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Data Sheet

August 15, 2026

AMETEK / VTI INSTRUMENTS / VXI TECHNOLOGY

Ametek / VTI Instruments / VXI Technology VM1548 48-Channel TTL I/O Module

AMETEK VTI VM1548 48 Channel TTL I/O Module The VTI VM1548 isaVMIP 48-channel TTL digital I/O module (six groups of 8 bits). OEM VM1548/VM1548C datasheet lists Vin high greater than 2.0 V, Vin low less than 0.8 V, Vout high greater than 2 V at minus 15 mA, Vout low less than 0.55 V at 64 mA, 500 ns typical register access, and 10 ns / 5 ns clocked setup/hold. High-density TTL pattern I/O and handshaking in VXIbus ATE, including up to 144 channels in one C-size slot when three VM1548 modules share a VM9000. The VTI VM1548 isaVMIP 48-channel TTL digital I/O module (six groups of 8 bits). OEM VM1548/VM1548C datasheet lists Vin high greater than 2.0 V, Vin low less than 0.8 V, Vout high greater than 2 V at minus 15 mA, Vout low less than 0.55 V at 64 mA, 500 ns typical register access, and 10 ns / 5 ns clocked setup/hold. High-density TTL pattern I/O and handshaking in VXIbus ATE, including up to 144 channels in one C-size slot when three VM1548 modules share a VM9000. Six programmable 8-bit groups (48 channels)



MODEL

**Ametek / VTI
Instruments / VXI
Technology
VM1548**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

VM1548

LISTING

<https://aumictechlabs.com/products/vm1548-3/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Ametek/VTI Instruments/VXI Technology VM1548 is a 48-channel TTL I/O module for VXI bus systems, delivering high-density digital I/O in a single C-size card slot. Part of the VMIP™ family, it organizes channels into six independently configurable 8-bit groups, each selectable as input or output under program control. The module supports single or double buffering for real-time or synchronized data access, with data throughput reaching approximately 500 ns via register-based access. It integrates trigger and clock distribution across all channels, enabling precise synchronization of UUT handshaking and multi-channel data collection.

Technical Specifications

Channel Architecture: 48 channels organized as six 8-bit groups; each group independently configurable as input or output

Buffering Options: Single-buffered for real-time access; double-buffered for synchronized input/output operations

Logic Levels: TTL compatible (standard VM1548); VM1548C variant supports TTL or up to 60 V, 300 mA open-collector outputs

Data Throughput: Register-based access delivers approximately 500 ns per operation (controller and software dependent)

Data Format Support: ASCII, Hex, Octal, and Binary output

Key Features

Dual Data Access Methods: Word serial message-based interface for programmatic clarity; register-based access for maximum throughput

Flexible Clock Sources: Front panel inputs (one per 8-bit group), VXIbus TTL trigger bus, or word serial command

Event-Triggered Backplane Signaling: Monitors clock inputs to detect events and transmit triggers to the VXIbus backplane for device handshaking

Multi-Module Stacking: Achieves up to 144 I/O channels by combining multiple VM1548 modules via a VM9000 carrier in a single slot

VXIplug&play Drivers: Supplied drivers and SCPI compliance simplify integration and control

Typical Applications

Automated test systems requiring synchronized multi-channel digital control, UUT stimulus/response monitoring, and cross-module triggering in compact VXI chassis.

Compatibility & Integration

C-size VXIbus form factor; VMIP™ family member; requires VM9000 carrier (holds up to three VMIP™ instruments per slot); VXIplug&play drivers and SCPI compliant.

VM1548 Characteristics / Specifications

PARAMETER	VALUE
Model	VM1548
Channels	48 (six groups of 8 bits)
Density PerCSize Slot	up to 144 channels (three VM1548 on VM9000)
Vin High	greater than 2.0 V
Vin Low	less than 0.8 V
Iin At 2p7 V	less than 70 uA
Iin At 5p0 V	less than 1 mA
Iin At 0p5 V	less than minus 1 mA
Vout High	greater than 2 V at minus 15 mA (damping resistors replaced with shorts)
Vout Low	less than 0.55 V at 64 mA (damping resistors replaced with shorts)
Register Access Time	500 ns typical, direct register access (controller/software dependent)
Throughput D	4 MB per second using D16 access
Clocked Input Setup	10 ns (VM1548)
Clocked Input Hold	5 ns (VM1548)
Data Input Clock Sources	front panel, TTL trigger bus 0-7, or word-serial event; rising or falling edge
Data Output Clock Sources	front panel, TTL trigger bus 0-7, or word-serial event; rising or falling edge
Ttl Trigger Output Sources	front panel clock inputs 0-5 or word-serial event; rising or falling edge
Data Access Types	direct register or message-based word serial
Clock Control Vin High	greater than 2.0 V
Clock Control Vin Low	less than 0.8 V
Clock Control Iin At 5 V	less than 1 mA
User Connector	68-pin SCSI-2 compatible IDC; mating connector supplied
Host Carrier	VM9000 required

PARAMETER

VALUE

Companion Open Collector

VM1548C Vin max 60 V, Vout low less than 1.5 V at 300 mA, setup 2 us, hold 80 ns

Drivers

VXIplug and play and SCPI

VM1548 Specifications

PARAMETER	VALUE
AMETEK VTI VM1548 48 Channel TTL I/O Module	Overview
Key Features	Six programmable 8-bit groups (48 channels)
Technical Specifications	Model: VM1548

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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PARAMETER	VALUE
Model	VM1548
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Density PerCSize Slot	up to 144 channels (three VM1548 on VM9000)
Vin High	greater than 2.0 V
Vin Low	less than 0.8 V
Iin At 2p7 V	less than 70 uA
Iin At 5p0 V	less than 1 mA
Iin At 0p5 V	less than minus 1 mA
Vout High	greater than 2 V at minus 15 mA (damping resistors replaced with shorts)
Vout Low	less than 0.55 V at 64 mA (damping resistors replaced with shorts)
Register Access Time	500 ns typical, direct register access (controller/software dependent)
Throughput D8	2 MB per second using D8 access
Throughput D16	4 MB per second using D16 access
Clocked Input Setup	10 ns (VM1548)
Clocked Input Hold	5 ns (VM1548)
Data Input Clock Sources	front panel, TTL trigger bus 0-7, or word-serial event; rising or falling edge
Data Output Clock Sources	front panel, TTL trigger bus 0-7, or word-serial event; rising or falling edge
Ttl Trigger Output Sources	front panel clock inputs 0-5 or word-serial event; rising or falling edge
Data Access Types	direct register or message-based word serial
Clock Control Vin High	greater than 2.0 V
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User Connector	68-pin SCSI-2 compatible IDC; mating connector supplied

PARAMETER	VALUE
Host Carrier	VM9000 required
Companion Open Collector	VM1548C Vin max 60 V, Vout low less than 1.5 V at 300 mA, setup 2 us, hold 80 ns
Drivers	VXIplug and play and SCPI

Notes

From VTI Instruments VM1548 / VM1548C datasheet input, output, throughput, and clocking tables. VM1548 rows are the TTL column; VM1548C open-collector limits are listed as the companion module on the same sheet.

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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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.