

Integrated Land, Air & Sea Technology Solutions

UNMANNED POLICE GROUND VEHICLE



8×8 ALL-TERRAIN AUTONOMOUS PLATFORM · BROCHURE & TECHNICAL DATASHEET

Engineered for reliability. Proven in the field.

Who We Are

Subsea Sales and Engineering Pte. Ltd.

A technology and engineering solutions provider delivering innovative products and integrated systems across the marine, land and air domains. We work with world-class technology partners to deliver intelligent solutions that improve operational efficiency, safety and productivity.

Our expertise spans advanced robotics, autonomous systems, AI-powered inspection, digital transformation and full lifecycle engineering support.

MARINE

ROV · AUV · survey

LAND

UGV · inspection
robotics

AIR

UAV · LiDAR ·
thermal

AI

Vision · digital twin



Regional support across Southeast Asia, backed by an experienced engineering team and complete turnkey project delivery.

Product Introduction



Keeping personnel out of harm's way

Designed to operate in challenging environments, the UGV combines exceptional mobility, high payload capacity and intelligent autonomous capability to perform a wide range of mission-critical tasks.

The Unmanned Police Ground Vehicle is an advanced 8×8 all-terrain autonomous platform developed to support modern law enforcement, homeland security and public safety operations.

Powered by a pure electric drive system with an optional diesel hybrid range extender, it offers quiet operation for covert missions, a pure electric range of over 40 km and an extended operational range of up to 500 km. The robust chassis carries payloads exceeding 500 kg, traverses difficult terrain, climbs slopes of up to 30°, negotiates trenches and vertical obstacles, and operates at speeds of up to 50 km/h.

It supports remote, semi-autonomous and fully autonomous driving modes, with waypoint navigation, intelligent obstacle avoidance and one-touch return-to-home — giving operators safe standoff control at up to 5 km.

8×8

DRIVE CONFIGURATION

500 kg

PAYLOAD CAPACITY

500 km

EXTENDED RANGE

50 km/h

MAXIMUM SPEED

5 km

REMOTE CONTROL RANGE

Chassis, Drive & Steering Architecture

01

Modular steering axle

Common axle architecture expandable to 4×4, 6×6 and 8×8 configurations from a single design family.

02

6×6 electric distributed drive

Independent electric drive at each wheel station delivers powerful, evenly distributed traction.

03

Differential / Ackermann steering

Pivot steer and multi-mode steering give exceptional manoeuvrability in confined spaces.

04

Balance arm & double-wishbone suspension

Long-travel independent suspension engineered for extreme off-road duty cycles.

05

Full drive-by-wire chassis

Native by-wire control, ready for remote, semi-autonomous and fully unmanned operation.

Datasheet — Basic Performance Parameters

MASS & DIMENSIONS	
Total mass	≤ 2000 kg
Curb weight	≤ 1500 kg
Payload capacity	≥ 500 kg
Overall dimensions (L×W×H)	3000 × 1800 × 1190 mm
MOBILITY	
Maximum speed	≥ 50 km/h
Average off-road speed	≥ 20 km/h
Max climbing gradient	≥ 30 deg
Max side slope angle	≥ 20 deg

OBSTACLE PERFORMANCE	
Minimum ground clearance	≥ 280 mm
Vertical obstacle clearance	≥ 300 mm
Trench crossing width	≥ 600 mm
POWER & ENDURANCE	
Pure electric range	≥ 40 km
Range extender	Diesel hybrid, up to 500 km
Remote operating range	5 km (extendable on request)
Drive system	Pure electric, distributed

Powertrain & Endurance

A pure electric drive system delivers near-silent movement for covert approach, while an optional diesel hybrid range extender removes endurance as a mission constraint.

PURE ELECTRIC

≥ 40 km

Silent-running battery mode for covert surveillance and low-signature approach.

HYBRID EXTENDED

up to 500 km

Diesel range extender recharges on the move for sustained, long-duration tasking.

LOW SIGNATURE

Reduced noise & heat

Electric drive lowers acoustic and thermal signature versus conventional vehicles.

DISTRIBUTED TRACTION

Per-wheel drive

Independent wheel-station drive maintains mobility even under uneven loading.

TERRAIN ENVELOPE

30 deg

Climb gradient

20 deg

Side slope

300 mm

Vertical step

600 mm

Trench width

280 mm

Ground clearance

Autonomy, Navigation & Control

01

REMOTE OPERATION

Short-range remote control plus a remote integrated display and control terminal, with an operating range of 5 km — extendable on request.

02

SEMI-AUTONOMOUS

Operator-supervised driving with assisted steering, obstacle avoidance and speed governing over the planned route.

03

FULLY AUTONOMOUS

Preset trajectory and waypoint navigation with intelligent obstacle avoidance and one-touch return-to-home.

Control & safety features

- Waypoint and preset-trajectory navigation
- Intelligent obstacle detection and avoidance
- One-touch return-to-home recovery
- Remote integrated display and control terminal
- Safe operator standoff at up to 5 km
- Drive-by-wire chassis with redundant command paths
- Quiet electric running for covert approach
- Multi-mode steering for confined-space manoeuvre

Modular Payload Bay

The 1.5-tonne platform adapts to new missions simply by swapping modules — one chassis, many roles. The payload bay provides mechanical, power and data interfaces for each module.

Advanced surveillance systems

Gimbal-mounted EO cameras for persistent wide-area observation.

Thermal imaging cameras

Night and low-visibility detection of personnel and vehicles.

Communications equipment

Mobile relay and mast-mounted antennas to extend network reach.

Loudspeaker / public address

Remote verbal warning and crowd instruction from safe standoff.

CBRN detection sensors

Contaminated-environment survey with no personnel exposure.

Robotic manipulator arms

Remote handling, door breaching and object recovery.

EOD equipment

Explosive ordnance investigation and disposal tooling.

Medical evacuation (CASEVAC)

Stretcher module for casualty extraction under threat.

Logistics and resupply carriers

Autonomous movement of ammunition, water and stores.

Mission Applications

Border Security

Persistent patrol of extended frontiers without exposing personnel.

Critical Infrastructure

Standing protection for ports, plants, airfields and utilities.

Tactical Surveillance

Reconnaissance and strike support with thermal and EO sensing.

Riot & Crowd Control

Non-contact presence with loudspeaker and observation payloads.

Explosive Threat Response

EOD tooling and manipulator arms operated from safe standoff.

Search & Rescue

Access to unstable or contaminated ground ahead of responders.

Disaster Relief

CASEVAC and supply movement across degraded terrain.

Autonomous Logistics

Unmanned resupply runs on preset routes with return-to-home.

SECTION 02

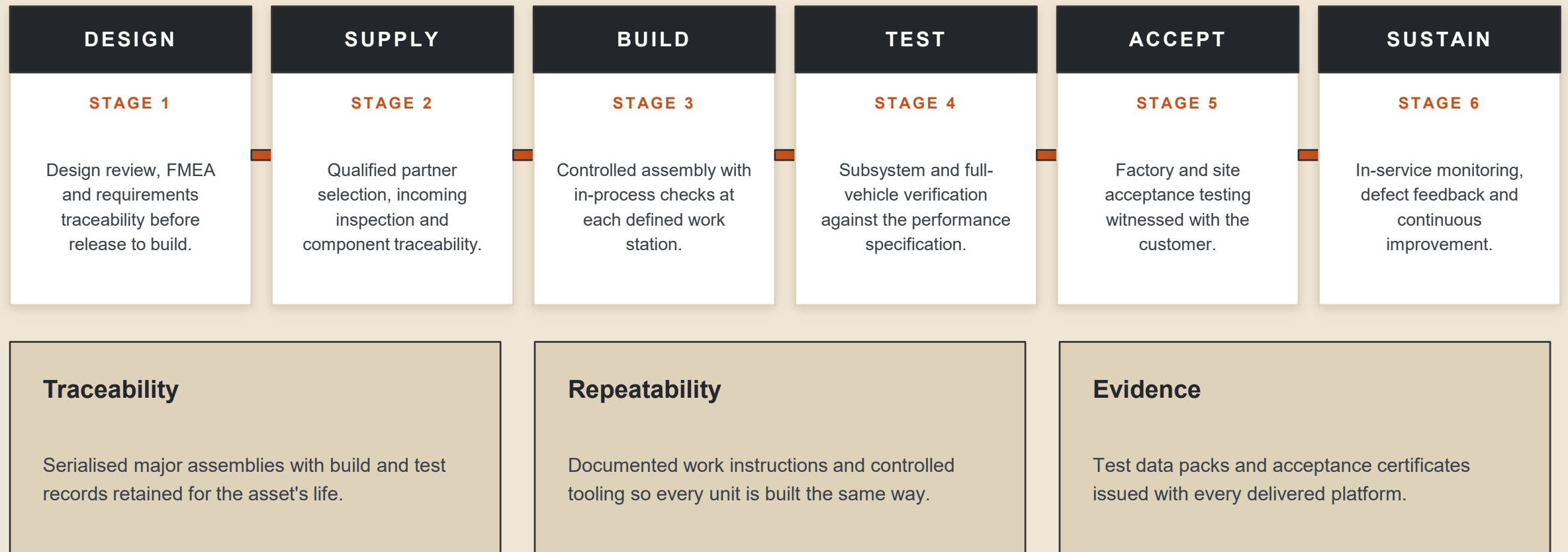
Quality Assurance & Reliability

Reliability is designed in, verified by test, and sustained through the full service life.



Quality Assurance Framework

Every platform passes through a staged assurance process, from design review to field acceptance. Each gate has defined entry criteria, recorded evidence and a documented sign-off.



Test, Validation & Reliability Engineering

Every platform is verified against the performance specification before acceptance. Test scope is tailored to the customer's operating environment and duty cycle.

Mobility & terrain trials

Gradient, side slope, trench and vertical step performance verified against specification.

Endurance & duty cycle

Extended-run testing of the electric drive and hybrid range extender under load.

Environmental exposure

Operation across temperature, dust, vibration and moisture conditions typical of the deployment area.

Autonomy & safety validation

Waypoint accuracy, obstacle avoidance, link-loss behaviour and return-to-home recovery.

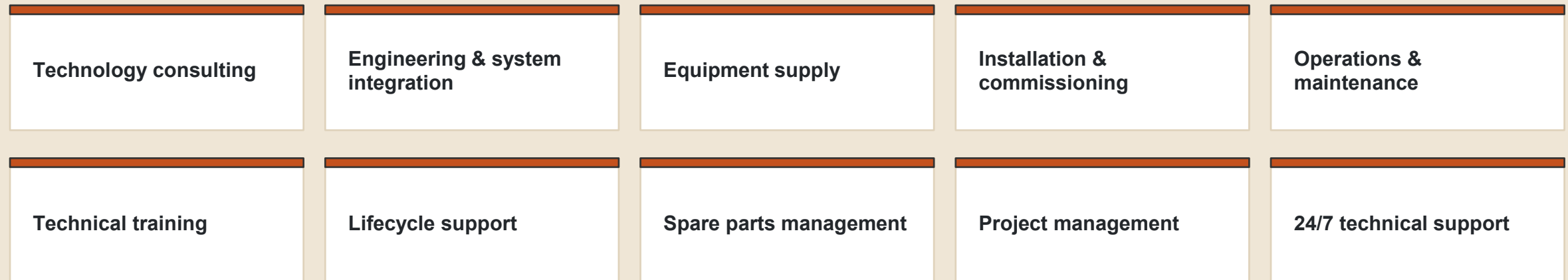
Payload integration testing

Each mission module verified for fit, power, data and command interoperability.

Redundant command paths and fail-safe recovery keep control assured on every mission.

Through-Life Support & Services

Reliability in service depends on the support behind the platform. SSAEPL delivers the full lifecycle, from consulting through to 24/7 technical response.



24/7

Technical support

Regional

Southeast Asia coverage

Turnkey

Complete project delivery

Managed

Spares & obsolescence

Why Subsea Sales and Engineering

■ Integrated land, air and sea technology solutions

■ Experienced engineering and technical support team

■ Advanced AI and robotics capabilities

■ Regional support across Southeast Asia

■ Strategic partnerships with leading global technology providers

■ Complete turnkey project delivery

■ Comprehensive after-sales service and training

■ Commitment to innovation, quality and customer success

Contact us

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Industries served: offshore oil & gas, offshore wind, marine construction, ports & harbours, defence & homeland security, government agencies, mining, utilities, infrastructure and water.