

# Digital and Boundary Scan

## Features

### BSCAN

- First in the Industry with 1149.1 Support and ASSET VXI Tools. Compatible with TI's ASSET™ and Teradyne's Victory™ Products Through SVF File Format
- Cost Effective Boundary Scan Packages for the R&D Lab or for the Production Floor
- Serial and Parallel Tools
- Cost Effective Basic Digital Pin Instruments with Simple to Use VXIplug&play Driver Support

## Applications

- General Purpose Digital I/O
- Boundary Scan R&D Development
- Digital Functional Test
- Functional Testing for IC, LCA, ASIC, etc.
- Functional PCB Module or Card Testing

## DIGITAL AND BOUNDARY SCAN SELECTION GUIDE

Instrument	Function	Key Specs	Key Features
73A-270	Prog Generator	2 Fast Serial	Complex pulse trains
VX4801	Basic Pins	48TTL/CMOS	Byte-by-byte I/O programming
VX4802	Basic Pins	80TTL/CMOS	User masks
VX4820	Dynamic Pins	20 MHz	32/64-Pin groups/Pods
VX4491	Serial Test	JTAG/1149.1	2 TAPs
ASSET VXI	B-Scan Software	Supports VX4491	Automatic vector generation, interactive debugger, scan analyzer

## It May Be Where You're Headed

Inevitably, test development grinds to a slow pace when confronted with complex programmable and standard VLSI devices. While growing modestly as a testability technique over the last years, boundary scan is soon to gain rapid acceptance as a methodology both "in the lab" and in production. Tektronix VX4491 and ASSET VXI software products allow you to implement your boundary scan testing philosophies or trials today – either as a "bench" configured VX1406 mini-system, or in a full-blown ATE Functional VXI system.

### BURST AND STATIC

Digital pin requirements follow a never-ending highway of need, from the necessity to test simple latched I/O, to complex processor or state machine bursts. Tektronix' digital products allow you to match the instrument and price to your specific application. VXIplug&play drivers simplify the test program development. Tektronix' VX4820 is suited to larger testing requirements with its openness to slave additional VX4820s.

### AND ONE BY ONE...

Tektronix' experience in serial avionics, automotive, and communications buses has been a basis for the design of the 73A-270, a very popular general purpose serial pattern generator. This instrument allows complex streams – of up to 1,600 events – to be programmed and burst, with additional facilities of triggering and synchronization readily available.



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<http://www.tek.com>



**ISO 9001**

Tektronix Measurement products are manufactured in ISO registered facilities.



For product detail, request a VXI Catalog by completing the business reply card in the back of this catalog.

## Features

### VXI AVIONICS

- MIL-STD-1553 Bus Monitor
- ARINC 429
- ARINC 629
- Discrete I/O Simulation
- Avionics Test



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# Avionics

## Features

### VXI AVIONICS TEST

- MIL-STD-1553 Bus Simulators and Bus Monitors
- ARINC 429 Receiver/Transmitter
- ARINC 629 Multi-terminal Simulator
- Discrete I/O and Aircraft Transducer Simulation
- Avionics Test System Services

## AVIONICS PRODUCT SELECTION GUIDE

Type	Description	Applications
VX4428	Quad ARINC 429 Transmitter and Receiver	Test and control LRUs via ARINC 429 Transmitter and Receiver
VX4469A	ARINC 629 Simulator with Enhanced Error Injection	Up to 3 terminals with full error injection Emulate multiple terminals in real time
73A-455	Dual-channel MIL-STD-1553	Simulate bus controller, remote terminal, or bus monitor
VX4457	MIL-STD-1553A/B Intelligent Bus Analyzer Monitor	"Logic Analyzer" for MIL-STD-1553 bus

### Avionics

Tektronix has a long history of commitment to aerospace and avionics testing. This year, Tektronix offers a wide range of products and services tailored to the avionics community. Whether you are a self-integrator of avionics ATE systems or need avionics test system integration services and expertise, Tektronix has the experience, products, and services to get you off the ground quickly and reliably.

Tektronix offers the widest range of VXI-based instrumentation and communication interfaces specifically designed for avionics test and simulation. Our extensive catalog includes ARINC 429, ARINC 629, and MIL-STD-1553 VXI modules. These products are used by airlines and depot repair facilities worldwide. Tektronix card modular instruments are included in avionics ATE systems supplied by leading avionics and aircraft manufacturers worldwide.

### ARINC 629

In support of Boeing's new jetliner, the B777, Tektronix is announcing the VX4469A ARINC 629 Simulator with Enhanced Error Injection.

The VX4469A is our third generation ARINC 629 tester whose enhancements are a direct result of our experience and customer feedback on our earlier products. The VX4469A combines all of the functions of the proven VX4469 with new error injection capability you need to get your test system flying. The VX4469A provides you an advanced tool for ARINC 629 communication, bus traffic simulation, and bit, word and message level error injection. The VX4469A provides the maximum visibility into your LRU's ARINC 629 interface.

### MIL-STD-1553

Tektronix introduces a new addition to our MIL-STD-1553 product family. The VX4457 Intelligent Bus Analyzer/Monitor is an unsurpassed tool for monitoring and analyzing 1553 bus traffic. The VX4457 provides test engineers with "Logic Analyzer" functionality to help zero in on specific messages of interest. Knowledgeable application engineers are available to consult on your avionics test applications and solutions.



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# Standard Product Summary

## STANDARD PRODUCT SUMMARY

For price information: Outside the U.S. contact your local Tektronix representative,  
inside the U.S. see the price list in the back of this catalog.

### MAINFRAMES

- VX1401** – Low Cost, 13-Slot Mainframe.
- VX1406** – Portable, 6-Slot Mainframe.
- VX1410** – IntelliFrame™, Intelligent 13-Slot Mainframe.

### SLOT 0/RESOURCE MANAGER MODULES

- VXIGPIB** – GPIB-VXI/C Slot 0 Resource Manager.
- VX4521** – High-speed slot 0 Device/Resource Manager.

### GPIB INTERFACES

- S3FG210** – GPIB-PCII/IA I/O Card for PC.
- S3FG220** – AT-GPIB/TNT I/O Card for PC.
- S3FG222** – EXM 27 AT-GPIB for EPC-7.

### MXI INTERFACES

- MXIWIN** – Standard VXI-MXI AT2010 without Cables.
- MXIEXT** – VXI-MXI Mainframe Extender.
- MXICBLS** – Cables for MXI.

### EMBEDDED CONTROLLERS

- VXI566** – 66 MHz Embedded 486 VXIbus Controller.
- VXI599** – 100 MHz Embedded 486DX4 VXIbus Controller.
- EPC-7** – 33/50 MHz Embedded 486 VXIbus Controller.

### SOFTWARE

- LVWIN** – National Instruments LabVIEW\*1 for Windows.
- LWDOS** – National Instruments LabWindows® for MS-DOS.
- LWCVI** – National Instruments LabWindows® CVI for Windows.

### DIGITIZERS

- TVS621** – Waveform Analyzer 2-CH, 250 MHz.
- TVS625** – Waveform Analyzer 2-CH, 1 GHz.
- TVS641** – Waveform Analyzer 4-CH, 250 MHz.
- TVS645** – Waveform Analyzer 4-CH, 1 GHz.
- DBS8700** – 8-CH, 200 kS/s Multiplexed Analog to Digital Converter/Digitizer.
- DBS8701** – 8-CH, 400 kS/s Multiplexed Analog to Digital Converter/Digitizer.
- DBS8710** – 16-CH, Differential Multiplexer with Sample and Hold.
- DBS8720** – 32-CH, Differential Multiplexer.
- VX4244** – 16-CH, 200 kS/s Simultaneous Digitizer.
- VX4240** – 10 MS/s Waveform Digitizer/Analyzer.

### MEASUREMENT

- 73A-541** – 10 MHz Universal Digitizing Counter.
- VX4224** – 200 MHz High Performance Universal Counter.
- VX4234** – 4.5-Digit Digital Multimeter.
- VX4237** – 6.5-Digit Digital Multimeter.
- VX4281** – RF Power Meter.
- VX1811A** – 18 GHz RF Diode Sensor.
- VX1812A** – 26.5 GHz RF Diode Sensor.
- VX1813** – Remote Calibrator for VX4281.
- VX1814A** – 18 GHz RF True RMS Sensor.
- VX1815A** – 40 GHz RF Diode Sensor.
- VX1817A** – 18 GHz 5 W Power Sensor.
- VX4286** – Single-ended, 32-CH, Analog/Digital Comparator.
- VX4287** – Differential 32-CH, Analog/Digital Comparator.

### SOURCES

- VX4342** – Dual Resistance Programming Module.
- VX4730** – 12-CH, 16-Bit D/AC.
- VX4750** – 25 MHz Function Generator.
- DBS8750** – 2-CH, 400 kS/s Arbitrary Waveform Synthesizer.
- DBS8751** – (Low Output) 4-CH, 200 kS/s Digital to Analog Converter/Waveform Generator.
- DBS8752** – (High Output) 4-CH, 200 kS/s Digital to Analog Converter/Waveform Generator.
- VX4790A** – 25 MS/s Arbitrary Waveform Generator.
- VX4792** – 250 MHz Arbitrary Waveform Generator.

### SWITCHING AND SCANNING

- VX4320** – Six 1X4 RF Multiplexer.
- VX4330** – 120-CH, Scanner/Multiplexer.
- VX4372** – 48-CH, Two-wire Scanner Slave.
- VX4374** – 24-CH, Four-wire Scanner Slave.
- VX4350** – 64-CH, SPST/SPDT Switching Module.
- VX4353** – 32-CH, SPST 5 A General Purpose Relay Switching.
- VX4355** – 24-CH, DPST/SPDT 5 A General Purpose Relay Switching.
- VX4356** – 20-CH, DPDT 5 A General Purpose Relay Switching.
- VX4357** – 32-CH, SPDT 5 A General Purpose Relay Switching.
- VX4380** – 256 Crosspoint Switch Matrix.
- VX4385** – 128 Crosspoint Relay Matrix Switch.
- 73A-308** – Relay and High Voltage Logic Driver.

### DIGITAL AND BOUNDARY SCAN

- 73A-270** – 2-CH, 10 MHz Arbitrary Serial Pulse/Pattern Generator.
- VX4491** – Serial Test Module (Boundary Scan).
- S59ADGS** – ASSET™ VXI Boundary Scan Diagnostic System.
- S59AITP** – ASSET™ Interconnect Test Product.
- S59ASFL** – ASSET™ Scan Function Library.
- S59ATVD** – ASSET™ VXI Test Vector Development System.
- VX4801** – 48-CH, Isolated Digital I/O.
- VX4802** – 80-CH, Programmable Digital I/O.
- VX4820** – 20 MHz Digital Test Module (64 Channels).

### AVIONICS

#### ARINC

- VX4428** – ARINC 429 Quad Transmitter/Receiver.
- VX4469A** – ARINC 629 Simulator with Enhanced Error Injection.

#### MIL-STD-1553/SYNCHRO

- VX4457** – MIL-STD-1553A/B Intelligent Bus Monitor.
- 73A-455** – Dual Channel MIL-STD-1553A/B Bus Simulator.

### TELECOMMUNICATIONS

See pages 326 to 329.

- SX4610** – SDH/SONET Analyzer.
- VX4610** – SDH/SONET Generator/Receiver.
- VX0A41** – VXI Programmable Optical Attenuator.

### ACCESSORIES

- 73A-451** – Wire-wrap Module with VXIbus Interface.
- 73A-452** – Blank Wire-wrap.
- 73A-850** – Extender.
- 73A-851** – VME to VXI Adapter.

\*1 LabVIEW is a registered trademark of National Instrument Corporation.



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