

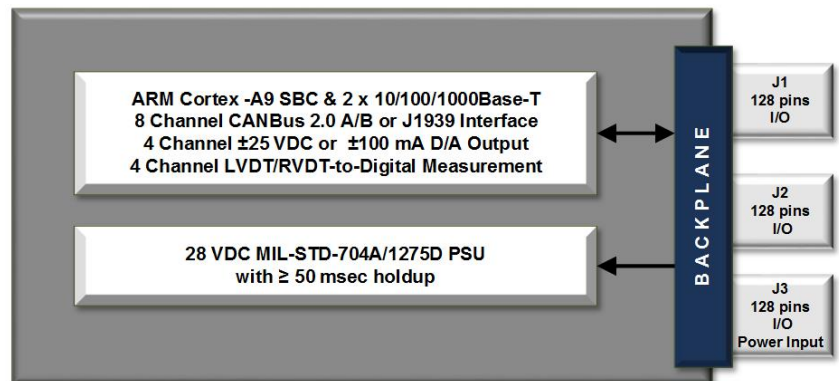


VMS-31CP0A – Vehicle Management System

Off-the-shelf, 3U, 1-slot chassis designed for remote, rugged environment operation

NAI designs [Vehicle Management Systems \(VMS\)](#) around core COTS technology building blocks, offering our customers readily available, interoperable, field-proven systems (or subsystems) designed to withstand the rigors of harsh, SWaP-constrained environments. The [VMS-31CP0A](#) is a pre-configured rugged system with a high-performance, low power ARM® Cortex®-A9 processor. It is ideally suited to support a multitude of military/aerospace applications that require high-density, multi-channel programmable LVDT Measurement; D/A Conversion; CANBus (CAN 2.0 A&B or J1939) and Dual Port Gig-E Ethernet.

The VMS-31CP0A delivers an off-the-shelf, preconfigured hardware solution that accelerates deployment of SWaP-optimized systems in rugged air, land and sea applications. Pairing the VMS-31CP0A hardware with your application will accelerate your time to mission!



Features

- Meets or exceeds: MIL-STD-461F and MIL-STD-810G requirements
- VxWorks®, Xilinx® PetaLinux OS
- Continuous Background Built-in-Test (BIT)
- < 5 lbs. typical
- COTS/NDI
- COSA® Architecture
- Conduction cooled SWaP
- 28 VDC power @ 15 W, typical

Architecture

With our exclusive, modular, interoperable [Configurable Open Systems Architecture™ \(COSA®\)](#), NAI's data acquisition systems seamlessly integrate with our intelligent [multifunction I/O boards](#), containing highest packaging density and greatest flexibility of any multifunction I/O modules in the industry, and can be deployed rapidly with no NRE.

Applications

NAI's [Vehicle Management Systems \(VMS\)](#) perform with a high level of stability and accuracy on military vehicles operating in hostile environments, and are vital on today's battlefield. The VMS-31CP0A provides a controller/monitoring system interface to discrete, analog and digital data inputs, and can control local functions based on input data. The VMS-31CP0A provides system control and monitoring in a single package with Built-in-Test (BIT) capability and can perform many functions including:

- Engine control
- Electrical power distribution
- Flap control and monitoring
- Cabin or cockpit environmental control and monitoring
- Fuel system monitoring
- Crew alerting system

Continuous Background Built-In-Test (BIT)

BIT monitors the status of all I/O during normal operations and is totally transparent to the user. SBC resources are not consumed while executing BIT routines. This simplifies maintenance, assures operational readiness, and reduces lifecycle costs and keeps your system mission-ready.

Single-Source Efficiencies

Eliminate man-months of integration with a configured, field-proven system from NAI. Requirements review through to deployment is a seamless experience as all design, state-of-the-art manufacturing, assembly and test are performed— by one trusted source. All facilities are located in the U.S. and optimized for high-mix/low volume production runs and extended lifecycle support.

Software

Software support includes VxWorks® and Xilinx® PetaLinux. All I/O and communications library Software Support Kits (SSKs) are supplied free of charge.

Target Environment

All products are designed to operate under extreme temperature, shock, vibration and EMI environments. NAI's systems are designed to meet or exceed MIL-STD-461F and MIL-STD-810G requirements.

**MIL-STD-461F requires proper shielded cables and system practices*

Specifications are subject to change without notice.

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Certified Small Business