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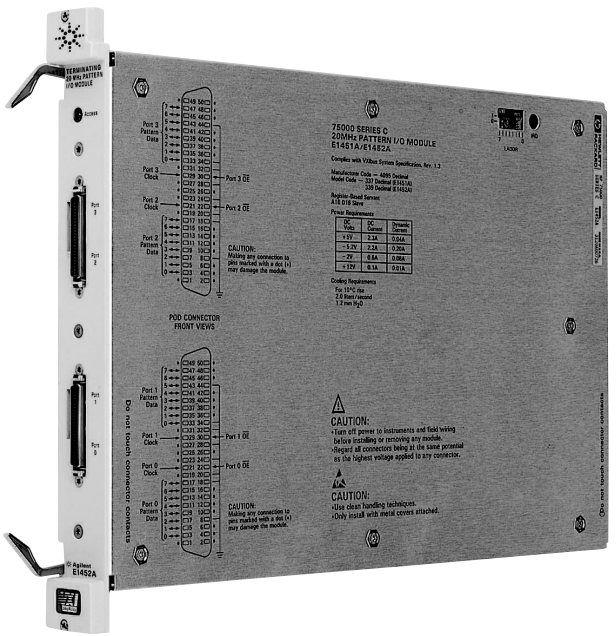
Find the *Keysight / Agilent E1454A* at our website: *Click HERE*

STEP4 Dionysos Job: 210%XXXX7953-0001 Agilent_E1452A Comp: 10-24-01 Time: 15:43 OP: NN

Agilent E1452A Terminating 20 MHz Pattern I/O Module

Data Sheet

- **32 I/O pins (4 ports of 8 bits each)**
- **Maximum 20 MHz pattern rate using an external clock**
- **64 K segmentable pattern depth**
- **Output, record, real-time comparison per port**
- **Programmatic or triggered tri-state on the fly**



Agilent E1452A

Description

The Agilent E1452A Pattern Input/Output Module is a **C-size, 1-slot, register-based VXI module** that is used to send data to and receive data from a device under test. Since it does not contain an internal time base, the E1452A is clocked by an externally supplied signal.

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

Programming

The pattern I/O module must be programmed using the SCPI instrument control language. Therefore, your VXI system requires an Agilent E1406A Command Module and a downloadable SCPI driver. Register-based programming is not supported.

32 Input/Output Pins per Module

Each pattern module contains 32 I/O pins arranged in four ports of eight bits. Each port can be statically programmed to output, record, or perform a real-time compare. Each port can also be tri-stated on the fly, either programmatically or externally. This allows two ports to be paralleled for bi-directional data transfers or to double I/O speed.

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Deep Memory

The pattern module contains 64 KB of memory behind each I/O port. This memory is segmentable and may be dedicated to one large test or split into multiple tests. **Note:** This memory is not dual-ported FIFO memory. Instead, generator/capture activity must be stopped when reading or writing to the memory.

Connecting the E1452A to the DUT

The Agilent E1454A Pattern Pod is a 16-pin active device with a 2-meter cable. This pod allows for full drive capability at a 2-meter distance from the module.

There are two basic ways to connect the pattern I/O module to the DUT:
(1) Using the Agilent E1454A Pattern Pod and making a connection to the pattern pod via:

- The E1493-61601 Pod Cable Assembly, which provides a mating connector for the pattern pod's connector and 61 cm of ribbon cable.
- The 1251-8832 right-angle PC board connector, which mates to the pattern pod's connector. The 1251-8832 connector is a 2x25-pin, male dual in-line connector (3M 3596-5002).
- The 1251-8262 straight PC board connector, which mates to the pattern pod's connector. The 1251-8262 connector is a 2x25-pin, male dual in-line connector (3M 3596-6002).

(2) Direct connection to the pattern I/O module's front panel connector via the E1454-61601 Pattern Module Cable Assembly or by a user-supplied connector and cable.



Agilent E1454A Pattern Pod

Product Specifications

Specifications include the E1454A pod and apply with a 50 pf, 500 Ω (to ground) load.

General	
Number of channels:	32
Channel type:	Input or Output
Output or input type:	TTL/CMOS
Memory:	64 K-vectors
Max. pattern rate:	20 M/s
32-bit block transfer:	n/a
Test synchronization:	Hardware triggers, software triggers

Memory	
Depth:	65,536 (64 k) vectors

Timing	
Pattern rate:	See external clock specifications
Skew:	3 ns typical (between I/O Pins, same port)
Rise time:	6.5 ns typical
Fall time:	7.0 ns typical

Output Levels	
High, open circuit:	4.4 V min
Low, open circuit:	0.1 V max
High, sourcing 24 mA:	3.7 V min
Low, sinking 24 mA:	0.44 V max

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Input Levels

High:	>2.0 V
Low:	<0.8 V

Tri-state Control Input Levels

High:	>2.0 V
Low:	<0.8 V

External Tri-state Delay

With pod:	11 ns max
Without pod:	14 ns max

External Clock

Minimum pulse width:	6 ns

Input Levels

High:	>2.0 V
Low:	<0.8 V

General Specifications

VXI Characteristics

VXI device type:	Register based
Size:	C
Slots:	1
Connectors:	P1/2
Shared memory:	No
VXI buses:	Local Bus A (specialized)

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.06
I-SCPI Win 3.1:	Yes
I-SCPI Series 700:	Yes (not supported on V743)
C-SCPI LynxOS:	No
C-SCPI Series 700:	Yes (not supported on V743)
Panel Drivers:	Yes
VXI*plug&play* Win Framework:	No
VXI*plug&play* Win 95/NT Framework:	No
VXI*plug&play* HP-UX Framework:	No

Module Current

	I_{PM}	I_{DM}
+5 V:	1.5	0.04
+12 V:	0.1	0.01
–12 V:	0	0
+24 V:	0	0
–24 V:	0	0
–5.2 V:	2.2	0.2
–2 V:	0.6	0.08

Cooling/Slot

Watts/slot:	22.00
ΔP mm H_2O:	0.12
Air Flow liter/s:	2.00

Ordering Information

Description	Product No.
Terminating 20 MHz Pattern Input/Output Module	E1452A
3 Yr. Retn. to Agilent to 1 Yr. OnSite Warr.	E1452A W01
Pattern I/O Pod for the E1451A/52A	E1454A
3 Yr. Retn. to Agilent to 1 Yr. OnSite Warr.	E1454A W01
Pattern I/O Cable	E1454-61601
Cable Customer Interface	E1493-61601

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