

# Software Defined Radio & JTRS/SCA

JTAP - JTRS Test Application



## SDR Products and Services

### JTAP:

- JTRS Test Application
  - Supporting JTRS JPO & JTeL
  - SCA v2.0, v2.2
  - SCA v2.2.1 (soon)
  - Portable
  - Configurable
  - User Extensible
  - Windows environment
  - Graphical User Interface
  - Test Log w/log levels

### SDR Applications:

- MIL-STD-188-220
  - B/C versions
  - D version (future)
  - Variable Message Format (VMF)
  - VMF parser solution
  - C++
  - Deployed on our IDM product
- WiMAX 802.16 - 2004
  - >2000 MPH Doppler
  - GPS Reference
  - Hard-MAC/Soft-MAC design
  - Simulink model
  - SCA compatible

### Prior SDR Experience:

- JCIT Software Defined Radio
  - Joint Combat Information Terminal
  - Naval Research Laboratory
  - Red & Black Processor Modules
  - INFOSEC modules
  - TIBS waveform
- MATT
  - Multimission Adv. Tactical Terminal
  - TIBS, TRAP TADIX

### Consulting:

- Current SCA Consultant to Titan/L-3, San Diego, for development of the Ka-Band Ground Terminal

Aeronix is the sole developer of the JTRS Test Application (JTAP), a software certification suite which exhaustively tests a Software Defined Radio for compliance with the Software Communications Architecture requirements. The JTAP has been developed under contract with the JTRS JPO and the SPAWAR JTRS Technology Laboratory (JTeL), beginning in 2001. Aeronix engineers have been instrumental in testing numerous JTRS radios, as well as commercial SDR Core Frameworks, for compliance with the SCA specification.



JTAP utilizes a familiar easy-to-use Graphical User Interface, which is completely configurable by test or SCA requirement for the particular JTRS Operating Environment under test or development. A structured test tree is generated from XML, and is easily extensible for adding SCA Device or Resource tests, as well as any type of user tests. It provides extensive test log capabilities with selectable log levels.

We have also developed and are continuing development of several SDR "waveform" applications, such as MIL-STD-188-220 /VMF and WiMAX 802.16.

Aeronix has supported the JTRS JPO with JTRS/SDR system engineering support since 1999. We have an experienced team of embedded hardware and software system designers that possess an intimate knowledge of the Software Communications Architecture and related Software Defined Radio technologies. Aeronix also supports other DoD and commercial vendors in SDR product development.

Aeronix has developed and fielded software defined radios and waveform software for the US DoD for over 15 years. We are an active member of the Software Defined Radio Forum (SDRF), and the Object Management Group (OMG) SWRadio working group.



## Commercial SCA Test Application

Aeronix plans to release a new test suite for SCA developers in the near future. Based upon the technologies developed for the JTAP test tool, this "commercial" version will be available internationally, and will be supported by Aeronix as a commercially-licensed product. It will be available in current JTRS-compliant versions, but will also be enhanced to test subsequent commercial and government versions of the SCA.

Aeronix is intimately involved in the evolution of SDR specifications, and plans to provide users with continued up-to-date test tools as these technologies mature. Prices and purchase options will be available soon.



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