ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

Artisan Technology Group
(217) 352-9330 | sales@artisantg.com | artisantg.com

Full-service, independent repair center
with experienced engineers and technicians on staff.

We buy your excess, underutilized, and idle equipment
along with credit for buybacks and trade-ins.

Custom engineering
so your equipment works exactly as you specify.

- Critical and expedited services
- In stock / Ready-to-ship
- Leasing / Rentals / Demos
- ITAR-certified secure asset solutions

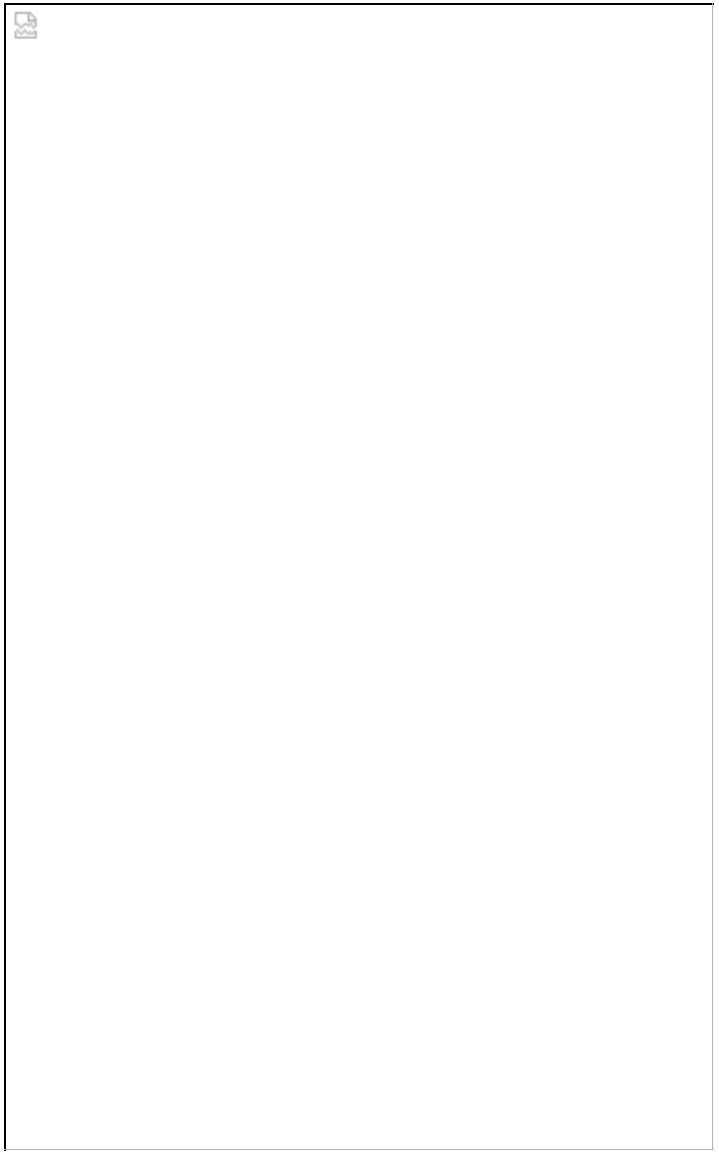
Expert team | Trust guarantee | 100% satisfaction

All trademarks, brand names, and brands appearing herein are the property of their respective owners.

Find the *AIM AVM1553SM-2* at our website: ***Click HERE***

AVM1553SM-X

Multiple Channel Dual Redundant MIL-STD-1553B Protocol Tester and Simulation Module for VMEbus



General Features:

The AVM1553SM-x family of configurable VME modules provides for the protocol testing, simulation, and monitoring of up to two independent dual redundant MIL-STD-1553B data busses on a single 6U module. The module can act as Bus Controller (BC), Multiple Remote Terminal (MRT, up to 31 plus the broadcast RT), and a Bus Monitor (BM) all concurrently for each dual redundant MIL-STD-1553B stream. Full error injection and detection is programmable in all modes of operation. The module can be configured with up to four 16 MIPS micro-coded controllers and 1 Mbytes of RAM. Each channel can be optionally equipped with a Chronological Bus Monitor/Analyzer capability with data filter functions and accurate time tagging of all MIL-STD-1553B messages, RT response times, and intermessage gaps.

Functional Characteristics

Bus Controller Simulation

The AVM1553SM-x module provides autonomous BC operation including a programmable retry mechanism and sequencing of Minor Frames within Major Frames with no need for host interaction. BC operation can be triggered by external events.

Key Features of BC Mode include:

- BC Intermessage Gaps programmable down to 4 microseconds
- External BC triggering or Minor Frame Time Synchronization
- Multi-buffering mechanism for data consistency and message multiplexing
- Full error injection down to Word and Bit levels

Multiple RT Simulation

The AVM1553SM-x module can simulate up to 31 Remote Terminals with all subaddresses individually programmable. Each RT has a programmable response time. In addition, RTs can be programmed as a Mailbox Monitor (Monitor Terminal) for non-simulated RTs.

Key Features of MRT Mode include:

- Fast programmable response time for each simulated RT down to 5 microseconds
- Multi-buffering for each simulated RT and subaddress
- Full error injection down to Word and Bit levels
- No Response Counter to simulate BC retries

Error Injection Capabilities

For BC and MRT simulation,the AVM1553SM-x provides full protocol error injection capabilities:

- SYNC pattern programmable on a half-bit basis;
- Manchester Error (low or high) in any word or bit position;
- Bit Count High and Low errors;
- Word Count High and Low Errors;
- Data Contiguity errors;
- Parity errors;
- Wrong Bus errors.

The position (word and bit) for the error injection can be specified precisely for each message.

Chronological Bus Monitor Operation

The AVM1553SM-x module can be optionally configured with a powerful Chronological Bus Monitor/Analyzer with Data Filter capability. Each daughter board has 256 Kbytes of memory and a dedicated 16 MIPS micro-coded controller.

The Chronological Bus Monitor provides 26 bit time tagging of all BC commands with 1 microsecond resolution and measures RT response times and intermessage gaps with a separate 9 bit counter with 250 ns resolution. The Time Tag Counter can be reset via the VME bus or through a separate RS-422 input.

Key Features of Chronological Monitor Mode include:

Two level Complex Trigger on:

- Elapsed Time
- Any MIL-STD-1553B error
- Any MIL-STD-1553B word
- Data word value including range checking

Capture Filter in Standard or Message Modes:

- 2048 MIL-STD-1553B message filters

- Range checking
- Corrupt transfer capture

MIL-STD-1553B Bus Connection

The interface of the AVM1553SM-x module to the MIL-STD-1553B bus is configurable for transformer coupling or direct coupling via jumpers. Trompeter BJ77 connectors are provided on the front plate of the VME card for the bus connections.

Driver Software Support

The AVM1553SM-x family of modules is offered with a comprehensive software driver package implemented in C language.

Support for Industry Standard Operating Systems is available:

- Generic Driver Software for 680X0 Processors or Embedded PC/AT (DOS)
- VxWorks 5.2 and Tornado
- pSOS+
- ADA

Other operating system drivers can be made available upon request. Contact Technical Support for the latest on supported operating systems.

Technical Data

Subsystem Interface:

VME slave

Data Transfer options D8, D16, D32, BLT

Address options A32 or A24 and A16

Programmable 16 bit timer

One VME interrupt line

Processors:

AVM1553S-1: One 16 MIPS micro-coded processor

AVM1553SM-1 and **AVM1553S-2**: Two 16 MIPS micro-coded processors

AVM1553SM-2: Four 16 MIPS micro-coded processor

Memory:

AVM1553S-1: 256 Kbytes RAM

AVM1553SM-1: 512 KBytes RAM

AVM1553S-2: 512 KBytes RAM

AVM1553SM-2: 1024 KBytes RAM

Time Tagging:

Global Time Tag: 26 bits wide, 1 microsecond resolution, can be reset from the VME bus or from an external RS-422 input

Response Time and Intermessage Gap Timer: 9 bits wide with 250 ns resolution

MIL-STD-1553B Frontend:

Two industry standard MIL-STD-1553B transceivers per Bus Interface Unit

Configurable for Transformer of Direct Coupling to bus

Connectors:

VME 96 Pin backplane connectors;

Two or Four Trompeter BJ77 frontplate connectors for bus signals;

14 Pin T&B series 609 connector for Time Tag Sync, BC Frame Sync, Monitor Trigger Input, Monitor Trigger Output

Dimensions:

Standard 6U (B-Size) VME module
160mm by 233mm by 20mm

Power Consumption (typical):

11 Watts @ +5V

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Decoder:

For each Bus Interface Unit, one Manchester Decoder with Parity Checker and Error Detection

Encoder:

For each Bus Interface Unit, one Manchester Encoder with Parity Generator and full Error Injection capabilities

Temperature Range:

0º to +45º C ambient (standard)
-15º to +60º C ambient (extended)

Relative Humidity:

5% to 95% non-condensing

Return to the VME 1553 Products Page
Return to the AIM Home Page
Request Product Information

Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

Learn more!

Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

Artisan Scientific Corporation dba Artisan Technology Group is not an affiliate, representative, or authorized distributor for any manufacturer listed herein.

We're here to make your life easier. How can we help you today?

(217) 352-9330 | sales@artisantg.com | artisantg.com

ARTISAN® TECHNOLOGY GROUP