new product

- *Verify MIL-STD-1553 Waveforms without an **external Scope!***
- *Sample and Store MIL-STD-1553 Waveform in Real Time*
- *Powerful Triggering: Voltage Level, Pulse Length or MIL-STD-1553 Bus Word*
- *Store, Measure and Post Process Physical Bus Parameters*
- *Automatic Verification and Validation of MIL-STD-1553 waveforms*

Right on Target

AIM-USA

MILScope™

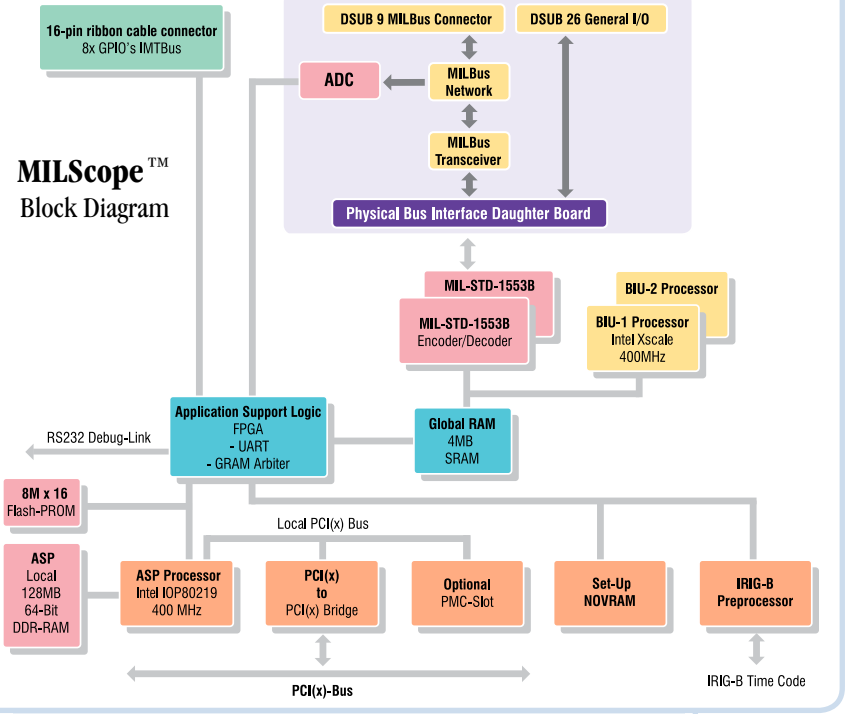
General Features

The AIM **MILScope**™ provides the unique capability to test & verify MIL-STD-1553 waveforms and detect faulty bus conditions without the need of an external Oscilloscope. The **MILScope**™ capability is integrated into the design of the new PCI/ PCI-X based APX1553-1-DS/-2- DS test & simulation modules on one MIL-STD-1553 channel. Each has a two channel differential analog to digital converter (ADC) providing 50Msamples for Primary & Secondary Bus data acquisition or 100Msamples for either the Primary or the Secondary Bus This capability is provided above and beyond that of the standard functions & features of the APX1553 cards (Bus Controller, Multiple Remote Terminal, Chronological Monitor, Physical Bus Reply - see APX1553 datasheet for full technical specifications). This enhanced capability provides users with accurate measurements of physical bus parameters such as rise and fall time, overshoot, undershoot, pulse width and signal amplitude.

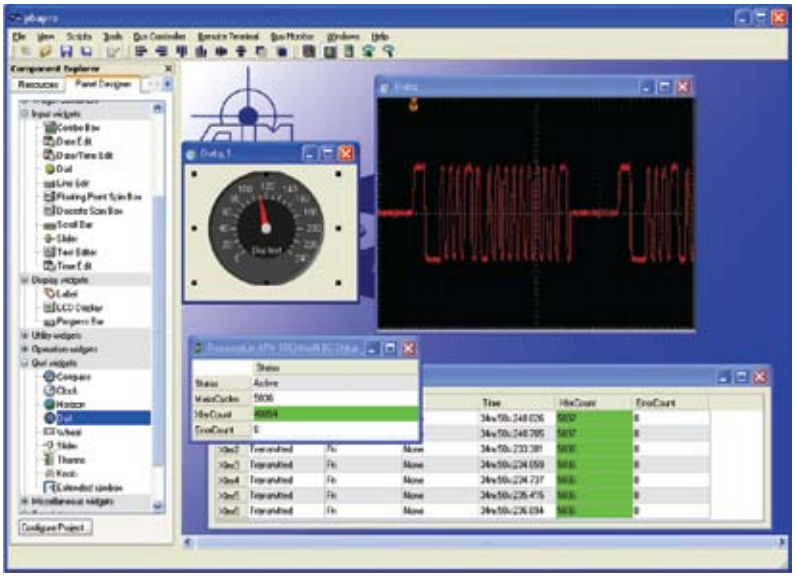
The APX1553-1-DS/-2-DS hardware can trigger on different voltage levels, pulse lengths or from the MIL-STD-1553 bus monitor using the trigger function. A direct correlation between the Protocol based Monitor stack and the physical signal view is possible. Flexible coupling modes are provided to support all types of test configurations.

The graphical user interface for the **MILScope**™ is provided by using the **PBA.pro**™ Databus Analyzer Software from AIM. The **PBA.pro**™ automatically detects if the APX1553 card has the embedded **MILScope**™ capability and enables the Bus Waveform and Analysis software including all Digital Scope features. Post processing of stored MIL-STD-1553 databus samples provides for automatic verification of transmitter validation parameters.

data sheet



MILScope™ Block Diagram



Avionics Databus Solutions

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www.aim-online.com

MIL-STD-1553 Bus Coupling

- Software Programmable Coupling modes:
  - Transformer/ Direct/ Terminated Bus Network
- **MILScope**™ automatically adjusts to selected Coupling mode

Selectable Trigger Functions

- Trigger on Voltage Level
- Trigger on MIL-STD-1553 Monitor Stack Event
- Powerful Complex Triggering with all available functions of APX1553 cards

Waveform Post Analysis

- Uses Powerful **PBA.pro**™ Graphical User Interface
- Trigger, Zoom, Scaling and Cursor functions just like using a Digital Scope
- Display & Correlate Triggers with MIL-STD-1553 Message Stack
- Stores MIL-STD-1553 databus samples for Post Processing & Analysis
- Support for:
  - MIL-HDBK-1553A section 100, RT Validation Test Plan
  - AS4113 BC Validation Test Plan

Ordering Information

APX1553-1-DS
Single Stream, Dual Redundant PCI-X bus to MIL-STD-1553A/B Interface: BC, Multi RT Simulator with Mailbox & Chronological Monitor IRIG-B Encoder/ Decoder Digitising Scope for Waveform Analysis & Measurement 1Mbyte Global RAM, 128Mbytes ASP RAM. Short Length Card.

APX1553-2-DS
Dual Stream, Dual Redundant PCI-X bus to MIL-STD-1553A/B Interface: BC, Multi RT Simulator with Mailbox & Chronological Monitor IRIG-B Encoder/ Decoder Digitising Scope for Waveform Analysis & Measurement (Stream 1) 4Mbyte Global RAM, 128Mbytes ASP RAM. Short Length Card.

PBA.pro-FP
Framework+Panelbuilder

PBA.pro-MIL1
MIL-STD-1553 Low Level 1st Stream

PBA.pro-MIL2
MIL-STD-1553 Low Level 2nd Stream

PBA.pro-MIL-X
MIL-STD-1553 Low Level Additional Stream

Technical Data

Sub-System Interface:	PCI-X Bus Master & Slave, Revision 2.3, 33/66/100/133MHz, 32/64-Bit, 5V & 3.3V compatible
Processors:	1 or 2 32-Bit, 400MHz Xscale Processors for BIU(s) 64-Bit, 400MHz Intel IOP as ASP
Global Memory:	1MByte (single channel card) 4MByte (dual channel card - costed option for 16MByte) ASP Memory: 128MByte
Encoder/Decoder:	One MIL-STD-1553A/B Encoder and Decoder per BIU with full error injection & detection
Time Tagging:	46 Bit absolute IRIG B Time with 1μsec resolution, sinusoidal IRIG-B output and free wheeling mode
Physical Bus Interface:	(PBI): 1 or 2, MIL-STD-1553A/B Transceivers with variable Output Amplitude, Programmable Bus Coupling modes with on-board terminated Bus Network

For models APX1553-DS-1/ -2: 2 x Analogue to Digital Convertors (ADC's) with 10 bit resolution & 50MSamples each. Can be configured to sample one bus with 100Msamples or two busses with 50Msamples maximum.

Connectors:	PCI-X Bus standard backplane connector, 9-way D-sub for Bus connections, 26-way High Density D-sub connector for Trigger and Time code I/O
Dimensions:	175mm x 107mm, short length PCI format
Power Consumption:	Single Channel: 8.5 Watts at 5V typical Dual Channel: 10 Watts at 5V typical
Operating Temp. Range:	Standard 0 C…+ 45°C Extended -15C…+65C
Storage Temp. Range:	-40 to + 85°C Humidity: 0 to 85% non-condensing

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