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Data Sheet

August 15, 2026

AMETEK / VTI INSTRUMENTS / VXI TECHNOLOGY

Ametek / VTI Instruments / VXI Technology VM3618 8-Channel Isolated 16-bit D/A Converter

AMETEK VTI VM3618 8 Channel Isolated 16 Bit D/A Converter The VTI VM3618 isaVMIP 8-channel isolated 16-bit DAC module. OEM VM3618 datasheet lists plus or minus 10 V, plus or minus 16 V, 0 to 20 V and 0 to 32 V voltage ranges, plus or minus 20 mA current mode, 100 V rms / 150 V peak isolation, 3 V/us slew at 20 mA, and scan lists of 512 entries per channel. Isolated analog stimulus in VXIbus ATE, including series-stacked channels for 0 to 64 V or plus or minus 32 V, with up to 24 isolated DACs in one C-size slot on VM9000. The VTI VM3618 isaVMIP 8-channel isolated 16-bit DAC module. OEM VM3618 datasheet lists plus or minus 10 V, plus or minus 16 V, 0 to 20 V and 0 to 32 V voltage ranges, plus or minus 20 mA current mode, 100 V rms / 150 V peak isolation, 3 V/us slew at 20 mA, and scan lists of 512 entries per channel. Isolated analog stimulus in VXIbus ATE, including series-stacked channels for 0 to 64 V or plus or minus 32 V, with up to 24 isolated DACs in one C-size slot on VM9000. Per-channel voltage or plus or minus 20 mA current range



MODEL

**Ametek / VTI
Instruments / VXI
Technology
VM3618**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

VM3618

LISTING

<https://aumictechlabs.com/products/vm3618-3/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Ametek/VTI Instruments/VXI Technology VM3618 is an 8-channel, isolated, 16-bit digital-to-analog converter designed for high-resolution analog output applications within VXIbus systems. This module offers significant flexibility, allowing each of its eight channels to be individually programmed for unique output ranges, supporting both voltage and current outputs. The VM3618 is part of the VMIP™ (VXI Modular Instrumentation Platform) family, enabling it to be combined with other VMIP modules for high-density configurations within a single VXIbus card slot. This platform approach leverages the full capabilities of the VXIbus, providing a powerful and modular instrumentation solution.

Technical Specifications

- * Channels: 8 independent, isolated 16-bit Digital-to-Analog Converters (DACs)
- Resolution: 16 bits, 15 bits monotonic
- Isolation: 100 V rms, 150 V dc/ac peak
- Output Ranges (Voltage Mode): * ± 10 V * ± 16 V * 0 V to 20 V * 0 V to 32 V
- Output Ranges (Current Mode): * ± 20 mA
- Maximum Output Current: * 20 mA per channel (normal operation) * 50 mA per channel (short circuit)
- Output Voltage Compliance: 12 V maximum at ± 20 mA output
- Slew Rate: 3 V/ μ S (with 20 mA load)
- Gain Error: $\pm 0.015\%$ of setting + 0.003%/°C
- Offset Error: ± 2 LSB + 0.2 LSB/°C
- Ripple and Noise: < 2 μ A rms (20 Hz-300 kHz, 250 Ω load)
- Settling Time: 20 μ s to 0.1% of specified value
- Conversion Rate: > 100,000 changes per second (up to 10 μ s with direct register access)

Electrical Characteristics

- * Output Current (Short Circuit): Continuous duration

Interfaces

- * Programming: * VXIbus Interface * SCPI Compatible * Word Serial Protocol (Message-based Data Access) * Direct Register-based Data Access (Offers fastest throughput) * Pseudo-register-based Data Access

Triggering

- * VXI TTL trigger bus support * Programmable trigger output upon DAC update * Eight available trigger lines can be specified or disabled * Trigger upon receipt of a word serial command

Scan Lists: Supports 8 different scan lists, each up to 512 entries long, to ease testing

Calibration: * On-board storage of calibration constants * Constants determined during calibration and can be queried or altered via word serial command * Allows pre-calculation of data for direct register access programming

User Connector: Standard

Physical Characteristics

- * Form Factor: VMIP™ module, designed to fit within a VM9000 carrier or VXIbus C-size slot
- Density: Up to 24 isolated D/A converters per single VXIbus C-size slot when combined with other VMIP modules

Compatibility

- * VXIbus System: Part of the VMIP™ family, designed to integrate with other VMIP™ instruments

Carrier Requirement: Requires a VM9000 carrier for integration into a VXIbus system

VXIplug&play Drivers: Provided for ease of programming

Programming and Operation

- * Output Configuration: Multiple channels can be connected in series to provide extended voltage ranges, e.g., channels 1 and 2 can provide a single output of (0-64) V or ± 32 V

Data Access: Supports message-based data access via word serial commands and direct register access for high-speed data transfer.

Scan Lists: Facilitates testing by allowing pre-defined sequences of output values to be loaded and executed.

Triggering Options: Extensive triggering capabilities allow synchronization with other system events.

Calibration Constants: Stored on-board and accessible for precision control.

Why Choose Aumictech for Ametek / VTI Instruments / VXI Technology VM3618? At Aumictech, we specialize in supplying high-end VXIbus instrumentation equipment. Whether you need precise 8-channel isolated 16-bit D/A conversion, flexible voltage and current output configurations, or seamless integration into your VXIbus system, our team ensures the Ametek/VTI Instruments/VXI Technology VM3618 delivers maximum performance for your application.

VM3618 Characteristics / Specifications

PARAMETER	VALUE
Model	VM3618
Channels Per Instrument	8 independently isolated
Voltage Resolution	16 bits, 15 bits monotonic
Voltage Ranges	plus or minus 10 V, plus or minus 16 V, 0 to 20 V, 0 to 32 V
Output Current Normal	20 mA max per channel
Output Current Short Circuit	50 mA max per channel
Short Circuit Duration	continuous
Slew Rate	3 V/us at 20 mA load
Voltage Ripple And Noise	less than 2 mV rms (20 Hz to 300 kHz, 10 kOhm load)
Isolation	100 V rms, 150 V dc/ac peak channel-to-channel or channel-to-mainframe
Current Output Range	plus or minus 20 mA
Current Compliance At 20 Ma	12 V max at plus or minus 20 mA
Current Compliance At 5 Ma	16 V max at plus or minus 5 mA
Current Open Circuit	less than 18 V
Current Resolution	15 bits, 14 bits monotonic
Current Ripple And Noise	less than 2 uA rms (20 Hz to 300 kHz, 250 ohm load)
Settling Time	20 us to 0.1 percent of specified value
Gain Error	plus or minus 0.015 percent plus 0.003 percent perCof setting
Offset Error	plus or minus 2 LSB plus 0.2 LSB perCConversion Rate Direct Register: greater than 100000 changes per second (controller/software dependent)
Conversion Rate Pseudo Register	greater than 20000 changes per second
Conversion Rate Word Serial	greater than 300 changes per second
Direct Register Conversion Time	approximately 10 us typical
Pseudo Register Conversion Time	under 50 us typical
Scan Lists	8 lists (one per channel), each up to 512 entries

PARAMETER	VALUE
Series Stack Example	two channels 0 to 64 V or plus or minus 32 V
Density PerCSize Slot	up to 24 isolated D/A converters (three VM3618 on VM9000)
Host Carrier	VM9000 required
User Connector	44-pin female high-density D-sub; mating connector supplied
Drivers	VXIplug and play and SCPI

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

From VTI Instruments VM3618 8-channel Isolated 16-bit D/A (VMIP) datasheet (voltage-mode, current-mode, conversion-rate, isolation, and connector tables). Must be configured with a VM9000 host module.

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

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<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.