

# Avid Systems, Inc

## Corporate Overview

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Avid Systems, Inc.  
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# Avid Systems

- Incorporated in January 2007
- Located in Mount Airy, MD
- DOD TS Cleared Facility
- Avid Systems designs and manufactures flexible signal processing systems



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# Corporate Mission

Avid Systems is a group of dedicated technical experts whose broad skill base provides the company with the capability to quickly develop cost effective solutions in the communications, signal processing, ESM and ECM markets.

The in-depth knowledge of our technical staff in the areas of RF and digital hardware design, FPGA and DSP based signal processing, and embedded software development give the company a unique ability to combine all of their core competencies in the development of highly integrated configurable multi-mission systems.

# Core Competencies

## ➤ FPGA and DSP Based Signal Processing

- Algorithm Development
- Digital Demodulators including:
  - Direct Sequence Spread Spectrum
  - Frequency Hopping Spread Spectrum
  - QPSK, BPSK, AM, FM, FSK, QAM, OFDM
- Spectral Analysis and Classification
- Software Defined Digital Radios
- Digital IFM Receivers
- Digital RF Memories



# Core Competencies (continued)

## ➤ RF and Digital Hardware Design

- RF transceivers and converters
- High speed FPGA and DSP designs
- Integrated general purpose processors
- High speed serial interfaces
  - Optical
  - USB
  - Ethernet
  - SATA
  - PCI Express
- Embedded systems including
  - CPCI, PCI Express, VME, ATCA, mTCA

# Core Competencies (Continued)

## ➤ Software Development

- Embedded Linux and Windows Software Expertise
- GUI and Hardware Control Software
- Network Based Protocols, TCP/IP, UDP

# Products

Avid Systems designs state of the art integrated systems for a variety of markets including:

Cellular Infrastructure  
Wireless Communications  
Signals Intelligence SIGINT  
Electronic Warfare  
Electronic Counter Measures

# AVS-1030 Wireless Communications Processor

## Features

- 833 MHz powerQuicc processor with 512 MB of memory running Linux
- Xilinx Virtex 5 SX50T with option for an SX95T with 128 MB of DDR2 memory
- Two picoChip 273 core PC203-10 Base Station PHY processors expandable to four
- Three 1Gbps Ethernet connections.
- ½ length 8 Lane PCI Express form factor or stand alone form factor

**Applications:** HSPA+, TD-SCDMA, WCDMA, CDMA 2000/EVDO, Beam Forming, Energy Detection, LTE, WiMax, GSM, FFT Coprocessor, Signal Identification







# AVS-1025 Transmitter

# AVS-1026 Receiver

Wireless E1 Monitoring System

Transmit Full E1 Up and Down Link

User Selectable Modulation QPSK or Direct Sequence Spread Spectrum

½ Rate Turbo Encoded Transmission

Receiver Outputs E1 Data Over Ethernet via UDP

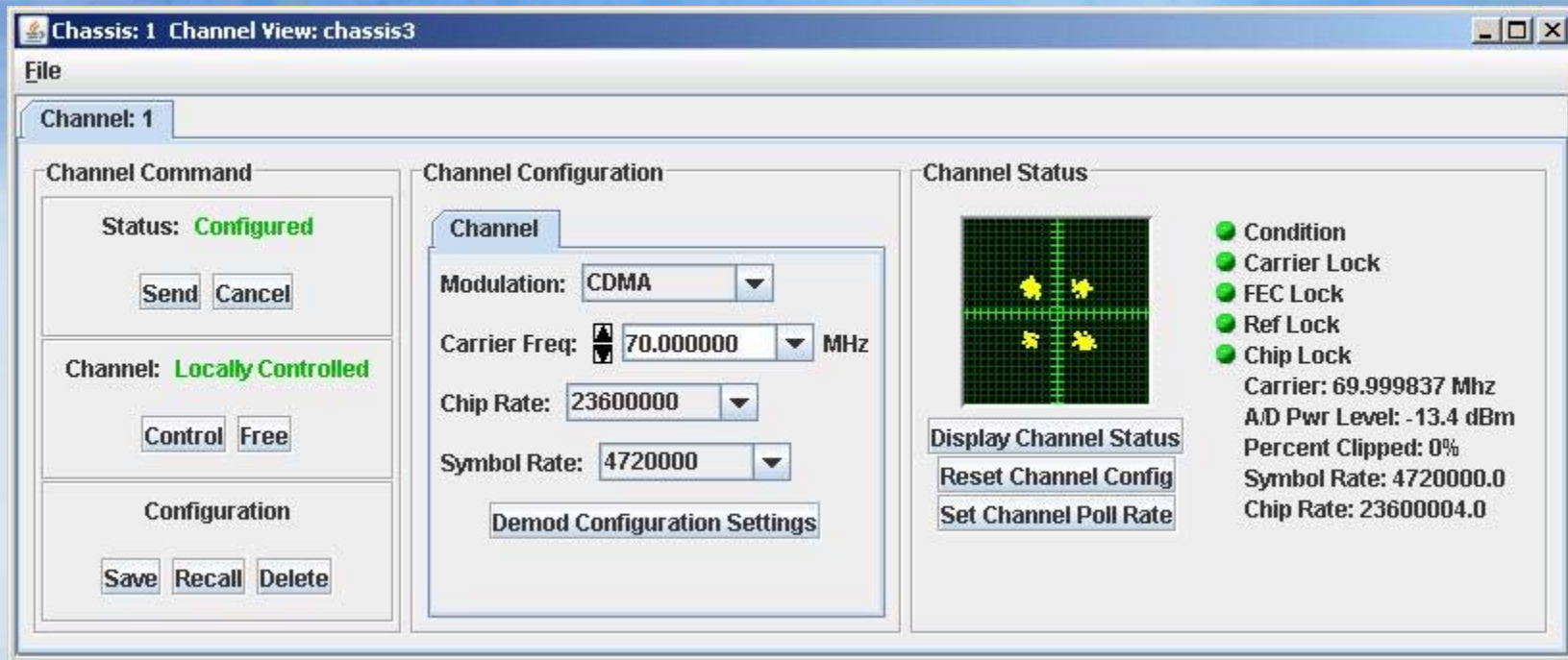


# AVS-1026 Receiver Control

Java Based Graphical User Interface

User Interface Controls Receiver Remotely or Locally Via Ethernet Connection

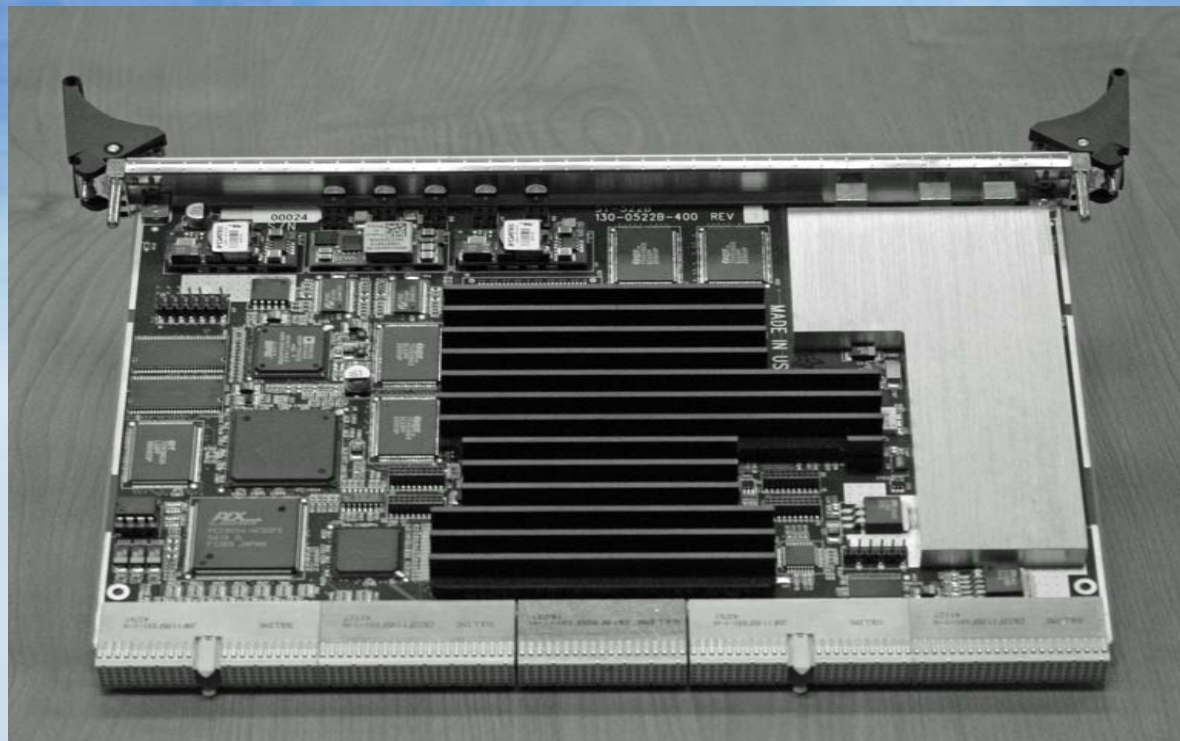
Embedded C# System Control Software Receives Commands From GUI





# AVS-522 Software Defined Radio

FPGA Based Digital Demodulator  
For  
PSK and Direct Sequence Spread Spectrum



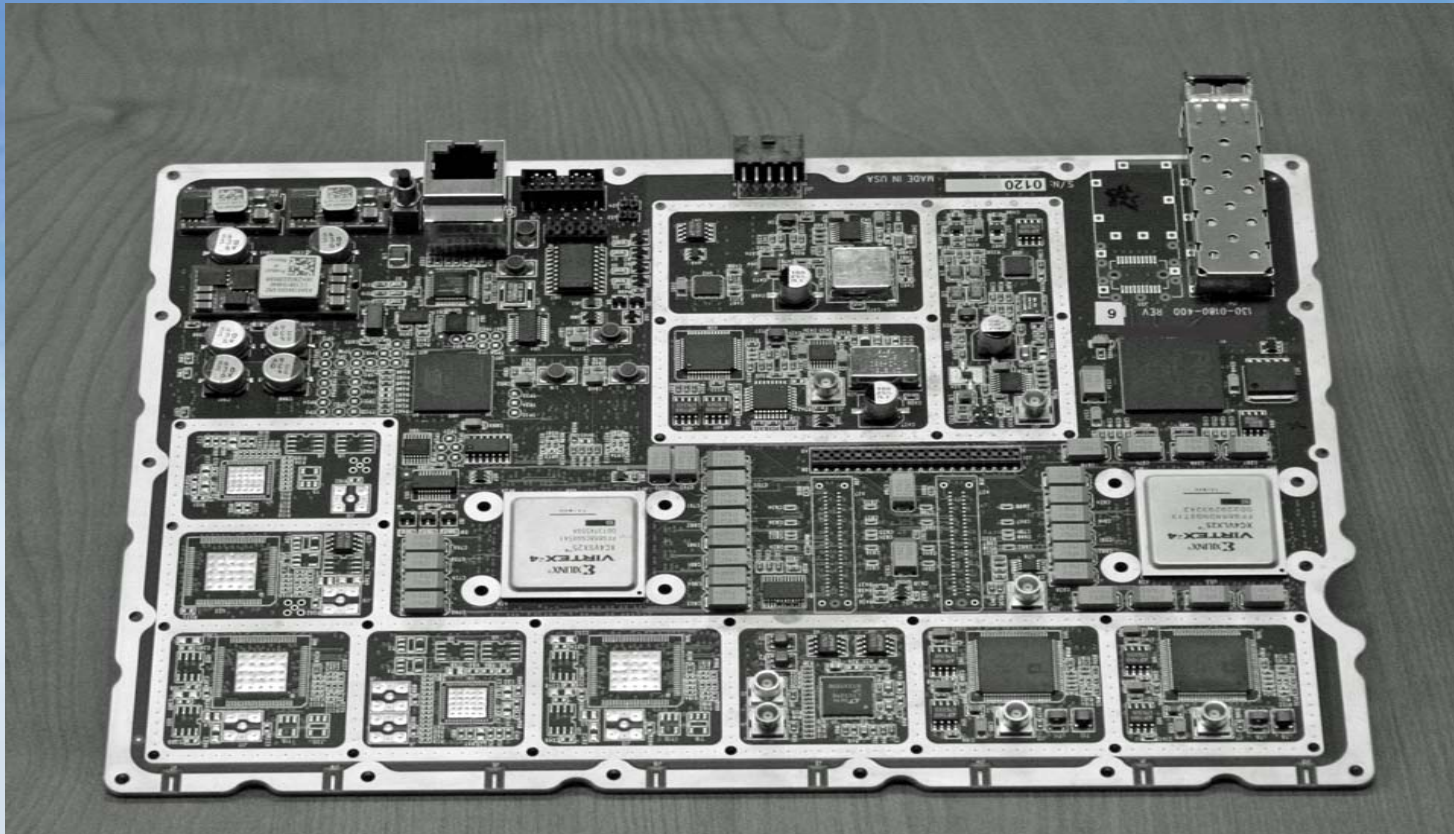
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# FPGA Based WiMax Transceiver



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# Targeted Markets

## ➤ Communications and SIGINT

- Continue to leverage FPGA based digital demodulators in the communications and SIGINT markets
- Develop OFDM demodulators to target LTE cellular and WiMax markets
- Utilize emerging FPGA technologies to provide GSM, CDMA2000, and WCDMA collection into small system footprints
- Develop Advanced Telecommunications Computing Architecture (ATCA) based receivers.
- Develop generic FPGA based signal processing hardware platforms

# Targeted Markets

## Continued

### ➤ ECM and EW

- Utilize expertise in the design of high speed FPGA based hardware platforms in the electronic warfare and electronic counter measures market
  - Digital IFM receivers
  - Flexible Direct Digital Synthesizers
  - Digital RF Memories
  - Unique Anti IED Jammers that provide jamming, friendly communications and SIGINT capability simultaneously