

KEYSIGHT TECHNOLOGIES (AGILENT HP)

E1406A

The Keysight/Agilent E1406A is a C-size, 1-slot VXI message-based command module that provides Slot 0 and Resource Manager functionality. It serves as a VMEbus system controller and a GPIB (IEEE-488)-to-VXIbus interface device, allowing for seamless communication with message-based and register-based VXI modules from any manufacturer. Featuring a 16 MHz 68000 processor, flash memory for driver storage, and up to 2 MB of RAM, the module also translates SCPI commands to make register-based instruments highly programmable and user-friendly. High-throughput performance across multiple mainframe systems is enabled via MXIbus protocol support.

SPECIFICATIONS

General

Interfaces	GPIB (IEEE-488), RS-232, VXIbus
Display	12-character dot-matrix LED display
Front Panel Status LEDs	FAILED, READY, ACCESS, SYSFAIL
Real-Time Clock Battery	Lithium, non-rechargeable

Physical

Operating Temperature	0 °C to +55 °C °C
Dimensions (W×H×D)	262 mm x 30.5 mm x 353 mm mm

System & Chassis Architecture

Form Factor	VXI C-size
Chassis Slot Width	1-slot
VXI Device Type	Message-based Commander
System Controller Capability	VMEbus system controller and Slot 0 / Resource Manager
Processor	16 MHz 68070
Memory (RAM)	Up to 2 MB
Flash Memory	Integrated flash memory for downloadable drivers

Timing & Synchronization

Reference Clock Output Synchronization	Synchronizes VXI backplane 10 MHz clock to external TTL signal
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Connectivity & Host Interfaces

Host Interface Connection	GPIB (IEEE-488) or RS-232
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Software & Programming

Command Language Support	SCPI (Standard Commands for Programmable Instruments)
SCPI Command Translation	Translates SCPI commands for register-based instruments
Diagnostic / Configuration Utility	Agilent VIC (VXI Installation Consultant)

Power Requirements

+5 V Current Draw	2.2 A
+12 V Current Draw	0.08 A
-5.2 V Current Draw	0.15 A
-2 V Current Draw	0.03 A

Environmental Specifications

Storage Temperature Range	-40 °C to +75 °C
Cooling Fan Configuration	Forced air from VXI mainframe

Interfaces & Connectivity

HP-IB (GPIB) Maximum Transfer Rate	1 MB/s
RS-232 Maximum Baud Rate	38.4 kbps

Standards & Compliance

VXIbus Specification Compliance	VXIbus Rev 1.4
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System Performance

Resource Manager Execution Time	< 5 seconds (typical 13-slot mainframe)
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Triggering & Synchronization

Standard Internal Clock Accuracy	±0.01% (±100 ppm)
10 MHz Reference Clock Input (CLK10 IN)	SMB connector
10 MHz Reference Clock Output (CLK10 OUT)	SMB connector

Environmental

Operating Humidity Range	Up to 95% RH at 40 °C (non-condensing)
Storage Humidity Range	Up to 95% RH at 65 °C
Operating Altitude	Up to 4,572 m (15,000 ft)
Storage Altitude	Up to 15,240 m (50,000 ft)

VXI Interface

VXIbus Master Capability	A24, A32, D16, D32
VXIbus Slave Capability	A16, D16
Data Transfer Bus Arbiter	Priority (PRI) or Round Robin (RRS)

Connectivity

RS-232 Flow Control	XON/XOFF, RTS/CTS
RS-232 Connector Type	9-pin D-sub (male)
Trigger Output Connector	SMB
10 MHz Reference Input Connector	SMB
10 MHz Reference Output Connector	SMB
GPIO Capability Codes	SH1, AH1, T6, TE0, L4, LE0, SR1, RL1, PP0, DC1, DT1, C1, C2, C3, C4, C28
GPIO Address Range	0 to 30

TECHNOLOGY

VXIbus

APPLICATIONS

VXI Slot 0 System Controller and Resource Manager

Generated by SpecAtlasHub (specatlashub.com). Specifications are compiled from available sources and are subject to change — verify critical values against the manufacturer before purchase.