

## 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 PANAVIA interface standard specification.

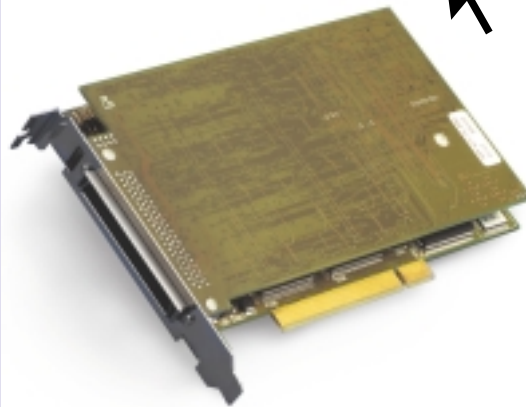
The advanced hardware architecture provides powerful resources (processing performance and memory size) to guarantee fully concurrent availability of all specified PANAVIA Interface functions simultaneously on all Tx and Rx channels.

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 PANAVIA 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  
PANAVIA  
Serial Interface  
Test & Simulation  
Module for PCI**

## PANAVIA Receiver

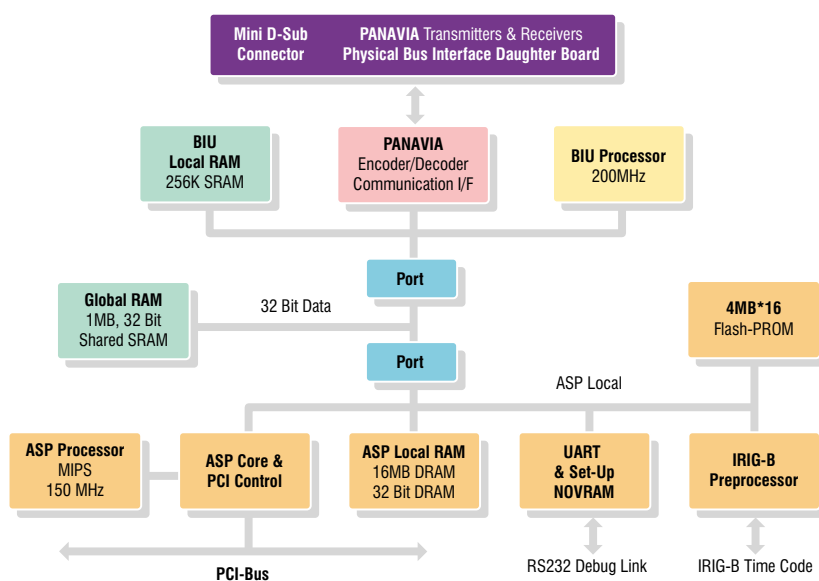
**Key Features of the 8 Receiver Channels are:**

- 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

## PANAVIA Transmitter

**Key Features of the 8 Transmitter Channels are:**

- Encoding PANAVIA 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 PANAVIA  
Serial Interface  
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## IRIG-B Time Code Decoder

An on-board IRIG-B time code decoder and generator allows synchronisation of PANAVIA 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 PANAVIA 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 PANAVIA connection to the data channels via a Mini D-Sub Connector.

## Driver Software Support

Since the Driver Software resides on the PANAVIA 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 PANAVIA 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 PANAVIA 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 PANAVIA Serial Interface for the PCIbus, including IRIG-B Time Decoder  
1Mbyte Global RAM, 16Mbyte ASP RAM.

