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Data Sheet

August 14, 2026

AMETEK / VTI INSTRUMENTS / VXI TECHNOLOGY

Ametek / VTI Instruments / VXI Technology VM2164 200 MHz, 1ns Universal Counter

Ametek VTI VM2164 200 MHz 1 ns Universal Counter The Ametek/VTI Instruments VM2164 isaVXI universal counter module with 200 MHz / 1 ns class timing performance for frequency and time-interval measurements in VXI systems. Automated frequency and time-interval measurement in VXI ATE racks. Frequency period time interval measurements The Ametek/VTI Instruments VM2164 isaVXI universal counter module with 200 MHz / 1 ns class timing performance for frequency and time-interval measurements in VXI systems. Automated frequency and time-interval measurement in VXI ATE racks. Frequency period time interval measurements Instrument Type: Universal counter module

**MODEL****Ametek / VTI
Instruments / VXI
Technology
VM2164****CALIBRATION****Available on
request****CONDITION****Used****STATUS****In stock****RFQ / SKU****VM2164****LISTING**<https://aumictechlabs.com/products/vm2164-3/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Ametek/VTI Instruments/VXI Technology VM2164 is a 200 MHz universal counter module delivering 1 ns time interval resolution for precision frequency, period, timing, and voltage measurements in automated test systems. This VXIbus-compatible C-size card integrates into

VMIP™ platforms, enabling modular instrument configurations while supporting measurement rates exceeding 200 readings per second over the VXIbus or up to 32,000 on-board readings via direct register access.

Technical Specifications

Measurement Ranges Frequency (Inputs A & B): 500 μ Hz to 200 MHz; AC coupled: 20 Hz to 200 MHz; Channel C optional to 2.5 GHz Period: 5 ns to 2000 s Time Interval: 2 ns to 1e6 s with 1 ns resolution (100 ps with averaging) Pulse Width: 5 ns to 20 ms (positive/negative) Rise/Fall Time: 10 ns to 1000 s Phase: 0.00° to 360.00° Gate Time: Programmable 200 μ s to 99.999 s Voltage Measurement: DC and peak voltage in 5.00 V and 50.0 V ranges Resolution & Performance 9-digit resolution at 1 second gate time Time interval measurement: 1 ns (100 ps with averaging) Reading speed: >200 readings/second over VXIbus; 32,000 on-board readings with register access

Input Specifications Impedance options: 50 Ω , 1 M Ω // 20 pF, 1 M Ω $\times$ 10 // 20 pF Trigger sensitivity: +50 V range - 200 mVrms sine ($\leq$ 50 MHz), 400 mVrms (50–200 MHz); +5.0 V range - 20 mVrms ($\leq$ 50 MHz), 40 mVrms (50–200 MHz) Maximum input voltage: 1 M Ω input 100 kHz: $\pm$ 5 V to 200 MHz; 50 Ω input: 5.0 Vrms Crosstalk: 50 ns pulse width, <250 ns transition time, TTL or ECL voltage levels, $\sim$ 1 k Ω impedance TTL Trigger Bus: Programmable polarity, edge or level selection

Key Features VXIbus modular architecture for integrated multi-instrument test systems Built-in DVM for voltage measurements Multiple totalization modes: count, 2nd channel start/stop, 2nd channel gate, time gate, external arm High-speed data buffering: 32,000 on-board readings Flexible input coupling and impedance selection

Typical Applications Frequency and timing validation in RF and digital circuits Production test environments requiring high-speed measurement throughput Automated test equipment with modular instrument integration Phase and pulse characterization in signal analysis

Compatibility & Integration VXIbus C-size module compatible with VMIP™ instrument platforms, enabling single-chassis multi-function test configurations with standardized VXI backplane communication.

VM2164 Characteristics / Specifications

PARAMETER	VALUE
Instrument Type	Universal counter module
Platform	VXIbus
Manufacturer	Ametek VTI Instruments / VXI Technology
Model	VM2164
Frequency Class	200 MHz
Timing Resolution Class	1 ns
Measurements	frequency period time interval class
Form Factor	VXI module
Application Class	ATE timing/frequency
Inputs	counter input channels class
Triggers	VXI TTL triggers class
Programming	VXI control
Use Stage	system ATE
Calibration	module calibration
Cooling	VXI mainframe airflow
Display	host computer readback
Gate Times	programmable gate class
Arming	start/stop arming class
Impedance	50 ohm/1 Mohm class typical counters
Family	VTI counter modules
Slot	VXI slot occupancy per assembly
Resolution Modes	frequency and TI resolution modes
Accessories	input cables
Documentation	VTI VM2164 manual

PARAMETER	VALUE
Configuration Note	expand full channel and accuracy tables from OEM datasheet before denser upload

VM2164 Specifications

PARAMETER	VALUE
Ametek VTI VM2164 200 MHz 1 ns Universal Counter	Overview
VXI universal counter module	200 MHz frequency class
Technical Specifications	Instrument Type: Universal counter module

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.

performance for frequency and time-interval measurements in VXI systems.

Applications

Automated frequency and time-interval measurement in VXI ATE racks.

Key Features

VXI universal counter module

200 MHz frequency class

1 ns timing resolution class

Frequency period time interval measurements

Ametek VTI Instruments family

Technical Specifications

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Notes
Frequency/timing class from Ametek/VTI VM2164 product title (200 MHz, 1 ns). Expand full accuracy tables from the VTI datasheet before upload.

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