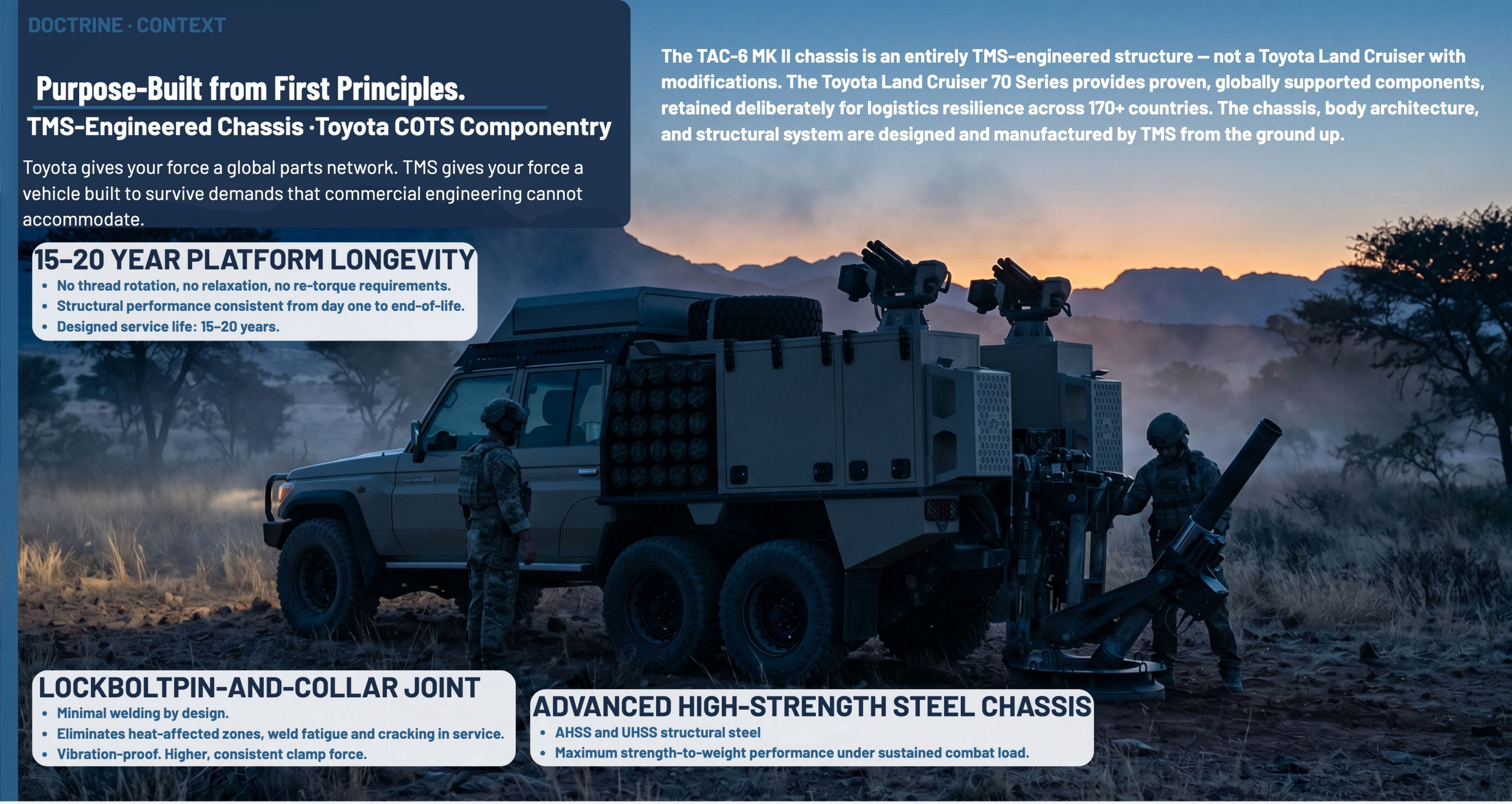
DOCTRINE · CONTEXT

Purpose-Built from First Principles.

TMS-Engineered Chassis ·Toyota COTS Componentry

Toyota gives your force a global parts network. TMS gives your force a vehicle built to survive demands that commercial engineering cannot accommodate.

The TAC-6 MK II chassis is an entirely TMS-engineered structure — not a Toyota Land Cruiser with modifications. The Toyota Land Cruiser 70 Series provides proven, globally supported components, retained deliberately for logistics resilience across 170+ countries. The chassis, body architecture, and structural system are designed and manufactured by TMS from the ground up.



15–20 YEAR PLATFORM LONGEVITY

- No thread rotation, no relaxation, no re-torque requirements.
- Structural performance consistent from day one to end-of-life.
- Designed service life: 15–20 years.

LOCKBOLTPIN-AND-COLLAR JOINT

- Minimal welding by design.
- Eliminates heat-affected zones, weld fatigue and cracking in service.
- Vibration-proof. Higher, consistent clamp force.

ADVANCED HIGH-STRENGTH STEEL CHASSIS

- AHSS and UHSS structural steel
- Maximum strength-to-weight performance under sustained combat load.

PLATFORM · DIFFERENTIATORS

VS3® Vector Dynamic Hydraulic Stability System

Active hydraulic platform – replaces conventional shocks, coils and leaf springs

The VECTOR system continuously monitors and adjusts suspension behaviour across all six wheel stations in real time, maintaining vehicle stability, weapon platform accuracy, and crew effectiveness on terrain that would defeat any conventional suspension architecture.

REAL-TIME STABILISATION

- Active pitch, roll and yaw control at speed.
- Crew fatigue significantly reduced on extended operations.

ADJUSTABLE RIDE HEIGHT

- On-the-fly: 1,890 mm to 2,250 mm.
- Low profile for concealment or air transport; max clearance for terrain.

SELF-RECOVERY MODE

- Active suspension assist in sand and mud.
- Front-mounted winch as secondary recovery system.

WEAPON PLATFORM LOCK

- Suspension locks in firing mode, accurate weapon deployment on uneven ground,
- No preparation required.

FAIL-SAFE DEFAULT

- Reverts to conventional suspension on electrical failure.
- Mobility is never catastrophically lost.

AUTOMATIC LEVELLING

- Self-levelling on the gradient is critical for accurate weapon deployment and crew safety on side slopes.



ZF 8HP90 — How the Power Reaches All Six Wheels

OE-engineered driveline ·Torsion split · Electronic locking differentials

ENGINE

Toyota 1GD-FTV. 2.8L Diesel. 172 kW. 620 Nm. JP8-capable

ZF 8HP90 —8-SPEED AUTOMATIC TRANSMISSION

1,000 Nm input capacity. 11-tonne GCWR. 7.81 ratio spread. Predictive shift control. Torque converter lock-up all gears

TRANSFER CASE

High / Low range ·Distributes drive to front and rear prop shafts

FRONT AXLE

Electronic locking differential. L—R

MID + REAR AXLES

Electronic locking differentials. x2 axles

When locked, equal torque to all six wheels simultaneously. Full 6-wheel drive traction in sand, mud, rock and slope



Armoured Cab – Built to Keep the Crew in the Fight

BALLISTIC PROTECTION & SURVIVABILITY

Standard Configuration	STANAG 4569 Level 1, protection against small arms fire, fragmentation and blast effects
Up-Armour Option	Appliqué armour system, enhanced STANAG level 2 classification available; contact TMS for details
Armour Material	Armox 620T ballistic plate, high hardness, reduced weight at equivalent protection level
Easily-Repairable Hull	Can be repaired at maintenance depot
Rollover Protection	Internal uni-body structural frame, rollover protection, DEF STAN 00-056 compliant

CREW CONFIGURATION

Armoured Cab Crew	4 fully equipped crew (double cab), DEF STAN 00-25, 95th percentile HFE design
GDAMS Operators	Total crew: 2
Climate Control	HVAC full control –32°C to +55°C · Designed for desert and arctic operations
Situational Awareness	360-degree camera system. 4 dedicated blackout modes. 12V/24V dual-voltage



PLATFORM · DIFFERENTIATORS

The 6×6 Flatback — Big Capability. Small Footprint.

Rear deck rated for GDAMS, full ammunition load and all supporting systems

REAR DECK SYSTEMS CAPACITY

- Fully integrated GDAMS 120mm Mortar System
- Ammunition stowage: 50 rounds of 120 mm on a double cab vehicle. 100 rounds on a single cab
- Digital fire control unit, integrated with vehicle GPS/navigation
- Power interface, GDAMS draws from vehicle 12V/24V architecture, no separate generator
- Thermal management for fire control electronics — supplied via vehicle power architecture
- Mortar crew platform, 2 operators with equipment and personal kit
- Optional: additional 300L fuel tank for extended range operations



WEAPONS INTEGRATION

GDAMS — Ground Deployed Advanced Mortar System

Direct integration onto the TAC-6 MK II rear flatback · No structural modification required

The GDAMS integrates directly onto the TAC-6 MK II rear deck via hardpoints engineered into the chassis at design stage, not retrofitted. The mount interfaces with the vehicle's navigation architecture and dual-voltage electrical system, drawing positional data and power directly from the platform. No external generator. No separate computing unit.

NAVIGATION INTEGRATION

- Vehicle GPS/navigation feeds directly to GDAMS digital fire control.
- Positional data always current.
- No separate survey required.

OPERATION MODES

- Ground-deployed operation - Rapid deployment for shoot and scoot purposes

ELECTRICAL INTERFACE

- System draws from TAC-6 12V/24V architecture.
- No separate generator.
- Thermal management for fire control electronics supplied by vehicle power architecture.
- No external cooling unit required.

STRUCTURAL MOUNT

- GDAMS mounts to rear deck hardpoints — purpose-engineered into chassis at design stage.
- Rated to full weapon system load including ammunition stowage.

Setup time: seconds from halt to firing — the mortar crew can be delivering effects before a static system has left its transit position.



GDAMS — System Capability & Loadout

120 mm CONFIGURATION — EXTENDED RANGE PRECISION INDIRECT FIRE	
Maximum Effective Range	9,000 m
Unguided CEP	1.5% PED and 1% PER (conventional round), sufficient for area effect targets.
PM120 GPS-Guided Round	10m CEP
On-Vehicle Ammunition Load	50 rounds of 120 mm (Double-cab), and 100 rounds (Singe-cab), sufficient for multiple complex fire missions
Fire Control	Automated traverse and elevation. Ballistic solution computed automatically upon Target Identification. Automated laying of the gun to the target. Integrated drone spotter for target designation and observation of impact

Legend	
CEP	Circular Error Probable
PED	Probable Error in Deflection
PER	Probable Error in Range



Organic UAS

ISR · Target acquisition · Calls for fire · Impact assessment

A small UAS with EO/IR sensor and laser designator, operating above the line of sight, provides the GDAMS team with persistent, precise, low-risk target acquisition at ranges that preclude counter-observation. Detection to first round: seconds, not minutes. The GDAMS and the drone are one integrated fires system, not two separate capabilities.

ISR - SCOUT AHEAD

UAS operates ahead of the vehicle axis, identifying threat positions and targets before the TAC-6 enters engagement range. Crew never exposed to counter-observation.

CALLS FOR FIRE

Target coordinates from the UAS transmit directly to the GDAMS digital fire control. Ballistic solution computed automatically. No voice correction. No manual calculation.

PRECISION GUIDANCE

Drone laser designator marks the specific target. GPS-guided 120 mm round impacts exactly where the drone designates. Single round — single effect at 9,000 m.

IMPACT ASSESSMENT & CORRECTION

Drone operator observes round impact, transmits digital fire correction before the crew has reloaded. Dynamic tracking of moving targets. Kill chain: near real-time.

The TAC-6/GDAMS executes the fire mission and displaces immediately. The drone observes the impact. The vehicle is already moving. The enemy counter-battery solution is negated.



TMSI Family of Vehicles

Common Toyota OEM components, parts and service network

TMS designs and manufactures a family of light tactical vehicles derived from a common chassis architecture. Each platform is optimised for a specific operational role while sharing a common Toyota OEM support and logistics baseline, reducing total programme cost and operator training requirements across the fleet.

TAC-6 MK II — MISSION VARIANTS

Patrol & Force Protection	Armoured double cab · STANAG 4569 Level 1 / 2
Indirect Fire Support	GDAMS 120 mm mortar system. Drone-integrated fires
Ambulance Variant	Medical Evacuation (CASEVAC) Protected cab. Field-deployable
Command & Control	Mission-configured communications suite supporting networked operations
Logistics & Forward Resupply	Flat-deck transport. Access where standard logistics cannot follow

ONE ARCHITECTURE · COHERENT FLEET

Shared Toyota OEM components across all platforms. Common service schedule. Common technician training. Common parts network spanning 170+ countries.

One acquisition decision – five distinct mission capabilities delivered across a single logistics baseline.

STRIKE VIPER SV6

- Heli-portable Light Reconnaissance & Assault Vehicle.
- C-130 / CH-47 deployable.
- 1,980 kg combat weight.
- 1,300 kg payload. 160 km/h.
- Shares Toyota OEM components, parts and service network with TAC-6 MK II



PLATFORM

Drive Configuration	6×6 Permanent AWD
Combat Weight (GVM)	7,000 kg
Payload Capacity	Up to 4,000 kg (mission configuration dependent)
Width	1,900 mm
Height (adjustable)	1,890 mm – 2,250 mm (VS3® on-the-fly)
Ground Clearance	280 mm (standard configuration)

POWERTRAIN

Engine	Toyota 1GD-FTV. 2.8L. 172 kW. 620 Nm
Fuel	Diesel / JP8 / F-34 (NATO)
Transmission	ZF 8HP90. 8-speed auto. 1,000 Nm. 11T GCWR
Drive System	6×6 AWD. Hi/Lo transfer case. Elec. locking diffs
Fuel Capacity	310L standard (+300L optional = 610L total)
Ground Clearance	280 mm (standard configuration)
Curb Weight	2,800–5,800 kg (configuration dependent)

PERFORMANCE

Top Speed	160 km/h (governable)
Cross-Country Speed	80 km/h
Operational Range	1,200 km minimum. 2,000+ km extended
Fording Depth	700 mm (without preparation)
Air-Deployable	C-130 ×2 per aircraft. C-390. CH-47
Operating Temp	–32°C to +55°C

PROTECTION

Ballistic Protection	STANAG 4569 Level 1 (standard)
Up-Armour	Appliqué armour - enhanced STANAG level 1 / 2 available

LIFECYCLE

Service Life	15–20 years (designed)
MTTR (field repair)	≤20 minutes (field-replaceable units)
COTS Components	≥80%. Toyota global network. 170+ countries

TMSI Tactical Mobility Solutions International

TAC-6 MK II + GDAMS

One Platform. Decisive Capability.

"The force that projects fastest, with the most capable organic firepower, holds the decisive advantage."



BUILT FOR NOW

- Shoot and scoot survivability.
- Low signature.
- Drone-integrated fires.
- Organic capability without external fire support dependency.

GLOBALLY SUSTAINED

- Toyota components.
- 170+ countries.
- ≥80% COTS components.
- No proprietary supply chain.
- No specialist tooling.
- Maintained anywhere.

TAC-6 / GDAMS, THE PERFECT COMBINATION

- GDAMS 120 mm.
- Sub-10-metre CEP with guided munitions.
- 50-100 rounds on-vehicle.
- Organic to the smallest manoeuvre element.
- 2 years of testing have culminated in one integrated, qualified solution.
- The combination of ZF HP90, VECTOR and a one-of-a-kind chassis makes this truly the best in its class

PURPOSE-BUILT

- A TMS-engineered 6×6 chassis built from the ground up for combat.
- Not a conversion.
- Not a modification programme.