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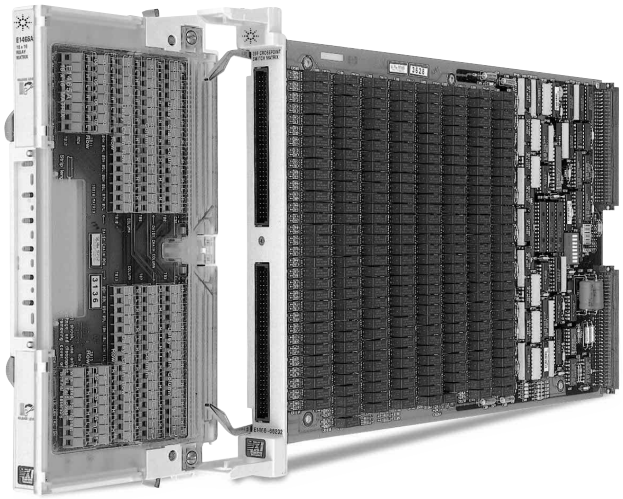
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Find the *Keysight / Agilent E1466A* at our website: ***Click HERE***

Agilent E1466A
4x64 Relay Matrix Switch
Data Sheet

- 1-Slot, C-size, register based
- 4x64 two-wire switching matrix, latching relays
- Rows expand to make larger matrixes
- Downloadable channel lists into onboard memory
- Includes QUIC easy-to-use terminal blocks
- Latching armature relay



Agilent E1466A

Description

The Agilent E1466A Relay Matrix Switch is a **C-size, 1-slot, register-based VXI module.** This 4x64 matrix switches each crosspoint—both high and low. The E1466A module provides the best cost-per-crosspoint for large matrix applications. It features easy expansion to larger matrixes via a chaining cable that allows you to interconnect rows and columns on different modules. A full E1401B 13-slot mainframe can have up to 3072 two-wire crosspoints.

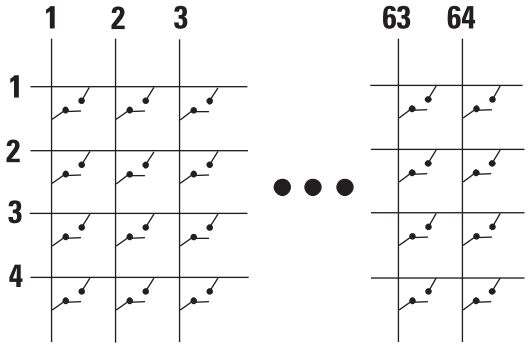
The E1466A shares the same switch card with the E1465A and E1467A; each product's unique terminal block determines the matrix configuration. Therefore, you can change matrix topology simply by plugging in the various terminal blocks, which can be obtained separately. Creating a matrix as large as 4x256 requires four matrix modules and interconnected rows and columns on the terminal blocks. All of the E1465/66/67A matrix modules offer similar densities, with different row/column sizes and identical performance specifications. All specifications are identical for this family, except for crosstalk.

Refer to the Agilent Technologies Website for instrument driver availability and downloading instructions, as well as for recent product updates, if applicable.

Configuration

You can create a larger matrix by adding one or more matrix modules and interconnecting the E1466A rows on the terminal blocks with the E1466-80002 daisy-chain expansion cable. You can interconnect the E1466A rows with the rows of another E1465A, E1466A, or an E1467A. To create a 4x256 matrix with four E1466A modules requires three daisy-chain expansion cables connected as shown.

A preferable solution for large matrixes is to use the E1467A with an expansion terminal block (Option 201/211) and Z2220A series cables. The E1467A Option 201/211 matrix expansion terminal block provides an 8x32 matrix configuration that can easily be expanded. Compared to the daisy-chain cable (which requires each wire to be screwed into the screw terminal), the E1467A Opt 201/211 terminal block gives you quicker access and easier cable connections.



E1466A Each crosspoint switches Hi and Lo

Agilent Technologies

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Product Specifications

AC Performance

AC specifications apply with no more than one crosspoint closed per row or column. Specifications are for 4x64 matrix, for Z(load) = Z(source) = 50 Ω. Specifications are for worst crosspoint. Matrix expansion degrades crosstalk and bandwidth performance. Typical is defined as the worst crosspoint test result from one or two matrix modules. If guaranteed specifications are necessary, contact your local sales representative.

Crosstalk (dB) within a card (worst path):

	<10 kHz	<100 kHz	<1 MHz
Closed path to closed path (typical):	–66 dB	–45 dB	–29 dB
Open row to open row (typical):	–73 dB	–52 dB	–37 dB
Open row to open column (typical):	–84 dB	–64 dB	–47 dB
Open column to open column (typical):	–92 dB	–70 dB	–52 dB

Crosstalk (dB) module-to-module (represents 4 x 128 configuration):

	<10 kHz	<100 kHz	<1 MHz
Closed path to closed path (typical):	–66 dB	–45 dB	–29 dB
Open row to open row (typical):	–68 dB	–46 dB	–29 dB
Open row to open column (typical):	–84 dB	–64 dB	–48 dB
Open column to open column (typical):	–92 dB	–71 dB	–52 dB

Closed channel capacitance (<10 kHz):

Hi to Lo:	<270 pF
Hi to Ground:	<430 pF
Lo to Ground:	<440 pF

Minimum bandwidth (-3 dB, $Z_L = Z_X = 50\ \Omega$): 10 MHz

Input

Maximum voltage (any terminal to any other terminal or chassis):

DC:	200 V
AC rms:	170 V
Peak:	238 V p-p
Maximum current (per channel common, non-inductive):	1 Adc; 1 Aac peak
Maximum power:	
Per channel:	30 W
Per module:	62.5 VA (resistive load)

DC

Maximum thermal offset per channel, differential Hi-Lo:	5 μV
Closed channel resistance (per channel):	
Initial:	<4.0 Ω (worst crosspoint) <1.8 Ω (best crosspoint)
End of life:	<10.0 Ω
Insulation resistance (between any two points):	
≤40 °C, ≤95% RH:	>10E8 Ω
≤40 °C, ≤65% RH:	n/a
≤25 °C, ≤40% RH:	>10E9 Ω

General

Time to close one channel: 8.9 ms *(Agilent V/743 and C-SCPI)*

Note: *When downloading a channel list to card memory, you can close all columns in one row in 8.9 ms.*

Power-down state:	Relay states are unchanged at power-down.
Power-up state:	Relays open at power-up.
Minimum relay life:	
No load:	10E7 operations
Screw terminal wire size:	18 to 26 AWG (1.2, 0.9, 0.75, 0.6, 0.5 mm)

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General Specifications

VXI Characteristics

VXI device type:	Register based, A16, slave only
Size:	C
Slots:	1
Connectors:	P1/2
Shared memory:	None
VXI busses:	None
C-size compatibility:	n/a

Instrument Drivers

See the Agilent Technologies Website (http://www.agilent.com/find/inst_drivers) for driver availability and downloading.

Command module firmware:	Downloadable
Command module firmware rev:	A.08
I-SCPI Win 3.1:	Yes
I-SCPI Series 700:	Yes
C-SCPI LynxOS:	Yes
C-SCPI Series 700:	Yes
Panel Drivers:	Yes
VXI*plug&play* Win Framework:	Yes
VXI*plug&play* Win 95/NT Framework:	Yes
VXI*plug&play* HP-UX Framework:	No

Module Current

	I_{PM}	I_{DM}
+5 V:	0.1	0.01
+12 V:	0.18	0.01
–12 V:	0	0
+24 V:	0	0
–24 V:	0	0
–5.2 V:	0	0
–2 V:	0	0

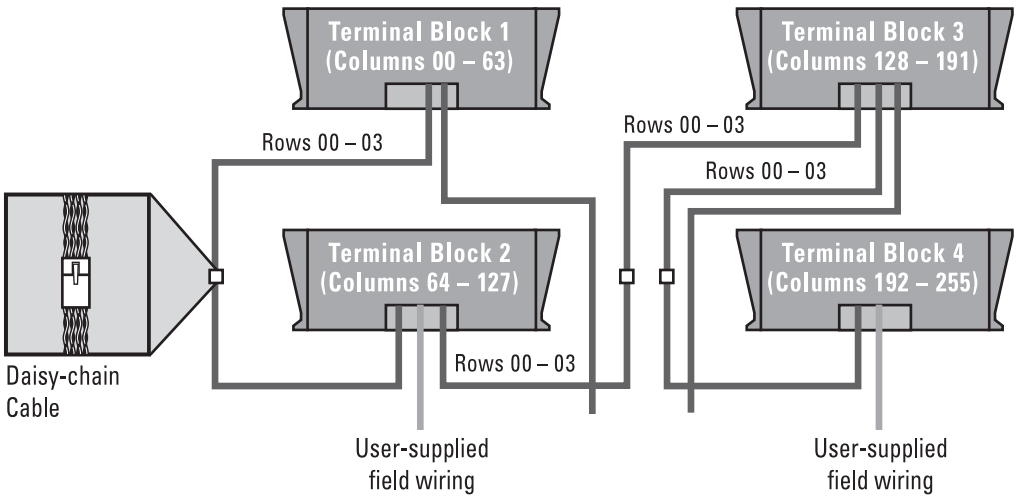
Cooling/Slot

Watts/slot:	5.00
ΔP mm H_2O:	0.08
Air Flow liter/s:	0.42

Ordering Information

Description	Product No.
4x64 Relay Matrix Module	E1466A
Service Manual	E1466A 0B3
Extra Terml BK 4 x 64 Relay Mat	E1466-80010
CBL Kit, Daisy Chain	E1466-80002

4 x 256 Matrix



Four E1466A matrix terminal blocks wired as a 4x256 matrix

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Related Literature

2000 Test System and VXI Catalog CD-ROM,
Agilent Pub. No. 5980-0308E (detailed specifications for VXI products)

2000 Test System and VXI Catalog,
Agilent Pub. No. 5980-0307E (overview of VXI products)

1998 Test System and VXI Products Data Book,
Agilent Pub. No. 5966-2812E

Online

Internet access for Agilent product information, services and support
www.agilent.com/find/tmdir

VXI product information
www.agilent.com/find/vxi

Defense Electronics Applications
www.agilent.com/find/defense_ATE

Agilent Technologies VXI Channel Partners
www.agilent.com/find/vxichanpart

Agilent Technologies' HP VEE Application Website
www.agilent.com/find/vee

Agilent Technologies Data Acquisition and Control Website
www.agilent.com/find/data_acq

Agilent Technologies Instrument Driver Downloads
www.agilent.com/find/inst_drivers

Agilent Technologies Electronics Manufacturing Test Solutions
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Get assistance with all your test and measurement needs at
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