

CAPABILITY BRIEF

Military Ground Vehicles

USING OPEN ARCHITECTURE TECHNOLOGIES TO ACCELERATE
MOBILE GROUND SYSTEMS DEPLOYMENT

HIGHLIGHTS

Real-time connectivity platform provides support for open UK Ground Vehicle Architecture (GVA) and NATO GVA

Maintainable multi-domain and multi-level security (MLS) architecture

Efficient technology insertion, maintainability and extensibility capabilities

Robust safety, security, interoperability and resiliency

Based on military grade Data Distribution Service™ (DDS™) standard

RTI Connex[®] DDS delivers military-grade connectivity for open GVA and NGVA vehicle design and operations. It provides fast, scalable, reliable and secure connectivity between manned and autonomous platforms. Through its integration to vehicular software standards, Connex DDS enables rapid system updates and mission-readiness while driving down vehicular maintenance costs.

CONNECTIVITY FOR NEXT GENERATION GVA/NGVA

Next generation military and paramilitary ground vehicles designs are evolving into software-defined integrated platforms that require optimized flow of mission and vehicle data. They run on low latency, high-reliability networks that connect and control the performance, efficiency and safety of differentiating systems in real-time. These systems need to rapidly scale across manned and autonomous vehicles, both legacy and new platforms.

To meet these intelligent data-centric requirements, military ground vehicles must be able to:

1. Acquire and consolidate a competitive set of mission-ready capabilities while increasing mission readiness and reducing operational costs
2. Provide support for open UK GVA and NGVA standards
3. Enable secure, high-speed, reliable and efficient vehicle-to-vehicle (V2V) communications

RTI Connex[®] DDS supports open architecture military ground systems by providing fast, scalable, reliable and secure connectivity between manned and autonomous platforms. Based on the Object Management Group (OMG[®]) DDS standard, Connex DDS runs on top of existing vehicular software standards GVA, NGVA and Adaptive AUTOSAR. Through this standards-based integration and support, Connex DDS delivers rapid integration and mission-readiness while increasing the maintainability of vehicle assets.

Connex DDS enables rapid reconfiguration for different mission roles while improving vehicle reliability and reducing operational training time. The Connex databus architecture enables operators to integrate the GVA and NGVA standards into new and legacy vehicles with minimal downtime.

Connex DDS includes a rich set of tools that accelerate module- and system-level development, debugging, testing, integration and optimization. RTI tools provide the ability to visualize system modules, view interconnectivity and system health as well as introspect and inject data into military ground vehicle systems.

MISSION-CRITICAL SECURITY

As the first solution to comply with the new OMG DDS standard security specification, Connex DDS delivers mission-critical security from edge to cloud. These security plug-ins provide authentication, access control, encryption, data tagging and event logging without modifying the existing DDS network infrastructure. This ensures data confidentiality and integrity while protecting information across multiple security domains from unauthorized access and tampering.

“We are giving our customers a complete solution of armored vehicles with integrated systems and subsystems, all based on the NATO Generic Vehicle Architecture (NGVA) and smart vehicles. We see RTI Connex DDS as an integral part of every solution that we are implementing within the next generation armored vehicles.”

Baruch Dilion

*Vetronics and Integration Division Manager,
Plasan*



ABOUT RTI

Real-Time Innovations (RTI) is the Industrial Internet of Things (IIoT) connectivity company. The RTI Connex[®] Databus is a software framework that shares information in real time, making applications work together as one, integrated system. It connects across field, fog and cloud. Its reliability, security, performance and scalability are proven in the most demanding industrial systems. Deployed systems include medical devices and imaging; wind, hydro and solar power; autonomous planes, trains and cars; traffic control; Oil and Gas; robotics, ships, and defense.

RTI lives at the intersection of functional artificial intelligence and pervasive networkingSM.

RTI is the largest vendor of products based on the Object Management Group (OMG) Data Distribution Service[™] (DDS) standard. RTI is privately held and headquartered in Sunnyvale, Calif.

Download a free 30-day trial of the latest, fully-functional Connex DDS software today: <https://www.rti.com/downloads>.

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