

# VMF TDL Protocol Analyzer

Integration and Test Tool

## Protocol Analyzer Technical Summary

The VMF TDL Protocol Analyzer provides the capability to fully decode any captured VMF TDL message traffic. The decoded data displays a summary of every over-the-air transmission, as well as a detailed decoding of the received data, down to the bit-level. All transmissions are logged with a timestamp that records the transmission time with millisecond accuracy. Annotations can be made to the recorded data to comment on the message traffic. Recorded data, with the comments, is exportable to both XML and HTML formats.

The VMF TDL Protocol Analyzer can process data recorded by a U-ROC™ or Mini IDM™ operating in promiscuous monitor mode, or data recorded by the NetSim™ application interfacing to WinIDM™. The power of the VMF TDL Protocol Analyzer to decode data down to the bit-level is invaluable for requirements verification, testing, and integration.

## IDM Overview

In 2001, Aeronix partnered with Symetrics Industries to develop the Improved Data Modem (IDM) 501/IDM Junior™, VPIDM, and Mini IDM suite of Tactical Data Link (TDL) products. This IDM family has grown to include the Weapons Data Link IDM (WDL IDM), and now, the U-ROC and WinIDM, providing a USB and Software solution to the TDL community.

Our IDMs are integrated and deployed in a variety of military platforms worldwide. Through this partnership, Aeronix has taken an active leadership role in the Combat Net Radio Working Group (CNRWG) to ensure interoperability of your MIL-STD-188-220/MIL-STD-2045-47001-based Tactical Data Link (TDL).



## Mini IDM™

The Mini IDM is designed as a “low-cost” data link for air-launched munitions and for UAV applications where a lightweight, low-power, extremely small LRV can be integrated. The modem electronics are designed to PC/104 mechanical form factor for rapid integration into existing customer PC/104-based LRUs.

## WinIDM™

WinIDM™ provides customers with a software-only implementation of the VMF TDL, featuring the F-35 Joint Strike Fighter (JSF) MIL-STD-188-220 D Change Notice 1 Protocol Stack, as well as legacy support for MIL-STD-188-220 B/C, AFAPD, and TACFIRE tactical data links. WinIDM™ can be combined with the U-ROC™ to provide a complete TDL solution or paired with NetSim™ for simulation and testing.

## U-ROC™

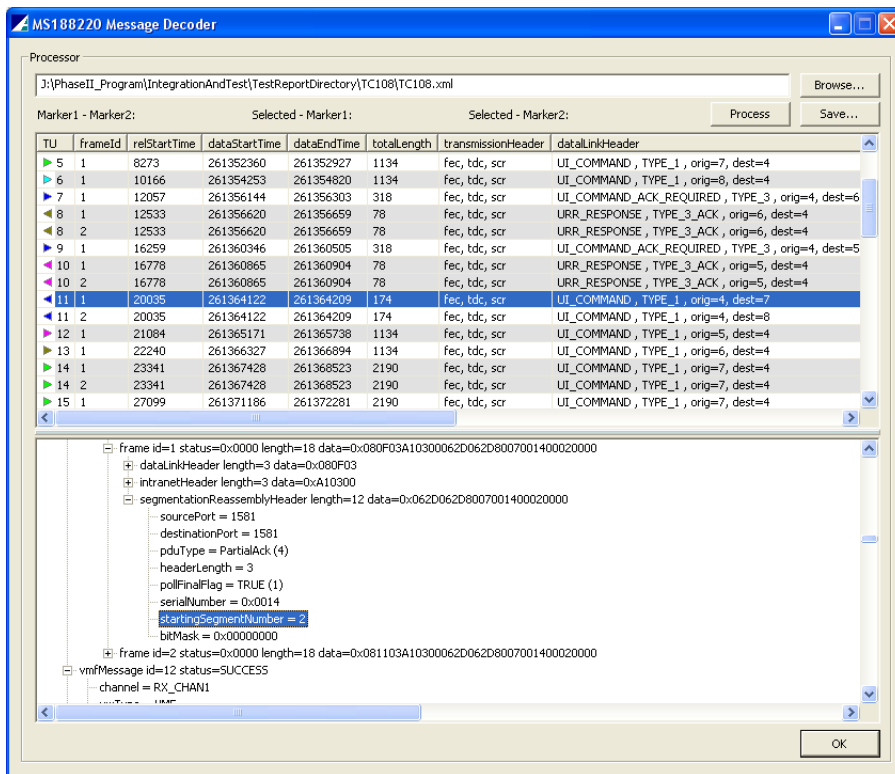
The Symetrics USB Radio Operations Cable (U-ROC™) is designed to allow personal commuters, ruggedized laptops, and personal digital assistants (PDAs) to interface to any radio in the field today, the U-ROC™ combines the radio interface capability of the Improved Data Modem (IDM) with the accessibility of the USB standard. The U-ROC™ provides customers with a low-cost, low-power solution ideal for integration into ground kits and laboratory testing environments. By providing two separate radio data interfaces, complete with remote control ports for the radios, combined with Modular Radio Connectors, programs save on non-recurring design and integration costs, recurring maintenance and logistics costs, and depot and spares costs.

## NetSim™

The NetSim™ application provides a software simulation of a Combat Net Radio network. Individual instances of the WinIDM™ application can be connected to the network representing any number of platforms. NetSim™ allows for simulating noisy networks, configuring the range of each participant's radio, and is easily extensible for modeling radio timing and automation of participant behavior.

## VMF TDL Protocol Analyzer Key Features

- Layer-by-Layer decoding
- Bit-Level detail
- Data annotation with comments
- Millisecond timestamp accuracy
- Error highlighting
- Exports to XML and HTML



1775 West Hibiscus Boulevard ■ Suite 200 ■ Melbourne Florida 32901 ■ Tel.(321) 984-1671 ■ Fax.(321) 984-0366

[www.aeronix.com](http://www.aeronix.com)