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Data Sheet
August 13, 2026

KEYSIGHT / AGILENT / HP

Keysight / Agilent / HP E1415A Algorithmic Closed Loop Controller

HP Agilent E1415A Algorithmic Closed Loop Controller VXI The HP E1415A isaC-size VXI algorithmic closed-loop controller for real-time control algorithms in ATE (PID-style and custom loops) using on-board processing rather than the Slot 0 computer for the inner loop. Used with VXI analog I/O and SCP (signal conditioning plug-on) families including strain SCPs such as E1539A. VXI closed-loop process/device control; algorithmic test sequencing; hardware-in-the-loop style inner loops; strain/analog control with E1539A SCP. The HP E1415A isaC-size VXI algorithmic closed-loop controller for real-time control algorithms in ATE (PID-style and custom loops) using on-board processing rather than the Slot 0 computer for the inner loop. Used with VXI analog I/O and SCP (signal conditioning plug-on) families including strain SCPs such as E1539A. VXI closed-loop process/device control; algorithmic test sequencing; hardware-in-the-loop style inner loops; strain/analog control with E1539A SCP.

MODEL **Keysight / Agilent / HP E1415A**	CALIBRATION **Available on request**
CONDITION **Used**	STATUS **In stock**
RFQ / SKU **E1415A**	LISTING **https://aumictechlabs.com/products/e1415a-2/**

NIST-traceable cal · SAM registered · 30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Keysight/Agilent/HP E1415A is a VXIbus Algorithmic Closed-Loop Controller that executes complex real-time control algorithms on a dedicated onboard Digital Signal Processor. This C-size, single-slot module eliminates dependency on host computer processing for primary control

functions, delivering deterministic response times essential for precision closed-loop applications. It bridges standard PID control and fully custom algorithm implementations, supporting up to 32 independent control loops with user-defined logic written in ANSI C subset programming. Technical Specifications Module Type: VXIbus Algorithmic Closed-Loop Controller, C-size, 1-slot Processing: Digital Signal Processor (DSP) for real-time algorithm execution Control Loops: Up to 32 independent closed-loop algorithms Algorithm Language: ANSI C subset with user-defined functions I/O Channels: 64 configurable channels in 8-channel groups Supported I/O Types: Analog Input, Analog Output, Digital I/O Signal Conditioning Plug-on Cards (SCPs): Up to 8 optional SCP slots for specialized I/O Update Rate: Up to 2.5 kHz; achievable up to 1000 Hz per loop for simple PID calculations with 8 loops SCP Example: E1502A 8-Channel Low-Pass Filter SCP - 7 Hz cutoff with over-voltage protection and open transducer detection; self-calibrated on demand Key Features Deterministic timing with no drift or jitter in integral and derivative calculations Input measurement, calculation, and output completion between scan triggers Built-in PID algorithms; user-specified control algorithms supported Up to 32 user-defined functions per module Transcendental and non-linear functions via piece-wise linear interpolated lookup tables for optimized execution speed Self-calibrating analog input and output SCPs Minimal host computer interaction required for operation Data Acquisition & Control Logic High-speed multi-channel capture of analog, digital, and frequency-based signals within a single module. Algorithms execute closed-loop control by acquiring input data, performing real-time calculations, and generating output commands with deterministic latency. Compatibility & Integration Designed for VXIbus backplane systems. Optional Signal Conditioning Plug-on Cards extend I/O capabilities and provide signal conditioning for specialized measurement and control applications.

Features & description

From manufacturer datasheet

Features

- On-board algorithmic closed-loop engine

E1415A Characteristics / Specifications

PARAMETER	VALUE
Model	E1415A
Manufacturer	Hewlett Packard / Agilent / Keysight
Instrument Type	VXI Algorithmic Closed Loop Controller
Alias	E1415A; HP E1415A
VXI Size	C-size
Function	algorithmic closed-loop control
Loop Engine	on-board (not Slot 0 inner loop)
SCP Support	signal conditioning plug-ons (strain analog)
Related E1539A	strain measurement SCP in this catalog
Related E14	scanning ADC / measurement family
Host	C-size VXI mainframe with E1406A command module
Device Type	register/message family VXI controller
I/O	analog/digital via module and SCPs
Scan List	algorithmic scan/control lists
Determinism	on-board loop timing vs GPIB host
Trigger	VXI TTL/ECL
Cooling	VXI C-size airflow
Status	HP E1415A EOL
Software	SCPI / downloadable algorithms
Slot	1 C-size
NotADMM	controller not E1411A
NotADigitizer	not E1432/E1438
Power	VXI backplane
Terminal	SCP and terminal assemblies
Calibration	analog path cal with installed SCPs

PARAMETER	VALUE
Documentation	E1415A user/programming manual
Use	closed-loop ATE
Firmware	module algorithm firmware Notes Algorithmic closed-loop VXI controller identity from HP E1415A product literature. Loop rates analog channel counts and SCP mix are configuration-specific: confirm installed SCPs (for example E1539A) rather than inventing PID sample rates.

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	E1415A
Manufacturer	Hewlett Packard / Agilent / Keysight
Instrument Type	VXI Algorithmic Closed Loop Controller

Specifications

PARAMETER	VALUE
Alias	E1415A; HP E1415A
VXI Size	C-size
Function	algorithmic closed-loop control

Specifications

PARAMETER	VALUE
Loop Engine	on-board (not Slot 0 inner loop)
SCP Support	signal conditioning plug-ons (strain analog)
Related E1539A	strain measurement SCP in this catalog

Specifications

PARAMETER	VALUE
Related E1413	scanning ADC / measurement family
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Device Type	register/message family VXI controller

Specifications

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Status	HP E1415A EOL

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PARAMETER	VALUE
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NotADMM	controller not E1411A

Specifications

PARAMETER	VALUE
NotADigitizer	not E1432/E1438
Power	VXI backplane
Terminal	SCP and terminal assemblies

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PARAMETER	VALUE
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Documentation	E1415A user/programming manual
Use	closed-loop ATE

Firmware: module algorithm firmware

Notes

Algorithmic closed-loop VXI controller identity from HP E1415A product literature. Loop rates analog channel counts and SCP mix are configuration-specific: confirm installed SCPs (for example E1539A) rather than inventing PID sample rates.

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

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