

KEYSIGHT TECHNOLOGIES (AGILENT HP)

E8491B

The Keysight (Agilent) E8491B is a high-performance IEEE 1394-to-VXI Slot 0 interface designed for C-size VXI mainframes. It establishes a high-speed PC-to-VXI link, providing full Slot 0 capability, system control functions, and standard CLK10 generation. Ideal for test and measurement systems requiring fast data transfer and robust software compatibility via Agilent/Keysight IO Libraries.

SPECIFICATIONS

General

Interfaces	IEEE 1394a (FireWire), SMB External Trigger Input, SMB External Trigger Output, SMB CLK10 Output
Display	LED Status Indicators (FAILED, SYSRESET, ACCESS, ACTIVE, ONLINE)

Physical

Power Supply	Powered via VXI backplane
Operating Temperature	0 to 55 °C °C
Dimensions (W×H×D)	30.5 mm × 262 mm × 353 mm (C-size, 1-slot VXI) mm

Host-to-VXI Interface Specifications

Host Interface Type	IEEE 1394a (FireWire 400)
Host Connection Protocol	IEEE 1394 Serial Bus Protocol
Maximum Data Transfer Rate	Up to 13 MB/s (sustained block transfers)
Cable Type Requirements	Shielded 6-pin to 6-pin IEEE 1394 copper cable
Maximum Cable Length	4.5 m

VXIbus Compatibility & Performance

VXIbus Specification Compliance	Revision 1.4
VXI Card Size	C-size
Slot Footprint	1-slot
VXI Slot 0 Capability	Yes (provides CLK10, SYSRESET, and System Controller functions)
VXI Backplane Clock (CLK10) Generation	10 MHz
VXI Addressing Modes	A16, A24, A32
VXI Data Modes	D08, D16, D32, Block Transfers
VXI Interrupt Handlers	Supports VXI interrupts on levels 1 through 7

Triggering and Synchronization

VXI TTL Trigger Lines Supported	TTLTRG0 through TTLTRG7
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Onboard Resources & Hardware Configuration

Logical Address Configuration	Hardware switch-selectable (usually set to 0 for Slot 0 controller)
System Controller Functions	VXIbus Arbiter, SYSCLK driver, SYSFAIL driver, SYSRESET driver

Software & Driver Support

I/O Libraries Compatibility	Keysight / Agilent IO Libraries Suite
API Standards	VISA, SICL
Driver Support	IVI-COM, IVI-C, LabVIEW

Environmental Specifications

Storage Temperature Range	-40 °C to +75 °C
Relative Humidity Range	Up to 95% at 40 °C (non-condensing)

Regulatory & Standards Compliance

EMC/EMI Compliance	CE, FCC Class A
VXIbus Consortium Compliance	Fully compliant

Ordering Information & Accessories

Compatible Cables	E8491-60011 (4.5 m cable), E8491-60012 (2.0 m cable)
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Power Requirements

+12 V Current Draw	0.05 A
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Status & Indicators

Status LED Indicators	Failed (red), Access (yellow), Ready (green)
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Interface Connectors

FireWire Port Count	2
FireWire Port Type	6-pin IEEE 1394
SMB Trigger Connectors	3 (External Trigger Input, External Trigger Output, CLK10 Output)

Cooling

Required Airflow	1.1 L/s @ 0.01 mm H ₂ O (for a 10°C temperature rise)
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Compliance

Safety Standards	IEC 61010-1, EN 61010-1, UL 3111-1, CSA C22.2 No. 1010.1
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VXI Interface

VXI Device Class	Register-based
CLK10 Generation Accuracy	±100 ppm
A16 Address Space Occupied	64 bytes

Environmental

Cooling Airflow Pressure Drop	0.01 mm H ₂ O (at 1.1 L/s)
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TECHNOLOGY

VXI / IEEE 1394 (FireWire)

APPLICATIONS

VXI Mainframe Slot 0 Interface and System Controller

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