Aeronix Physical Interface Layer (APIL)™

Radio Interface Solution for Aeronix Software Modem Technology

APIL™ Summary

Aeronix designed the APIL™ radio interface solution to address the need to most flexibly manage the exchange of MIL-STD-188-220 data with the Combat Net Radio (CNR).

The APIL™ is one of many commercially-available radio connection options that Aeronix' WinIDM™ and mobileIDM™ software modems support.

The APIL™ supports both analog and sync/serial data path interfaces to a CNR. Analog options include both ASK and FSK with a variety of baud rates and tone pairs supported.

The APIL™ is dual-channel, allowing the dismounted soldier to participate on different networks simultaneously.

Modular USB-side connector allows hookup to commercial or custom EUD ports.

- Interfaces to virtually any common combat net radio type that supports legacy analog or sync/serial data paths
- Attractive SWaP: 1.4"H x 2.35"W x 4.7"D, 5 oz., 800mW
- MIL-STD-461 CE101/CE102/RE102/RS103
- MIL-STD-810G

Aeronix Overview

Aeronix has been involved in the IDM tactical data link business area since 2001. Aeronix is a multi-faceted contributor to the U.S. Digitally-Aided Close Air Support (DACAS) community. Aeronix modem technology is deployed on multiple airframes, including the F-35, A-10, B-52, ANG F-16s, and multiple ground / vehicular applications, including TACP CASS 1.4.5, BAO-Kit, FAC-Utility, SNC TRAX, ViaSat Mojo, and Teleplan's FACNAV BMS. Besides providing modem hardware/software products, Aeronix actively serves on the Combat Net Radio Working Group and is a proactive contributor to the DACAS Coordinated Implementation movement. Aeronix has developed the XNPv2 C++ Common Software Module (CSM) available through the U.S. government for all modem suppliers.

APIL™ Key Features

- **Dual-Channel**
- **Sync/Serial**
- **ASK 8000/9600/16000 baud**
- **FSK 1200**
- **Programmable EPRE**
- **Powered by USB**
- **Can be DaCAS DVMT Tool component**
- **Modular USB-side and radio-side connectors**
- **Integrates to both WinIDM and mobileIDM**

mobileIDM/WinIDM Adaptability

Aeronix works with various industry providers to adapt its software modem technology to the widest variety of combat net radios. Besides the APIL™, Aeronix' WinIDM™ and mobileIDM™ operate with the following radio connection solutions:

- Direct USB for PRC-117G, PRC-152A and variants
- Black Diamond Apex/MTS
- Glenair StarPan Hub
- Smartronix RDA Cables
- SeaLevel Sync/Serial Cables
- Extant Aerospace U-ROC
- Aeronix NetworkSim™ for software simulation of the network

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