

Windows Improved Data Modem (WinIDM™)

VMF/MIL-STD-188-220 B/C/D Change 1, AFAPD, TACFIRE, MTS

WinIDM™ Summary

Aeronix has developed the official F-35 Joint Strike Fighter (JSF) MIL-STD-188-220 D Change Notice 1 Protocol Stack. The same code that flies in the JSF is now available on Microsoft Windows platforms under the moniker **WinIDM™**. The WinIDM™ application provides a software-only implementation of the JSF CNR Waveform, as well as providing legacy support for MIL-STD-188-220 B/C, AFAPD, TACFIRE, and MTS data links. The Protocol Stack was tested against over 1200 requirements directly from the MIL-STD. Also included in WinIDM™ is the first fielded implementation of MIL-STD-2045-47001 D Change Notice 1 Segmentation / Reassembly Basic Protocol. This protocol works seamlessly with K04.17 as well as providing image transfer capability via raw binary messages.

WinIDM™ combines with a variety of commercially-available application and physical layer solutions to form a **complete CNR solution available for your laptop or handheld computer**. WinIDM can also be provided as an independent software stack that Aeronix can help adapt to your physical layer solution.

WinIDM: Tactical, Official, Standards-Compliant, Interoperable, and runs on a PC.

WinIDM Technical Notes

Protocols Supported:

- ◆ MIL-STD-188-220B/C/D Ch1
- ◆ MIL-STD-2045-47001D Ch1 S/R
- ◆ XNPv2
- ◆ MIL-STD-6017 (VMF) with VIP™
- ◆ AFAPD / TACFIRE / MTS

Windows Application:

- ◆ Can be run as a separate Windows application, or embedded into an existing application via 'C'-style library
- ◆ Portable to any POSIX-compliant Operating system
- ◆ C/C++/C# Host APIs available for rapid programming

Uses:

- ◆ Digitally-Aided Close Air Support
- ◆ Standards-Compliant Digital Transmission Interoperability
- ◆ Situational Awareness, Tactical Internet
- ◆ TACP, JTAC
- ◆ Man-Pack communications
- ◆ Testing and Analysis
- ◆ CESMO

Interoperability:

- ◆ U.S. DACAS Coordinated Implementation (CI)
- ◆ Part of U.S. DACAS DVMT Test Tool



Shown at left:

- Aeronix Protocol Analyzer
- WinIDM
- U-ROC
- PRC-117 Radio

Physical Layer Flexibility

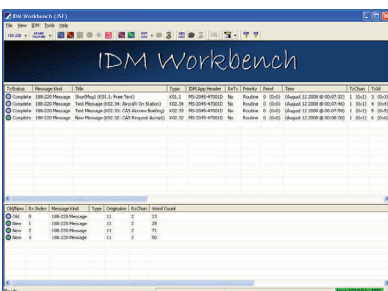
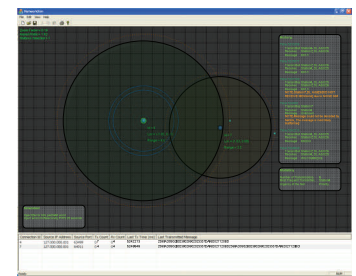
WinIDM is integrated with multiple physical layer solutions, including:

- ◆ Black Diamond Advanced Technology MTS/APEX
- ◆ Smartronix RDA Sync/Serial Cable
- ◆ Harris Remote KDU/Programming Cable (USB)
- ◆ Sealevel 9065QD Sync/Serial Radio Adapter
- ◆ Aeronix NetworkSim (software simulation)
- ◆ Aeronix CNRI and APIL adapter solutions

Related Technologies

NetworkSim™

The NetworkSim application provides a software simulation of a Combat Net Radio Network. Individual instances of WinIDM™ can be connected representing any number of platforms. Can simulate noisy networks, participant range and is easily extensible for modeling radio timing and automation of participant behavior.

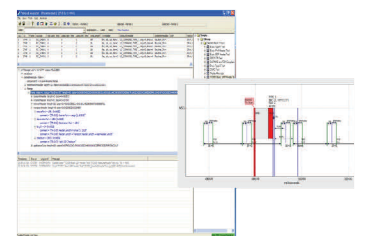


IDM Workbench™

Turnkey control application of WinIDM. Start testing your TDL now with Built-In VMF Parsing! Contains powerful, native script language for complex testing scenarios.

Protocol Analyzer™

The Aeronix Protocol Analyzer™ application provides the capability to fully decode any captured MIL-STD-188-220 transmission unit (TU) traffic. The decoded data displays a summary of every over-the-air transmission as well as a detailed decoding of each layer of the protocol stack. The analyzer is extensible via script language so that traffic content and timing can be automatically verified.



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