



# ELECTRIFICATION FOR MILITARY GROUND VEHICLES

For Defense and Aerospace companies to serve critical roles in our world, requires a partner who can connect the parts, products, and people that make the incredible possible.

Allient (Allied Nexus Technologies) is a global leader in connecting motion, controls, and power technologies to create products and solutions for customers, from standard component products to preeminent custom-designed, vertically integrated systems for both OEMs and Tier 1 suppliers.



## Why Allient?

Today's military ground vehicle programs continue to advance flexibility and lethality, and as the shift towards ever greater levels of electrification continues, it's imperative that these new vehicle programs offer the same level, if not better performance than today's conventional vehicles do.

As an industry leader in ruggedized vehicle-based motion solutions, Allient offers drive, motor and feedback technologies with voltages ranging from 12 to 800 volts. Our decades of experience working alongside our customers in designing and developing these innovative technologies offers a level of expertise and collaboration not found in other suppliers.

Allient's vertically integrated know-how and manufacturing of both COTS and custom-engineered solutions allow us to meet the specific requirements of our military vehicle customers. We are your trusted partner in ground vehicle electrification.

#### Capability Highlights

- Advanced electromechanical actuation systems for ground vehicles
- Steer-by-wire, electrohydraulic, and electromechanical steering options
- Fully qualified ruggedized vehicle-based solutions and components
- High power density motor topologies up to 14 kW continuous duty
- Design for MIL-STD-810 environments and system level functional safety
- Standard motor frame sizes up from 13 to 190 mm

#### **Products and Systems**

- Fully qualified ruggedized vehicle-based solutions
  - Operating ambient -40 to +85 degrees Celsius
  - MIL-STD-810 environments
- Voltages from 12 to 800 volts
- Current to 300 Arms
- High torque and power density motor topologies
  - Torque up to 67 Nm continuous / 210 Nm peak
  - Power output up to 14kW continuous / 16 kW peak
  - Surface PM, Interior PM options available
  - Slotless and Slotted options available
  - Neodymium Iron Boron and Samarium Cobalt Magnet options available
- Standard Motor Frame sizes up to 190 mm square
- Single and multi-axis motion control systems
- Design for system level functional safety
- Vertically integrated know-how and manufacturing includes motors, gearing, electronics, assemblies, and more
- Domestic and Global Manufacturing options
  - Leverage COTS technologies within the Allied portfolio to meet specific Military requirements as appropriate

## Programs and Applications

High-Speed Active Protection Systems • Missile Launch Platforms Radar Deployment Systems • Ramp Door Lift Systems • Turreted Weapon Systems • Vehicle Positioning Systems

CERTIFICATIONS:
AS9100 Rev-D, ISO-9001

# Advanced Solutions for AEROSPACE & DEFENSE





