

# RUGGED VEHICULAR COMPUTING

Empowering Mission Critical  
Vehicular Platforms



Rugged computers are instrumental in unlocking success in mission-critical operations. They enable the deployment of advanced technologies (e.g., artificial intelligence, edge processing) across a range of vehicular platforms, delivering critical capabilities (e.g., data analysis at edge, autonomous detection of abnormalities), essential for decision making in mission-critical operations.

ST Engineering offers a myriad range of rugged computing solutions to meet the needs of different vehicular-based operations.



### **RUGGED DESIGN**

Qualified to MIL-STD 810, MIL-STD 461 and MIL-STD 1275 standards for extreme ruggedness needs of track vehicle profile.



### **CUSTOMISABLE**

NATO Generic Vehicle Architecture (GVA) & GVA-compliant. Modular interfaces design allowing ease of customisation for tailored solution (e.g. LAN, CANBus, ports, connectors).



### **PROGRAMME SUPPORT**

Manufactured in Singapore with full design ownership to offer long lifecycles support.



### **LIFE CYCLE COST**

Consistent mid-life upgrade and tech-refresh available to extend service life of products.



### **GUARANTEED PERFORMANCE**

Track record of innovation in rugged technology spanning over 57 years and supplying rugged computing products over 20 years.





## OVERVIEW



### Rugged Computers

Rugged computers: advanced central processing units built to withstand extreme environments. Ensuring you stay connected and productive no matter where you are.



### Multi-Functional Display

High quality display unit with integrated human-machine interfaces for extreme environment operation



### Rugged Panel Computer

Integrated with rugged computing and flat-panel display, enabling seamless operation in harsh environment.

# DEPLOYMENT



## AUTONOMOUS OPERATIONS



In support of next generation autonomous vehicle fleets, our rugged computers enable processing at the edge for enhanced data collection, field exploration and other autonomous operations.

## ADVANCED COMPUTING FOR EXTENDED OPERATIONS



Beyond advanced computing capabilities, we provide rugged and multi-functional displays enabling user-friendly interaction with mission-critical systems, by multiple parties within the vehicle.

## SMALL FORM-FACTOR COMPUTING FOR TIGHT SPACES



Beyond advanced computing capabilities, we provide rugged, multi-functional displays enabling user-friendly interaction with various mission-critical systems within the vehicle.

## Rugged Computer RC510



The Rugged Computer RC510 is equipped with the latest iCore processor and superior power management systems. Its ultra space-saving design optimises the usable space in vehicles, providing users with the flexibility of exploring the most ideal spot to mount the modules.

It is made for easy deployment on wheeled vehicles and performs optimally even in harsh environments.

Users may choose to equip the RC510 with our state-of-the-art Graphic Processor Unit (GPU), which enables the AI capability, boosting the user assistance system and empowering real-time smart decision making.

## Rugged Computer RC530



The Rugged Computer RC530 is equipped with the latest iCore processor and superior power management system. It is designed to perform optimally under harsh environments, and comes in a modular form, making it an ideal computer fit even for space-constrained tracked vehicles. It consists of an extensive range of input/output interfaces to support full connectivity for a myriad of peripherals.

User may choose to equip the RC530 with our state-of-the-art GPU, which enables the AI capability, boosting the user assistance system and empowering real-time smart decision making.

## Multi-Functional Display



The Multi-Functional Display (MFD) features the latest multi-touch projected capacitive touchscreen technology. The MFDs are ruggedised to suit deployment on both tracked & wheeled vehicles, and the user-friendly interface enables hassle-free operation. Users can also enjoy superior graphics quality.

ST Engineering offers MFDs of various sizes to meet dynamic requirements.

## Rugged Panel Computer



The Rugged Panel Computer (RPC) optimises space efficiency by combining both display & compute capabilities into a single hardware. Built to IP65 rating, the RPC is resilient to environmental factors (e.g., shock, dust, water, temperature), allowing it to perform robustly even under tough conditions.

Users may choose to equip the RPC with our state-of-the-art GPU, which enables real-time 3D mapping to support navigation, autonomous driving, and situation awareness.

The advanced GPU is also capable of processing AI algorithms on the move, boosting the driver assistance systems and empowering real-time smart decision making.

ST Engineering offers GVA screens for our RPC series, and RPC of various sizes to meet dynamic requirements.



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