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Data Sheet

August 15, 2026

AMETEK / VTI INSTRUMENTS / VXI TECHNOLOGY

Ametek / VTI Instruments / VXI Technology SMP7500 96-Channel 300 mA Open- Collector/Relay Driver

Ametek / VTI Instruments / VXI Technology SMP7500 96-Channel 300 mA Open-Collector Relay Driver Module The Ametek / VTI Instruments / VXI Technology SMP7500 isaSMIPII I/O module with twelve groups of 8 bits (96 channels). Each group may be programmed as input or output. Single or double buffering is supported. Up to 192 channels fit in one C-size slot or 576 channels in two slots when paired with SMIPII bases. Each channel sinks 300 mA with built-in clamping diodes. Direct register access is typically 500 ns with D16 throughput to 4 MB per second. Clocked input setup is 2 us and hold is 80 ns. Vin max is 60 V. The Ametek / VTI Instruments / VXI Technology SMP7500 isaSMIPII I/O module with twelve groups of 8 bits (96 channels). Each group may be programmed as input or output. Single or double buffering is supported. Up to 192 channels fit in one C-size slot or 576 channels in two slots when paired with SMIPII bases. Each channel sinks 300 mA with built-in clamping diodes. Direct register access is typically 500 ns with D16 throughput to 4 MB per second. Clocked input setup is 2 us and hold is 80 ns. Vin max is 60 V. Relay driving, high-current digital I/O, synchronized pattern generation with SMIPII memory word generator mode, and UUT discrete control in VXI ATE.



MODEL

**Ametek / VTI
Instruments / VXI
Technology
SMP7500**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

SMP7500

LISTING

<https://aumatictechlabs.com/products/smp7500-3/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Ametek VTI Instruments SMP7500 is a 96-channel open-collector/relay driver module for automated test and control applications within the VXIbus platform. As a SMIP II plug-in module, it delivers high channel density and configurability for switching and relay driving tasks. Each of the 96 channels can sink up to 300 mA and is equipped with integrated clamping diodes for solid external device interfacing.

Technical Specifications

Channels: 96 open-collector/relay driver channels organized into 12 groups of 8 bits

Channel Configuration: Individually selectable as input or output via program control or front panel control line

Current Sink Capability: 300 mA maximum per channel

Data Buffering Modes: Single-buffered for real-time access; double-buffered for synchronized transfers

Clamping Protection: Built-in clamping diodes on each channel

Pull-Up Resistors: Internal pull-up resistors for clamping diodes and open-collector channels

Key Features

- Front panel sourcing of input and output clocks for large-scale channel synchronization
- On-board SMIP II memory functioning as memory-backed word generator
- Scan lists and timing delay support for enhanced relay control capabilities
- Internal clamping diode protection simplifies external wiring and reduces component count

Typical Applications

- Relay and solenoid control in test automation
- High-density digital I/O switching for industrial control
- Synchronized multi-channel switching in UUT interface systems
- Memory-backed waveform generation for time-critical switching sequences

Compatibility & Integration

The SMP7500 integrates into VXIbus C-size and D-size chassis using SMIP II base units. Single-slot configuration yields up to 192 channels; dual-slot base units support up to 576 channels in two card slots. Front panel connectors enable clock synchronization across multiple modules for system-wide timing coherence.

SMP7500 Characteristics / Specifications

PARAMETER	VALUE
Model	SMP7500
Instrument Type	96-channel open-collector relay driver I/O module
Family	SMIPII
Channel Count	96
Group Count	12 groups of 8 bits
Sink Current Per Channel	300 mA
Vin High Threshold	greater than 2.0 V
Vin Low Threshold	less than 1.5 V
Vin Maximum	60 V
Vout Low At 300 mA	less than 1.5 V
Vout High Range	greater than 2 V to 60 V
Data Access Type	direct register
Register Access Time Typical	500 ns
D16 Throughput	4 MB per second
Channels Per Single Slot Max	192
Channels Per Two Slots Max	576
Clocked Input Setup	2 us
Clocked Input Hold	80 ns
Data Input Clock Source	front panel
Data Output Clock Source	front panel
Buffer Modes	single buffered or double buffered
Clamping Diodes	built-in
Internal Pullups	clamping diodes and open collectors can be pulled up internally
Platform	VXIbus SMIPII modular switching

SMP7500 Specifications

PARAMETER	VALUE
Single or double buffered data paths	Up to 192 channels per single VXI C-size slot
Technical Specifications	Model: SMP7500
Notes	From VTI Instruments SMP7500 datasheet specifications. Exact SMIPII memory depth for word generator mode is carrier and option dependent.

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
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Notes

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Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

788 S 500 E, Pleasant Grove, UT 84062
sales@aumictech.com · +1 (484) 841-9341
<https://aumictechlabs.com>

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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.