CANBus Communications - NAI's CANBus smart function modules provide independent, isolated channels of CAN serial data bus links, conforming to the ISO 11898 International Standard. All CAN nodes can transmit data and several CAN nodes can request the bus simultaneously. NAI offers three CANBus smart function module models with different levels of support for CANBus 2.0 A and B protocols and CANBus SAE J1939 protocols – offering features including: Fully compliant ANSI C network: Transport and DataLink layers, Adjustable baud rate with speeds up to 1 Mbit/sec and MilCAN compliance.

Module	Description
CB1	8 CANBus Channels, CAN 2.0 A/B Protocol
CB2	8 CANBus Channels, J1939 Protocol
CB3	8 CANBus Channels, CAN 2.0 A/B Protocol or J1939 Protocol

Key Features

- Eight independent galvanically-isolated, channels
- ANSI-C fully Compliant Network, Transport and DataLink layers
- Addressing can be set to be Self-configurable, Non-Configurable or Command-Configurable
- CB1 module stack supports CAN 2.0 A & B protocol. Each channel is independently configurable.
- CB2 module supports the J1939 protocol.
    - Transport and DataLink layers IAW SAE section J1939/21
    - Network layer IAW SAE section J1939/81 for self-configurable or non-configurable device
- CB3 module supports both protocols and allows channels to be set for either protocol
- Adjustable baud rate with speeds up to 1 Mbit/sec supported

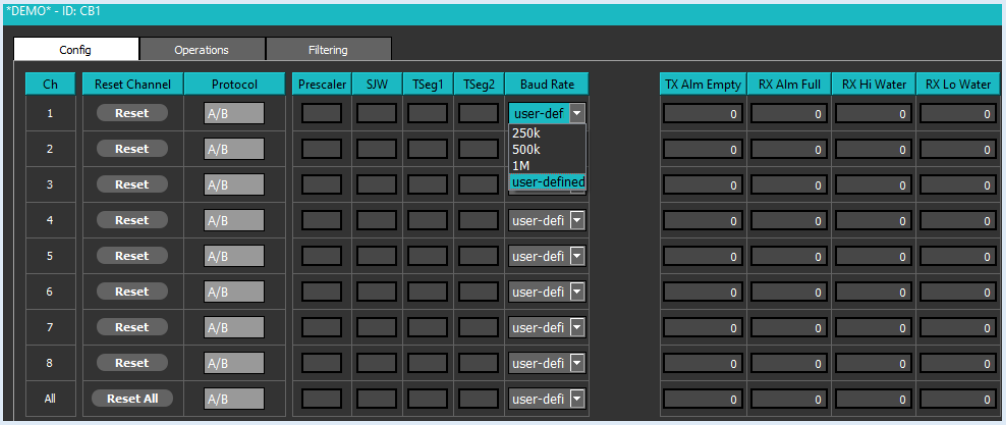
Built-In Test (BIT)/Diagnostic Capability

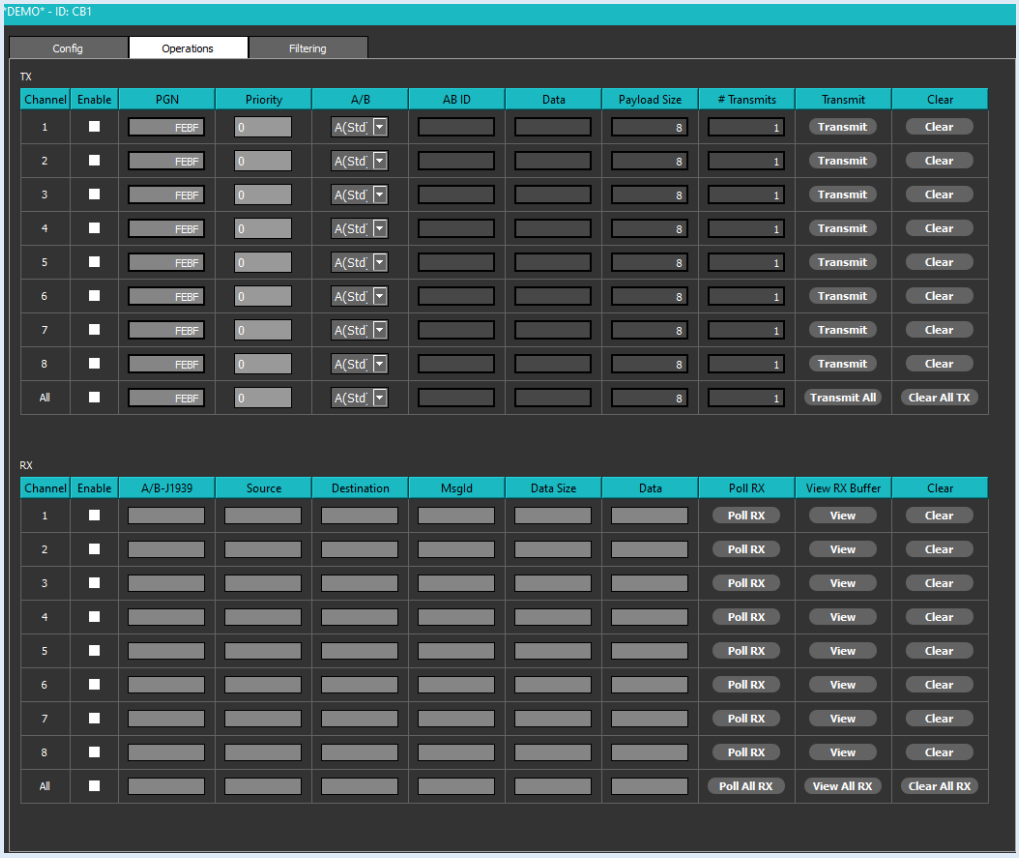
Built-In Test (BIT) is invoked at power on and then can be manually invoked on demand by setting a bit in the Control register for each channel, which forces BIT to be run for the given channel. When running BIT, the CANBus module will be taken out of "Normal" mode and temporarily placed in "Loopback" mode. When BIT finishes, CANBus will be placed back into Normal mode. While in Loopback mode, CANBus will not respond to receive or transmit requests. A specific CAN test message is sent, received and verified for each of the CAN channels while in loopback mode. Upon failure, an interrupt is generate.

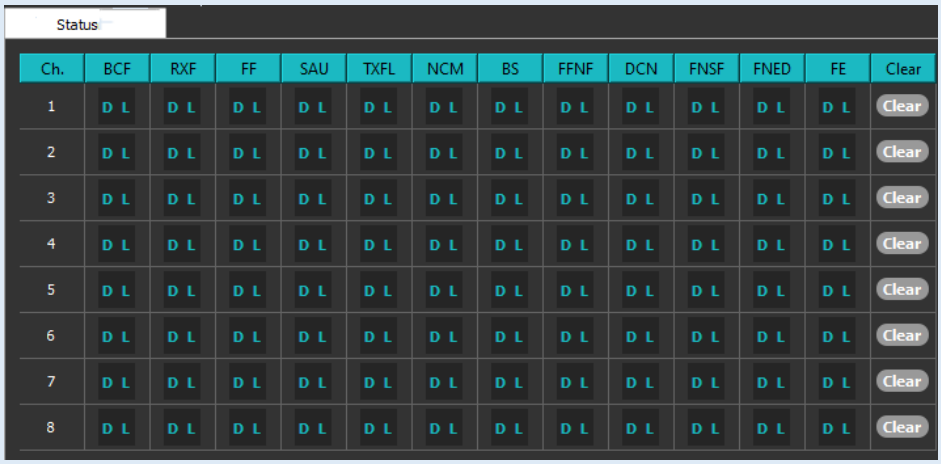
New Embedded Soft Panel

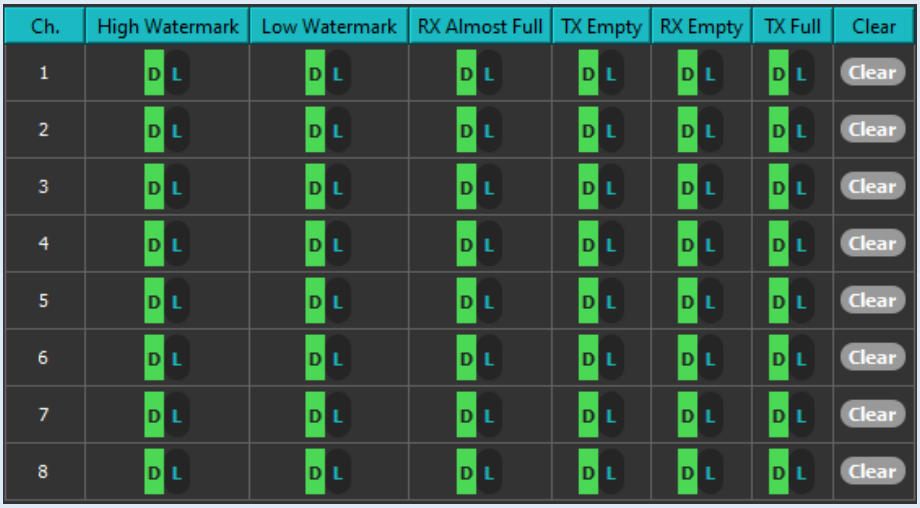
North Atlantic Industries offers the newest cross platform (Windows and Linux) GUI for our Gen 5 products that allows a user to quickly interact with our broad range of modular, I/O cards and rugged embedded computing products. Embedded Soft Panel 2 (ESP 2) is coherent and easy to use with a clean, fleshed out UI with features such as drag and drop dock able windows, a dark and light theme, and multi-language support. Multiple ways to open a board are offered, including saving board opening settings for future use. Interacting with and collecting information on hardware is simple to do with the register editor for reading and writing specific addresses, and the API logger which logs all API library calls including their return status and parameters. ESP 2 has many new features and provides an organized and effortless interface for NAI's next generation products. Available for CentOS 7.4 and 8.2 and Windows 10 x64

CB1 Example Demo Mode









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Rev. A