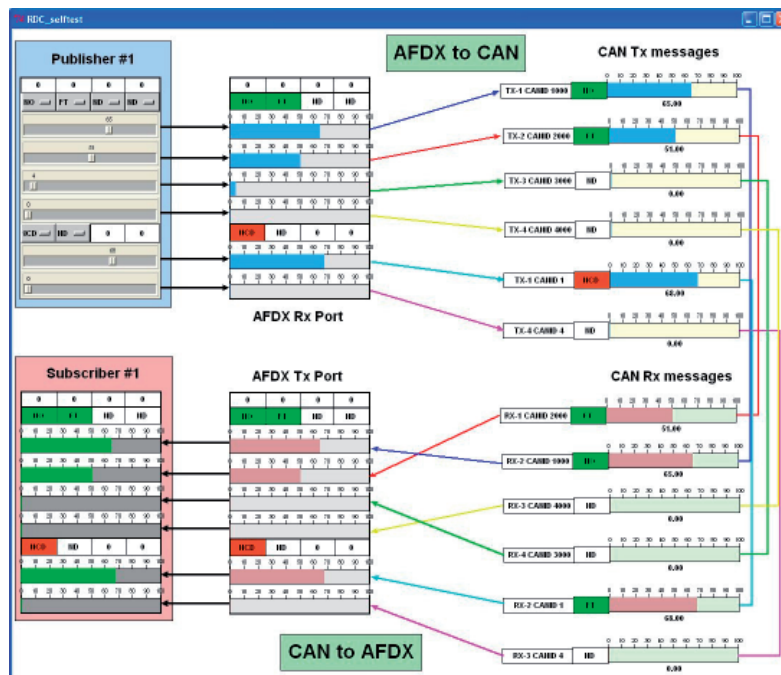




NetGate/RDC

787 Remote Data Concentrator Simulation



- Full Simulation of the 787 Remote Data Concentrator (RDC)
- Developed of the TechSAT NetGate Product Series for Next Generation Avionics Architectures
- Easy to use Graphical User Interface (GUI)
- ARINC 664 (AFDX®) to CAN Bus/ARINC 429 Gateway
- Supports Data Loading via ARINC 615A to downstream LRUs
- Supports Data Loading per ARINC 826 A and B
- Supports Data Transfer per Required Protocols
- Full Event Logging During Message Transfer and Complete Post Load Diagnostics
- Optional Data Analyzer for AFDX® and CAN Bus
- Developed in Cooperation With Smiths Aerospace





mastering
realtime
complexity

NetGate/RDC

787 Remote Data Concentrator Simulation

General

TechSAT's NetGate/RDC is a complete simulation of the Smiths Remote Data Concentrator (RDC). Based on the versatile NetGate family of gateway products, the NetGate/RDC provides a full two-way portal between ARINC 664 (AFDX®) and CAN Bus and ARINC 429 „feeder“ networks. The RDC concept allows use of legacy ARINC 429 LRUs in Next Generation aircraft and supports the use of emerging CAN Bus networks in avionics applications.

Test and Integration Support

TechSAT's NetGate/RDC provides an ideal tool for 787 network development, test and integration applications. It provides a convention lab based simulation with the full operational characteristics of the 787 RDC. Using other TechSAT products, a complete "table top" 787 Data Network can be constructed for lab and development purposes.

Data Transfer

When used with other NetGate products, data messages in Avionics Ethernet, ARINC 664 (AFDX®), CAN or ARINC 429 can be sent via copper or optical desktop ARINC 664 network and reconstituted into the required protocol using the RDC. Communication from other aircraft networks or from other LRUs resident behind other RDCs can be fully simulated for development, test and integration purposes. Up to ten channels of CAN and four channels of ARINC 429 can be supported in each RDC simulation.

Data Loading Support for CAN Bus

Like traditional NetGate products, TechSAT's NetGate/RDC provides the basis for data loading via non-Ethernet protocols via ARINC 615A. The NetGate/RDC provides full support for 615A over CAN bus and data loading via ARINC 826A. It also supports downstream data loading via proprietary CAN gateways supporting data loading via ARINC 826B (diminutive). It also allows ARINC 429 messages to be transferred via ARINC 664 to allow ARINC 429 LRUs to be loaded with data.

Simulation/Stimulation Support

NetGate/RDC runs as an application on Avionics Development System 2 (ADS2) just like other NetGate products. When the full ADS2 option is taken, the NetGate/RDC can act as a programmable simulation/stimulation source for LRUs up or down stream of the RDC. For example, development of upstream logic functions that may live in the AFDX world can be developed and tested prior to the availability of sensors or downstream LRUs living in the CAN bus world by using the RDC as a simulation source. Conversely, CAN and legacy ARINC 429 devices can be stimulated by the RDC when programmed to simulate upstream control logic, substituting for upstream logic functions that are not yet developed. As a "bridge portal" between avionics networks, the NetGate/RDC provides an ideal monitoring point. CAN, ARINC 429 and

AFDX Analyzer functions can be hosted on the RDC for monitoring of bus traffic on both sides of the gateway in all supported protocols.

Discrete and Analog Support

A full catalog of TechSAT discrete and analog hardware solutions is available to configure the NetGate/RDC to customer requirements. Hardware and firmware are pre-integrated into ADS2 so complex RDC signal requirements can be quickly created.

NetGate/RDC Versions

NetGate/RDC-CAN

> CAN version: 2 to 10 channels

NetGate/RDC-ARINC 429

> ARINC 429 version: 2 channels

NetGate/RDC-CAN/A429

> CAN/A429 version: 2 channels ARINC 429 & 2 to 10 channels CAN Bus

Rover/MST (Multifunction Support Tool)

> CAN Data Loader Version

Options

- > Full ADS2
- > With AFDX View Analyzer package

Discrete and Analog Options

- > Full discrete support catalog
- > Support catalog for most avionics analog signal devices

Available Host Platforms For NetGate/RDC

UHP-6 (Universal Host Platform, 6 PCI slots)

UHP-14 (Universal Host Platform, 14 PCI slots)

