

General Features

The API-PSI-16 is a 'short length' standard PCIbus module, providing simulation, monitoring and recording, protocol testing and data selection of 8 Transmit (Tx) and 8 Receive (Rx) Serial Data Channels according to the PANAIA interface standard specification.

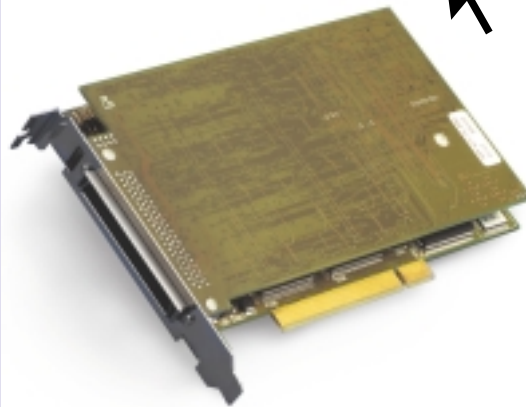
The advanced hardware architecture provides powerful resources (processing performance and memory size) to guarantee fully concurrent availability of all specified PANAIA Interface functions simultaneously on all Tx and Rx channels.

The 8 Transmit (Tx) Channels, on the API-PSI-16 module, act as an autonomously operating data communication simulator, supporting a continuous transmission sequence with user definable data words.

The 8 Receive (Rx) channels, on the API-PSI-16 module provides the PANAIA standard decoding, with unique on-board error detection, triggering and data selection capability.

The API-PSI-16 also operates with the optional 'PANalyser' Databus Analyser software package for WINDOWS.

API-PSI-16



**16 Channel
PANAIA
Serial Interface
Test & Simulation
Module for PCI**

PANAIA Receiver

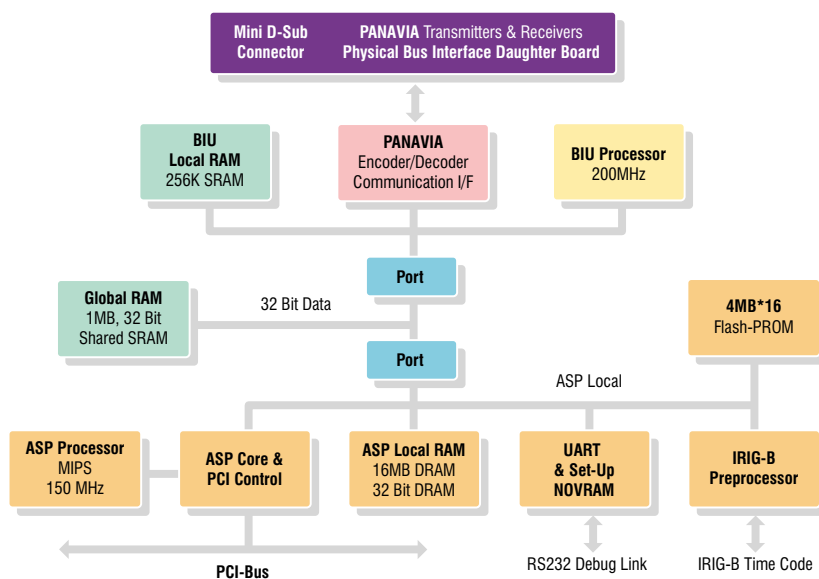
Key Features of the 8 Receiver Channels are:

- Decoding 16Bit Data & Status Words
- Tag orientated Data Storage or Chronological Data Storage
- Tag Selective Data Filtering
- Comprehensive Error Detection of: Control Bit Error; Framing Error; Bit Count Error; Sync Bit Error; Parity Error
- Programmable Interrupts & Trigger on: Definable Tag Receipt, Definable Data Word Receipt, Erroneous Data Receipt, Loss of Clock / Data
- IRIG- B Time Tagging on Received Data with a resolution of 1µsec

PANAIA Transmitter

Key Features of the 8 Transmitter Channels are:

- Encoding PANAIA Protocol For Continuous Data & Clock Transmission
- Programmable Tag Sequence
- Selective Transmission Frequency of 64KHz or 62,5KHz
- Programmable Interrupts on: Definable Tag Transmissions, End of Transfer List
- Full Error Injection on each Tag Transfer: Bit Count, Parity, Framing, Sync Bit, Control Bit



Avionics Databus Solutions

API-PSI-16

16 Channel PANAIA
Serial Interface
Test & Simulation
Module for PCI

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IRIG-B Time Code Decoder

An on-board IRIG-B time code decoder and generator allows synchronisation of PANAIA bus traffic. Multiple API-PSI-16 modules can be synchronised using one common IRIG-B time source or the on-board time code generator of one API-PSI-16 modules as the reference for accurate correlation of data across multiple PANAIA data streams.

Application Support Processor

The 150 MHz ASP Application Support Processor provides unique on-board processing functions typically provided by host processing systems.

Operational features include:

- Driver Software Execution on-board
- Control of RS232C debug Port for Firmware Updates
- Dynamic Data Generation
- Automatic Test Sequence Generation
- User Application processing on-board

Physical Bus Interface

A Physical Bus Interface daughter board (PBI) provides PANAIA connection to the data channels via a Mini D-Sub Connector.

Driver Software Support

Since the Driver Software resides on the PANAIA module, a host Application Interface Driver software package is provided compatible with Windows 98/NT/2000 and XP.

Technical Data

Sub-System Interface: PCibus Master & Slave (Revision 2.1, issued June 1995)

Processors: 32 bit ARM 200MHz BIU Processor, 64 bit MIPS 150MHz ASP Processor

Memory: 1Mbyte Global RAM, 16Mbyte ASP RAM

Encoder/Decoder: Eight PANAIA Encoders and Eight Decoders with full Error Injection and Detection Capability

Time Tagging: 46 Bit absolute IRIG-B Time Code with 1µsec resolution

Physical Bus Interface: 8 Tx and 8 Rx PANAIA Channels

Connectors: 80pin Mini D-Sub Connector

Dimensions: PCI Standard "Short Length" 175 mm x 107 mm

Operating Temp. Range: Standard: 0°C...+45°C ambient
Extended: -15°C...+60°C ambient

Storage Temp. Range: -40°C...+85°C ambient

Humidity: 0 to 95% non-condensing

Ordering Information

API-PSI-16

16 Channel PANAIA Serial Interface for the PCibus, including IRIG-B Time Decoder
1Mbyte Global RAM, 16Mbyte ASP RAM.

