

# Agilent E8481A 2-Wire, 4x32 Relay Matrix Switch

## Data Sheet

- 1-Slot, C-size, register based
- Ideal for signal switching up to 70 MHz @ 4x16, or 50 MHz @ 4x32
- Flexible dual 4x16 or single 4x32 2-wire matrix
- More than 500 channel lists can be downloaded into onboard memory
- Includes Agilent QUIC easy-to-use terminal blocks
- Non-latching reed relays

## Description

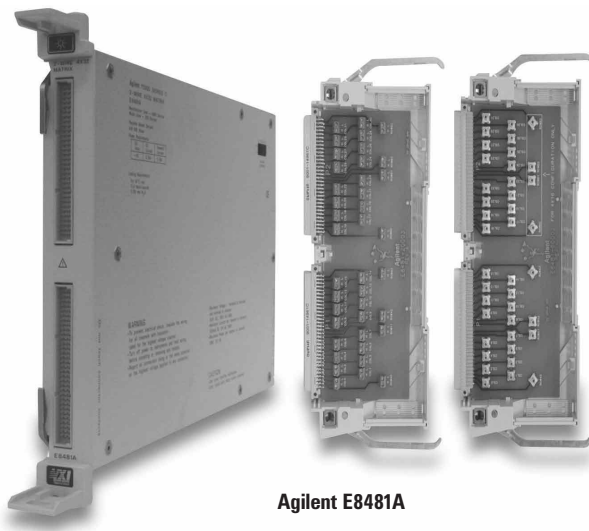
The Agilent Technologies E8481A 2-Wire, 4x32 Relay Matrix Switch is a **C-size, 1-slot, register-based VXI module**. This module switches each crosspoint — both high and low.

The Agilent E8481A can be configured as dual 4x16 matrices or a single 4x32 matrix. Bandwidth (-3 dB) is up to 70 MHz @ 4x16, or 50 MHz @ 4x32 configuration. The E8481A works with two types of Agilent QUIC terminal blocks. The SMB connector terminal block (Option 105) should be used for single-ended systems and higher frequencies. The screw terminal block (Option 106) should be used for two-wire systems and lower frequencies. Either terminal block must be ordered separately as an option to the E8481A; the standard E8481A includes no terminal block.

You can store up to 511 complete channel lists, or complete matrix configurations of opened/closed switches, in on-board E8481A memory. This allows switch module states to be recalled quickly and easily without long, complex programming commands.

The Agilent E8481A is ideal for switching signals to oscilloscopes, counters, and signal sources in your test system.

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



Agilent E8481A



## Product Specifications

### Input

**Maximum V (term to term):**

DC:	42 V
AC rms:	30V

**Maximum transient impulse:**

Vpk:	500 V
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**Maximum I (per channel, non-inductive):**

DC:	0.5 A
AC peak:	0.5 A

**Maximum power:**

Per channel:	5 VA
Per module:	40 VA

### DC

**Maximum thermal offset:** 50  $\mu$ V

**Closed channel resistance (per channel):** <2  $\Omega$  initial

**Insulation resistance (any two points):**

$\leq 40^\circ\text{C}$ , $\leq 65\%$ RH:	>10E8 $\Omega$
$\leq 25^\circ\text{C}$ , $\leq 40\%$ RH:	>10E9 $\Omega$

### AC

**Minimum bandwidth (-3 dB,  $Z_L=Z_X=50\ \Omega$ ):** 70 MHz @ 4x16  
50 MHz @ 4x32

**Crosstalk (dB, channel-to-channel typical):**

<100 KHz:	<-65 dB
<5 MHz:	<-50 dB
<50 MHz:	<-27 dB

**Closed-channel capacitance:**

<b>Hi to Lo:</b>	100 pF @ 4x16 160 pF @ 4x32
<b>Hi to chassis:</b>	100 pF @ 4x16 160 pF @ 4x32
<b>Lo to chassis:</b>	300 pF @ 4x16 550 pF @ 4x32

### General

**Typical relay life (rated**

**load)\*:** 10E9 operations

**Screw terminal wire size:** AWG 18 to AWG 26

*\*10 mA, 1 Vdc resistive load*

## General Specifications

### VXI Characteristics

<b>VXI device type:</b>	Register based, A16, Slave only
<b>Size:</b>	C
<b>Slots:</b>	1
<b>Connectors:</b>	P1/P2
<b>Shared memory:</b>	None
<b>VXI buses:</b>	None

### Instrument Drivers

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

**Command module firmware:** Downloadable

**Command module firmware rev:** A.11.01

**I-SCPI Win 3.1:** No

**I-SCPI Series 700:** No

**C-SCPI LynxOS:** No

**C-SCPI Series 700:** No

**Panel Drivers:** No

**VXIplug&play Win**

**Framework:** No

**VXIplug&play Win95/NT**

**Framework:** Yes

**VXIplug&play HP-UX**

**Framework:** No

### Cooling / Slot

**Watts / slot:** 13 (8 crosspoints closed)\*

**$\Delta$ P mm H<sub>2</sub>O:** 0.1

**Air flow liter / s:** 1.1

*\*Add 0.34 W per crosspoint when more than 8 crosspoints are closed.*

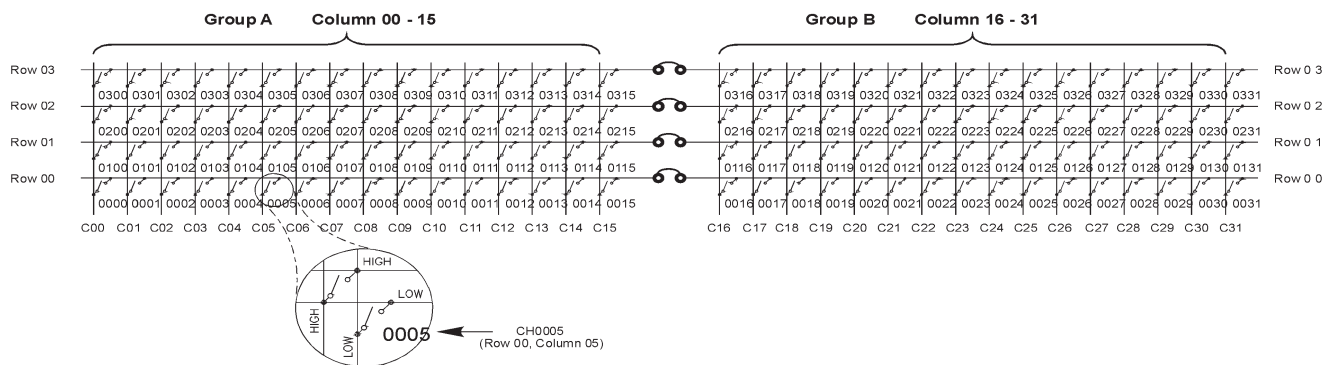
### Module Current

	$I_{PM}$ (A)	$I_{DM}$ (A)
+5 V:	2.21	0.10
+12 V:	0	0
-12 V:	0	0
+24 V:	0	0
-24 V:	0	0
-5.2 V:	0	0
-2 V:	0	0

### Ordering Information

Description	Product No.
2-Wire, 4x32 Relay Matrix Switch	E8481A*
SMB Terminal Block	E8481A 105
Screw Terminal Block	E8481A 106

\*Does not include a terminal block. To receive a terminal block, you must order either Option 105 or Option 106.



Agilent E8481A Crosspoint Switches Hi and Lo

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(fax) (31 20) 547 2390

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(fax) (82 2) 2004 5115

#### **Latin America:**

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(fax) (305) 269 7599

#### **Taiwan:**

(tel) 0800 047 8666

(fax) 0800 286 331

#### **Other Asia Pacific Countries:**

(tel) (65) 6375 8100

(fax) (65) 6836 0252

(e-mail) [tm\\_asia@agilent.com](mailto:tm_asia@agilent.com)

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