

pAXAS Portable AFDX® Bus Analyzer and Simulator



- Up to 6 dual redundant AFDX® channels
- Comprehensive AFDX® monitoring, recording and stimuli features
- Complete simulation of AFDX® End Systems
- Combination of AFDX® with other I/O-types, including A429, CAN, RS-xxx, Discrete, Analog, et al.
- Running under any Windows or LINUX
- Interface to 3rd-party software (Matlab / Simulink, MATRIXx)





mastering
realtime
complexity

pAXAS Portable AFDX® Bus Analyzer and Simulator

General

pAXAS is a fully integrated portable Avionics Full Duplex Switched Ethernet (AFDX®) Bus Analyzer & Simulation system with a Linux or Windows-based GUI supporting AFDX® monitoring, recording, protocol error injection, dynamic parameter manipulation, and the complete simulation of AFDX® End Systems (ES). It has been specifically designed for the development, testing, integration, and maintenance of AFDX® avionics subsystems employed in the new generation A380 aircraft.

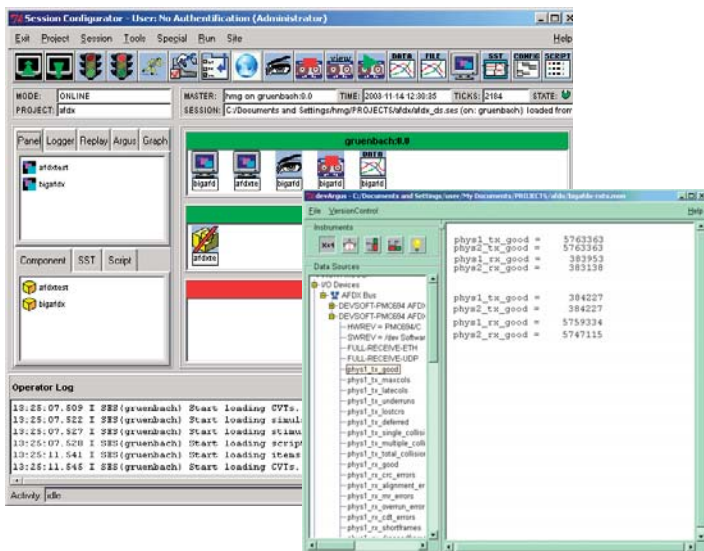
AFDX® Interface Cards

Different from the numerous proprietary "daughter module" concepts, the IP standard formally defines the mechanical, host bus electrical, and logical definition of I/O space, memory space, identification space, interrupts and reset functions. Standard IndustryPack® carrier boards typically have 2 or 4 single-size IP slots (up to 6 possible).

pAXAS ADS2 Software Package

pAXAS uses the latest release of TechSAT's premium ADS2 software package for SBC workstations running either Linux or Windows XP Professional. ADS2, which serves as a real-time test and simulation environment, is comprised of the following components:

- > Distributed real-time core software system with real-time database (CVTs), configuration database, and master scheduler
- > AFDX® I/O subsystem consisting of the generic I/O process and the AFDX® driver
- > External Application Interface (EXAPI) allowing attaching user applications and simulations
- > AFDX® bus tools consisting of a set of configuration, control, visualization, data acquisition, data replay and stimulation utilities



AFDX® Session Configurator (left) & AFDX® Monitor window (right)

Technical Data

pAXAS Main Features

- 2 Up to 6 dual-redundant AFDX® channels
- Comprehensive AFDX® monitoring, recording, replay, and stimulation features
- Raw-data (AFDX® frames) and decoded engineering units
- Protocol analyzer with extended error injection and detection capabilities
- Enhanced state-of-the-art analyzer features including filters, triggers, time-stamping, scripting, dynamic parameter manipulation, and more
- Complete simulation of AFDX® end systems
- Optional AFDX® end system »Test Responder«
- Optional combination with other I/O-types (ARINC 429, CAN, RS-xxx, Discrete, et al.)
- Easy-to-use cross-platform GUI for Windows XP or Linux

PAXAS AFDX® Interface Card

- Protocol error injection/detection
- External synchronization
- All AFDX® MIB counters supported
- IFG manipulation
- 40 ns synchronous time stamping
- Rx/Tx sampling & queuing ports
- Arbitrary filtering on any portion of frame data
- Conduction-cooled version (optional)

System Hardware Features

- CPU/RAM – Intel Pentium P4 1.7 GHz, 400 MHz FSB, 256MB SDRAM expandable up to 1.5GB
- Slots – 6 open slots, 7 backplane configurations of PCI and ISA
- Storage – 40 GB EIDE UDMA 7200 RPM standard 3.5inch HDD; Options: SCSI, removable, high performance, high capacity drives
- Peripherals – IDE Floppy 24x IDE CD-ROM; Options: Jazz, Zip, LS120, DVD, CDRW, DAT, MO
- Display – 14.1 inch XGA 1024x768 TFT Color LCD high visibility display; front panel brightness and contrast controls (Option: RGB subsystem for custom Video Capture)
- Ports – 2 Serial, 1 Parallel, Ext VGA, Ext PS/2 keyboard and mouse; ENET 10/100 RJ45 (Options: USB, RS422, 56k Modem, PCMCIA, PCI sound)
- Keyboard – 105-key heavy-duty keyboard with built-in touch pad and standard PS/2 connectors
- Power Supply – Input: 400W 100-120v / 50-420Hz; 200-250v / 50-60Hz auto-select; Output: 5V/20A; 12V/8A; -5V/3A; -12V/5A; EN60950 EMI EN55022 Class B; Option: 150w AC/DC internal supply
- Ventilation – Multi-fan forced-cavity cooling zoned for the add-in card cage
- Dimensions – Case 16.1" W x 12.2" H x 9.8" D; Weight 20.9 lbs

AFDX is a registered trademark of Airbus Deutschland GmbH