



# IMACHINE



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## IMACHINE Autonomous Vehicle Enablement Platform

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The IMACHINE Autonomous Enablement Platform delivers robust, modular and fully integrated off-road robotics & autonomous vehicle solutions for industrial, mining, construction, landscaping and agricultural applications.

The end-to-end platform combines advanced autonomy, robust modular hardware, multi-layer safety and seamless integration with machinery and payloads.



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[www.imachine.com.au](http://www.imachine.com.au)

## Turn-key Autonomous Solutions

IMACHINE's Autonomous Enablement Platform supports a wide range of use cases and features.

The platform enables the delivery of turn-key autonomous vehicle and mobile robotics solutions for end users while also offering integrated solutions for tech startups and OEMs.



### IMACHINE's Autonomous Vehicle Platform Key On-Board Systems:

#### COMMUNICATIONS

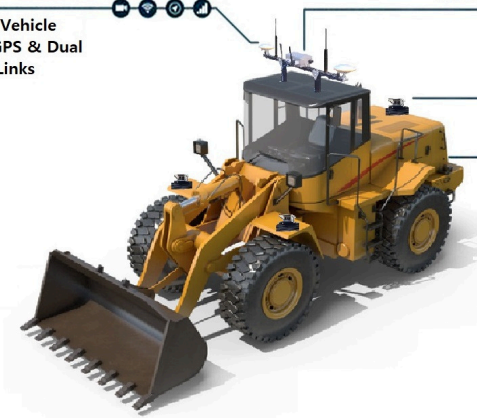
High Speed Vehicle  
Telemetry, GPS & Dual  
Redundant Links

#### NAVIGATION & AWARENESS

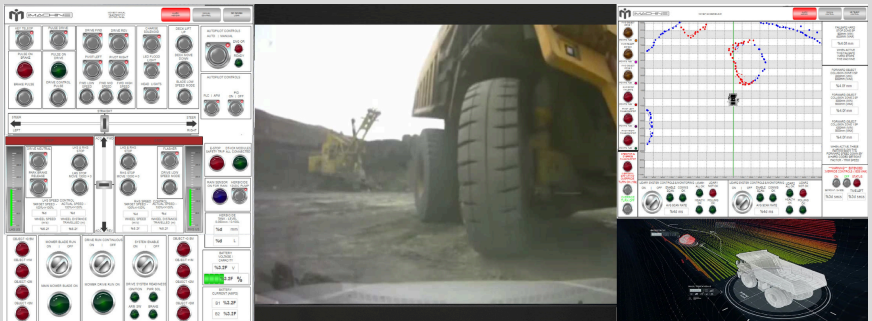
AI, Machine Vision, LIDAR & Sensing Systems Scan in Real-time for Safe Navigation with Object Detection & Avoidance

#### VEHICLE CONTROL

An on board processor allows autonomous platform and user teleoperation interface with throttle, brakes, steering, hoist, hydraulics and other systems.

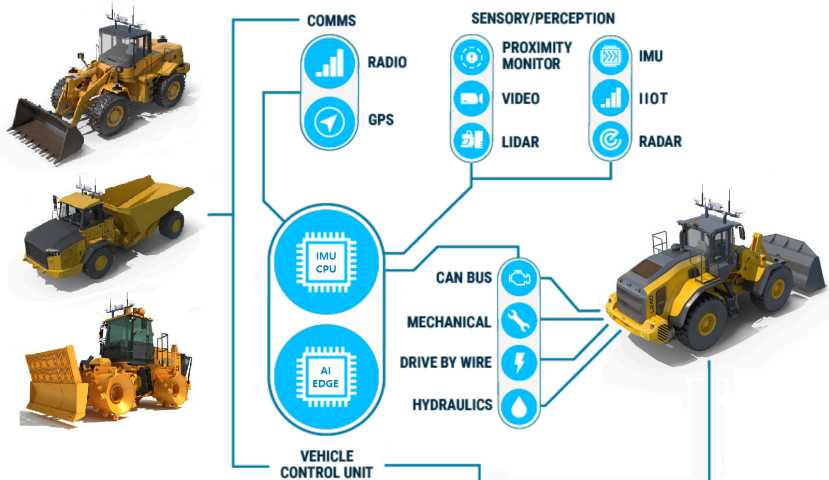


### IMACHINE's Remote Operations & Autonomous Systems Software:



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## DIVERSE FLEET ON-BOARD AUTONOMOUS SYSTEMS



## REMOTE OPERATIONS

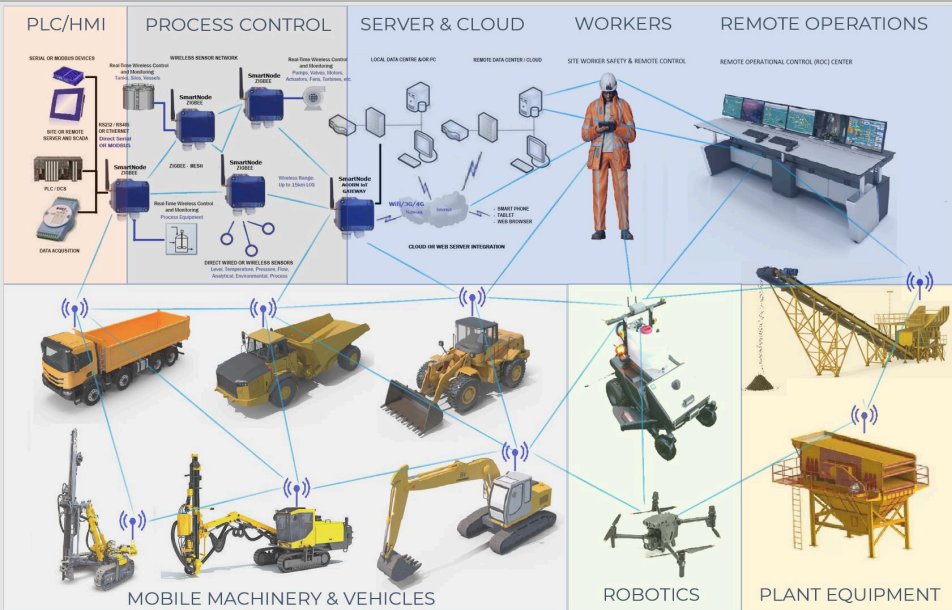


OEM Vehicle Autonomy Upgrade Packages provide conversion of many common machine makes and models to bridge all vehicle functions with IMACHINE's Autonomous Vehicle Enablement Platform.

# IMACHINE's Unifying Site to Vehicle IIoT & R2E Connectivity Platform



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**Maintain remote command & control of fleets at all times, with intelligent integration of vehicles, workers and operating conditions.**

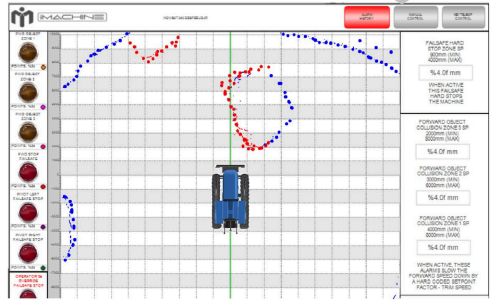
Ultra-long-range mesh radio and satellite backhaul for remote autonomous operations. On-vehicle and in field Wireless Modules for IIoT and R2E (Robot to Everything) connectivity, integrates vehicles with site workers, infrastructure, processes, external systems, gates and access control.

Real-time environmental, geo-technical, fleet integration and safety monitoring, enables fast situational awareness for autonomous vehicles, streamlining operations and improving performance on site.



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# IMACHINE's Complete Autonomous Vehicle & Robotic UGV Rover Packages



## FULL AUTONOMY

READY FOR ACTION



IMACHINE's Complete Autonomous Vehicle UGVs & Crawlers including the MULTIBOT fully electric UGV Rover and TRACBOT Heavy-Duty Crawler Tractor present a proven Turn-Key solution, with the flexibility to customise payloads and mission planning for many applications.



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## MACHINE's Autonomous Enablement Platform Core Features



At a glance, each IMACHINE platform provides the following core systems:

- **Rugged On-Vehicle Electronics, Computing & Sensors** for durability and reliability including engine, steering & vehicle control systems.
- **Advanced navigation, safety and situational awareness** systems for precise operation in complex environments. GPS / LiDAR / AI & vision system fusion guidance system with 7 layers of safety.
- **Ultra-long-range connectivity and real-time teleoperation** with multiple on-board cameras for seamless remote control and operation.
- **Full-Stack Hardware & Software Platform** for end-to-end requirements including web-based GUIs, GCS (Ground Control Station), mapping & mission planning software, on-board real-time processing of automation and vehicle systems, ECU integration.
- **OEM Vehicle Autonomy Upgrade Modules** for onboard integration with existing heavy machinery and off-road vehicle fleets into teleoperated and fully autonomous systems.
- **Onboard Payload Automation** customisable through standard PLC / SCADA type systems embedded onboard vehicles and robots to meet client requirements and evolving conditions. Supporting diverse operational needs and rapid changes in the field.

**Ready to launch your next robotics venture?  
Contact IMACHINE Robotics for a free consultation.  
Contact us at [info@imachine.com.au](mailto:info@imachine.com.au)**



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