

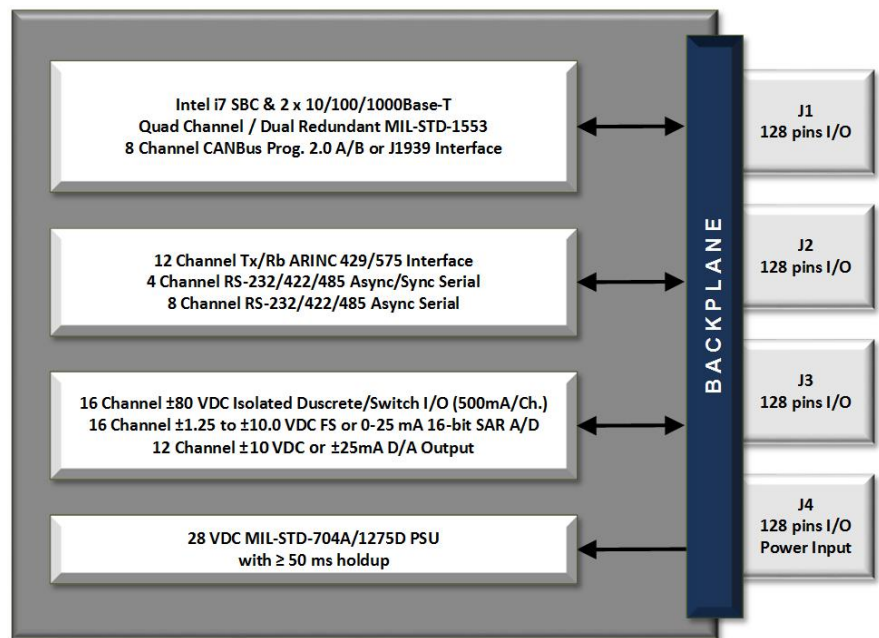


RDC-33CP0B – Remote Data Concentrator

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

NAI designs [Remote Data Concentrators \(RDC\)](#) 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 [RDC-33CP0B](#) is a pre-configured rugged system with a high-performance, Intel® i7 processor. It is ideally suited to support a multitude of military/aerospace applications that require ARINC 429/575 Communications; RS-422/423/485 Serial Communications; Dual-Redundant, Quad Channel MIL-STD-1553B; Digital-to-Synchro Simulation, Synchro-to-Digital Measurement; AC Reference; A/D Conversion; D/A Conversion; Discrete I/O; CANBus (CAN 2.0 A&B or J1939); Differential I/O and Dual-Port Gig-E Ethernet.

The RDC-33CP0B delivers an off-the-shelf, preconfigured solution that accelerates deployment of SWaP-optimized systems in harsh air, land and sea environments. Pairing the RDC-33CP0B hardware with your application will accelerate your time to mission!



Features

- Meets or exceeds: MIL-STD-461F and MIL-STD-810G requirements
- Linux® (CentOS®, Red Hat®), Windows® Embedded Standard 7 OS
- Continuous Background Built-in-Test (BIT)
- < 10 lbs. typical
- COTS/NDI
- COSA® Architecture
- Conduction cooled SWaP
- 28 VDC power @ 45 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

Designed to consolidate inputs from a military aircraft's systems and sensors and distribute them via a full duplex switched Ethernet network, NAI's [Remote Data Concentrators \(RDC\)](#) serve as the "central nervous system" of a military aircraft. Additionally, these systems host the avionics and utilities functions, eliminating several boxes and hundreds of pounds of cable. NAI's RDUs perform with a high level of stability and accuracy on military vehicles operating in hostile environments and are a perfect fit for a number of avionics applications including fixed-wing, rotorcraft and unmanned aerial vehicle (UAV) platforms where compact, low-power systems are required.

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 Linux® (CentOS®, Red Hat®), Windows® Embedded Standard 7. 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