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AMETEK / VTI INSTRUMENTS / VXI TECHNOLOGY

# Ametek / VTI Instruments / VXI Technology SMP3001DS 64-Channel Multiplexer Module

Ametek / VTI Instruments / VXI Technology SMP3001DS 64×1 Two-Wire Multiplexer with Discharge The Ametek / VTI Instruments / VXI Technology SMP3001DS isaSMIPII multiplexer providing a 64×1 two-wire multiplexer with discharge capability. It is the discharge-equipped variant of the SMP3001 64×1 two-wire (or 128×1 one-wire) multiplexer family for safer switching of charged nodes in automated test. Scanner and multiplexer ATE paths, charged cable discharge before reconnect, and high-channel 2-wire measurement multiplexing in VXI. The Ametek / VTI Instruments / VXI Technology SMP3001DS isaSMIPII multiplexer providing a 64×1 two-wire multiplexer with discharge capability. It is the discharge-equipped variant of the SMP3001 64×1 two-wire (or 128×1 one-wire) multiplexer family for safer switching of charged nodes in automated test. Scanner and multiplexer ATE paths, charged cable discharge before reconnect, and high-channel 2-wire measurement multiplexing in VXI. Discharge capability versus standard SMP3001 Family one-wire mode context on related SMP3001


**MODEL**

**Ametek / VTI  
Instruments / VXI  
Technology  
SMP3001DS**

**CALIBRATION**

**Available on  
request**

**CONDITION**

**Used**

**STATUS**

**In stock**

**RFQ / SKU**

**SMP3001DS**

**LISTING**

<https://aumictechlabs.com/products/smp3001ds-3/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

**This unit**

The SMP3001DS is a 64-channel multiplexer module for VXIbus systems, engineered to route multiple input signals through a single measurement channel. Part of the SMIP II series, this plug-in module delivers high-density switching in a compact form factor, enabling efficient sequential sampling of numerous sensors and test points while reducing system complexity. Configurable as either a 1×64 two-wire multiplexer or 1×128 one-wire multiplexer, the SMP3001DS integrates directly into VXIbus mainframes and combines with other SMIP II modules to build flexible, scalable switch matrices supporting up to 384 two-wire channels per double-slot VXIbus card.

**Technical Specifications**

Channels: 64 (1×64 two-wire or 1×128 one-wire) Switching Voltage: 300 VDC, 300 VAC Switching Current: 2 A maximum per channel Switching Power: 60 W DC, 125 VA; 60 W DC, 62.5 VA Bandwidth: >50 MHz (–3 dB), >100 MHz Path Resistance: <0.5  $\Omega$ ,  $10^8 \Omega$

VXIbus Slots: Single-slot (SMP1100) or double-slot (SMP1200) compatible

**Key Features**

- Multi-layer PCB construction with ground planes and shielding to minimize crosstalk
- Internal capacitive discharge relays protect sensitive circuits from residual voltages; discharge function is software-disableable for high-throughput, low-voltage applications
- Signal and control grounds isolated to maintain measurement integrity
- Break-Before-Make (BBM) and Make-Before-Break (MBB) switching implemented in hardware
- Programmable scan lists with configurable timing delays and backplane trigger advancement
- Individual relay control and path-level programming options
- Internal confidence checking confirms relay closure status
- Extensive triggering capability for synchronized multi-instrument operation

**Typical Applications**

Multi-point sensor monitoring, automated test systems, data acquisition from distributed measurement nodes, high-density signal switching in laboratory and production environments.

**Compatibility & Integration**

Register-mapped VXIbus interface with VXIplug&play driver support. Mixes and matches with other SMIP II modules within SMP1100 and SMP1200 VXIbus mainframes.

## SMP3001DS Characteristics / Specifications

| PARAMETER              | VALUE                                         |
|------------------------|-----------------------------------------------|
| Model                  | SMP3001DS                                     |
| Instrument Type        | two-wire multiplexer with discharge           |
| Mux Configuration      | 64×1 two-wire                                 |
| Discharge Capability   | yes                                           |
| Related Model          | SMP3001                                       |
| Smp3001 Alternate Mode | 64×1 two-wire or 128×1 one-wire               |
| Family                 | SMP3xxx multiplexers scanners                 |
| Base Units             | SMP1100 and SMP1200                           |
| Platform               | VXIbus SMIPII                                 |
| Module Role            | plug-in switch daughtercard                   |
| Wire Mode              | 2-wire                                        |
| Channel Count Two Wire | 64                                            |
| Series Name            | SMIPII multiplexer                            |
| Integration            | mix and match with power GP matrix RF modules |
| Catalog Listing        | 64×1 2-wire multiplexer discharge capability  |
| Density Class          | high density multiplexer                      |
| Switching Domain       | DC to RF family platform                      |
| Configuration          | housed in SMP1100 or SMP1200 base             |
| Maintainability        | front removable with base unit design         |
| Base Unit Family       | SMP1100 and SMP1200                           |
| Field Service          | front removable modules on bases              |
| Mix Capability         | power GP mux matrix RF driver modules         |
| Connector Selection    | mating connectors per installed module        |
| Family Alias           | SMIP II                                       |

# SMP3001DS Specifications

| PARAMETER                                    | VALUE                                                                                                                                 |
|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| Applications                                 | Scanner and multiplexer ATE paths, charged cable discharge before reconnect, and high-channel 2-wire measurement multiplexing in VXI. |
| Discharge capability versus standard SMP3001 | SMIPII plug-in for SMP1100/1200                                                                                                       |
| Technical Specifications                     | Model: SMP3001DS                                                                                                                      |

# 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         |                                               |
|------------------------|-----------------------------------------------|
| Specifications         |                                               |
| PARAMETER              | VALUE                                         |
| Model                  | SMP3001DS                                     |
| Instrument Type        | two-wire multiplexer with discharge           |
| Mux Configuration      | 64x1 two-wire                                 |
| Discharge Capability   | yes                                           |
| Related Model          | SMP3001                                       |
| Smp3001 Alternate Mode | 64x1 two-wire or 128x1 one-wire               |
| Family                 | SMP3xxx multiplexers scanners                 |
| Base Units             | SMP1100 and SMP1200                           |
| Platform               | VXibus SMIP II                                |
| Module Role            | plug-in switch daughtercard                   |
| Wire Mode              | 2-wire                                        |
| Channel Count Two Wire | 64                                            |
| Series Name            | SMIP II multiplexer                           |
| Integration            | mix and match with power GP matrix RF modules |
| Catalog Listing        | 64x1 2-wire multiplexer discharge capability  |
| Density Class          | high density multiplexer                      |
| Switching Domain       | DC to RF family platform                      |
| Configuration          | housed in SMP1100 or SMP1200 base             |
| Maintainability        | front removable with base unit design         |
| Base Unit Family       | SMP1100 and SMP1200                           |
| Field Service          | front removable modules on bases              |
| Mix Capability         | power GP mux matrix RF driver modules         |
| Connector Selection    | mating connectors per installed module        |
| Family Alias           | SMIP II                                       |

#### Notes

From VTI Instruments SMIPII switching introduction multiplexer table. Per-channel voltage current and discharge timing belong on the SMP3001/DS datasheet.

### Available from Aumictech

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

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

#### Aumictech

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<https://aumictechlabs.com>

NIST-traceable calibration · SAM registered ·  
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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.