

General Features

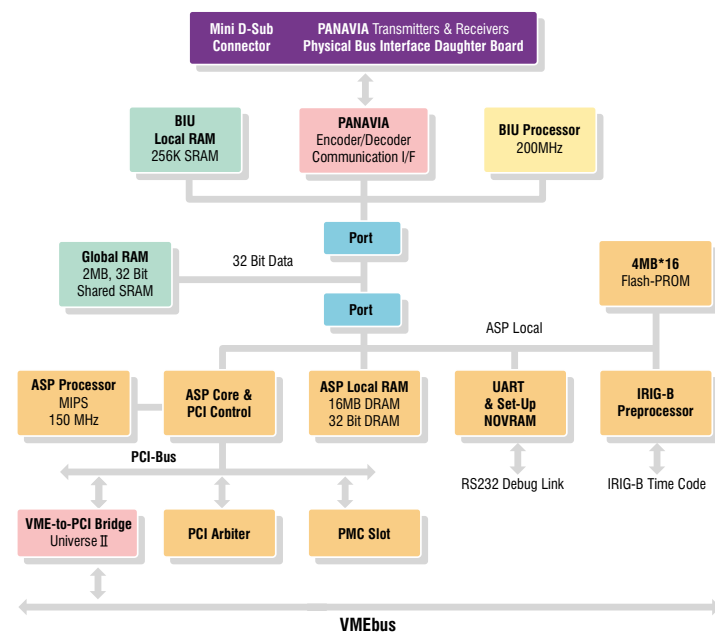
The AVI-PSI-16 is a 6U VMEbus module, providing simulation, monitoring, protocol testing and data selection of 8 Transmit (Tx) and 8 Receive (Rx) Serial Data Channels according to the PANAVIA interface standard specification.

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 AVI-PSI-16 module acts as an autonomously operating data communication simulator, supporting a continuous transmission sequence with user definable data words.

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

The AVI-PSI-16 module is provided with Driver Software Source Code written in 'C/C++'



AVI-PSI-16



**16 Channel
PANAVIA Serial
Interface Test
& Simulation
Module for
VMEbus**

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

AVI-PSI-16

16 Channel PANAVIA
Serial Interface
Test & Simulation
Module for VMEbus

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IRIG-B Time Code Decoder

An on-board IRIG-B time code decoder and generator allow synchronisation of PANAVIA bus traffic. Multiple AVI-PSI-16 modules can be synchronised using one common IRIG-B time source or the on-board time code generator of one AVI-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
- 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

The AVI-PSI-16 module is provided with Driver Software Source Code written in 'C/C++'

Technical Data

Sub-System Interface: 32/64 VMEbus bit Master & Slave.

- MBLT, BLT, ADOH, RMW and LOCK support
- A32, A24 & A16 Addressing

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

Memory: 2Mbyte Global RAM, 16 Mbyte 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: 80 pin Mini D-Sub Connector for Tx/Rx Channels
9 way D-Sub for Trigger, Time Code I/O, RS232

Dimensions: 233.35 x 160.00 x 20.00mm

Power Consumption: Typical 12 Watts (operating)

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

AVI-PSI-16

16 Channel PANAVIA Serial Interface for the VMEbus Including IRIG-B Time Code.
2Mbyte Global RAM, 16Mbyte ASP RAM.

Note: For a 32 Channel PANAVIA Serial Interface, please contact your nearest AIM office or Representative

