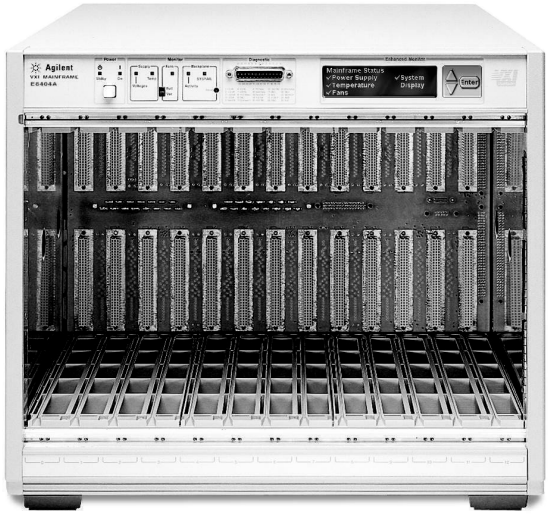
Agilent E8401A, E8403A, E8404A VXI Mainframes, 13-Slot C-Size, 500 & 1000 Watt

Data Sheet

- **13-Slot, C-size,**
- **500 – 1000 watts of usable power**
- **Efficient, quiet cooling improves VXI module performance**
- **Range of mainframe monitoring capabilities for confident measurements**
- **Compliant with VXIbus and VXI*plug&play* Specifications**



Agilent E8404A

Description

The Agilent Technologies E8400 Series of **13-slot, C-size VXI mainframes** provides a wide range of mainframe solutions to meet all your test system needs. They deliver innovative cooling technology, improved backplane design, high reliability, easy maintenance, and versatile accessories. The innovative air distribution system used in all three mainframes provides extremely quiet and efficient cooling.

Selection Guide

	E8401A	E8403A	E8404A
Description:	Lowest-cost, moderate-power mainframe	Lower-cost, high-power mainframe	High-performance mainframe
Number of slots:	13	13	13
Usable power:	500 W	1000 W	1000 W
Monitoring:	Basic	Basic	Enhanced

Agilent Technologies

The power supply in the E8401A VXI mainframe provides 500 watts of usable power, sufficient for most automated test applications. The power supply in the E8403A and E8404A VXI mainframes provides 1000 watts of usable power, sufficient for the most demanding automated test applications. Ample dynamic and peak current capability is provided for most applications.

The basic mainframe monitoring of the E8401A and E8403A indicates normal operating conditions at a glance. The enhanced monitoring of the E8404A mainframe provides superior cooling control and details regarding temperatures throughout the mainframe, power supply voltages and currents, fans operation, system status, history queue, and stripcharts or histograms for easy diagnostics. This information is available on the full color display or through VXIbus or RS-232 connection. A front panel diagnostics connector on all three mainframes allows continuous local or remote system monitoring.

These mainframes comply with the VXI Specification by providing injector surface rails used by the QUIC easy module insertion and extraction system. Superior cooling, reliable design and system monitoring make any of these mainframes an excellent choice for all VXI test system applications.

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

Superior Cooling

The innovative cooling design of these three VXI mainframes provides extremely quiet and efficient cooling. Carefully engineered airflow provides the ultimate in cooling with a minimum of noise. Outstanding back pressure performance insures airflow through dense modules. Separate power supply cooling fan(s) provides an independent air path for reliable cooling of the power supply.

For all three mainframes, all fans operate in either Variable or Full Speed mode. A two-position switch on the mainframe's front panel controls the speed mode. Full Speed mode is recommended for maximum cooling and/or if acoustic noise is not a concern; all air movers (cardcage impeller and power supply fan(s)) operate at full capacity at all times. In Variable Speed mode, the fan speed varies depending on the temperature in the mainframe, and the ambient temperature. Variable Speed mode operation allows the quietest operation while providing sufficient cooling for the modules in the mainframe.

Airflow is conveniently routed into the rear and exhausted out the sides of the mainframe. This allows mainframes to be stacked or rack-mounted directly on top of one another.

Improved, Highly Reliable Backplane Design

The backplane of all three mainframes features solid state automatic daisy-chain jumpering for the VMEbus grant and interrupt acknowledge lines, eliminating the need for hand selection of switch settings. Full differential distribution of the CLK10 signal is provided on the backplane. This minimizes jitter and skew, providing a clean timing source for VXI instrument modules. The surface mount backplane improves both reliability and stripline signal performance.

Agilent generates SYSRESET and ACFAIL on the backplane. This is necessary for full compliance with the VXI Specification, but is not generally implemented by other manufacturers.

Easy Maintenance Rear-Accessible Power Supply and Impeller

Convenient access to the power supply and cooling systems of all three mainframes, and the monitoring system of the E8404A, is provided through the mainframe's rear panel. A replacement power supply or fan can be installed without removing the mainframe from a rack. The power supply's plug-in design makes repair easy.

The E8404A monitor control board and the impeller for module cooling are easily replaced. The internal fan for the power supply, an integral part of the supply, is easily replaced with the power supply itself. If the optional Air Filter Accessory Kit is installed, air filters may be replaced without tools.

At-a-Glance Confidence in Operation

The front panel indicator lights on all three VXI mainframes give immediate visual indication that the power supply voltages are operating within the VXI Specification, the temperatures are within limit, and that the fans are operational. Backplane activity and SYSFAIL indicators are also provided.

The system can be reset easily from the front panel of all three mainframes, providing reset even when the Slot 0 is inaccessible due to cabling.

The diagnostic connector, conveniently located on the front of all three mainframes, provides connection for remote monitoring of power supply voltages, power supply and reference temperatures, and fans function. This connector also allows remote on/standby, access to +5VSTDBY, ACFAIL, and SYSRESET. The connector's functionality is a superset of the functionality on the E1401B mainframe, allowing software and hardware compatibility with existing applications. Up to 1 A of +5VSTDBY may be provided by the user through the connector. Up to 1 A each of +5 V and +12 V are available for external applications through the connector.

E8404A Enhanced Monitoring

- VXIbus or RS-232 communication
- Three temperature sensors per slot
- Cooling control
- Power supply voltage and current
- Stripcharts and histograms for easy diagnostics
- Audible warnings of over-limit conditions
- History queue
- VXI*plug&play* WIN Framework driver
- English, French, German, and Spanish language support

State-of-the-art enhanced monitoring is provided on the E8404A VXI mainframe. The enhanced monitor board plugs into the backplane from the rear of the mainframe; it does not occupy a slot in the mainframe or tie up a MODID line.

The E8404A enhanced monitoring is message based, allowing easy communication with the mainframe for the user over RS-232 or through the VXIbus. SCPI commands are used to address the mainframe. A VXI*plug&play* WIN Framework driver is provided.

On the E8404A, temperature monitoring includes module exhaust temperatures at three points on every slot, power supply temperature and ambient temperature. Measurements at the front, center and rear of every slot provide an accurate assessment of the temperature fluctuations over a variety of cards, whose hottest components may vary in position. Display screens are provided for overall temperature map, temperature limits set, stripcharts and histograms of each slot.

E8404A temperature monitoring is also used for cooling control. Both the absolute temperature of the slots and the temperature rise over ambient temperature are measured. Cooling speed is increased when either an absolute temperature or a temperature rise approaches its respective limit. The user may adjust these control limit ranges programmatically.

Speeds of the E8404A power supply fans and the impeller are displayed as a percentage of full speed and as the number of rotations per minute.

All seven voltages, +5VSTDBY and the optional user-supplied external 5 V power are measured on the E8404A. Current monitoring is provided and power is calculated for each power supply voltage. Overview display screens are provided for all these data; more detailed information is also available in stripcharts and histograms. These values are visible on the display and are available through the VXI and RS-232 interfaces.

On the E8404A, warning alarms occur when a temperature is over limit, power supply voltages are out of VXI specification, when current or total power exceeds user set limits, or for certain user-defined conditions. A beeper provides audible warnings; it is enabled or disabled through a SCPI command or through the front panel keys.

The enhanced monitor includes a maintenance timer. This timer may be set, queried, and reset by the user for support of scheduled maintenance activities, such as cleaning the optional air filter.

The enhanced monitor may operate independently of line power by using an external +5 V power supply. When line power goes down, communication with the enhanced monitor is possible via the RS-232 interface.

With the E8404A, a remote power-on signal is available via the diagnostic connector's "remote on signal" or through a SCPI command.

Localization enables the user to select English, French, German, or Spanish languages on the display for ease of operation worldwide.

E8404A Color Graphics Display

A full color graphical display on the front of the E8404A VXI mainframe provides frame status, including:

- Temperatures at front, center and rear of every slot
- Ambient and power supply temperatures
- Power supply voltages
- Power supply currents
- Total power
- Fans speeds
- User-defined text messages
- System log and timer
- History

Accessories and Configurations
(Applicable to all three mainframes)

Optional Rack Mounting Kits

Three rack mounting kits are available for the mainframe, providing versatile options for installation in an Agilent or non-Agilent rack. The following rack mounting kits are available: Standard Adapter Kit, Flush Mount Adapter Kit and VXI*plug&play* Compliant Adapter Kit.

Standard Adapter Kit for Recess, Flush or Forward Rack Mounting

Using the Standard Adapter Kit (E8394A), the mainframe can be recess mounted up to 10.6 inches in ~1/2 inch increments. (Recess mounting is required for compatibility with the tinted acrylic door.) The mainframe can also be mounted extended from the front of the rack from 0 to 5.8 inches in ~1/2 inch increments, allowing mounting in racks with shallow depths. The Standard Adapter Kit includes handles and requires the E3664AC Support Rail Kit or the 1494-0411 Rack Slide Kit.

Flush Mount Adapter Kit

The Flush Mount Adapter Kit (Opt. 924 or E8400-80924), the least expensive of the adapter kits, allows flush rack mounting of the mainframe. It does not include handles. The Flush Mount Adapter Kit requires the E3664AC Support Rail Kit. The Flush Mount Adapter Kit is not compatible with the tinted acrylic door or with the rack slides.

VXI*plug&play* Compliant Adapter Kit

The VXI*plug&play* Compliant Adapter Kit (Opt. 925 or E8400-80925) provides rack mounting compatible with the VXI*plug&play* VPP-8 Specification for ease of interconnect with MAC Panel, Virginia Panel, TTI Testron or other VXI*plug&play*-compatible ICA receivers. The Adapter Kit locates the mainframe in the position prescribed by the VXI*plug&play* Systems Alliance and provides four mounting holes for attachment of the receiver adapter frame. The VXI*plug&play* Compliant Adapter Kit requires the E3663AC Support Rail Kit or the 1494-0411 Rack Slide Kit.

Electromagnetic Compliance (EMC) Accessories

The standard mainframe is suitable for the majority of applications. However, for EMC-sensitive applications, a Chassis Shield Kit, Backplane Connector Shields, and EMC Filler Panels are available.

Chassis Shield Kit

The Chassis Shield Kit (E8400-80919) is used to provide additional isolation or shielding between noisy or sensitive modules. These newly designed, patent pending chassis shields are easy to install and are grounded in all four corners.

Backplane Connector Shields

Backplane Connector Shields (Opt. 918 or E8400-80918) are useful for improving the ground connection between a module and the backplane. For a few modules, they are necessary for EMC compliance to EN55011 and CISPR11. For the vast majority of modules, they are not necessary. Note that these shields are only useful if the module includes contacts conforming to VXI Spec B.7.2.3.

EMC Filler Panels

EMC Filler Panels (E8400-60202) are used to provide a continuous connection across the front opening of the mainframe. All Agilent modules include EMC contacts to the adjacent slot. Using EMC Filler Panels in the empty slots completes the connection and reduces radiated emissions and increases radiated and ESD immunity.

Optional Air Filter

Air filters are not necessary on these mainframes. However, an optional Air Filter Kit (E8395A) is available for use in demanding environments. The airflow is reduced less than 10% with a clean air filter installed.

Cable Routing

In rack-mount installations, cables can be routed to the front of the mainframe or from below the mainframe. The optional Cable Tray (E8393A) allows cable routing under the mainframe. The Cable Tray may be mounted to provide three different heights: one EIA rack unit (44.5 mm), two EIA rack units, and halfway between one and two EIA rack units. It is compatible with the E3664AC Support Rail Kit and the 1494-0411 Rack Slide Kit. If the mainframe is used on a benchtop, the mainframe feet may be removed and reinstalled on the bottom of the Cable Tray.

Optional Door

An optional Tinted Acrylic Door (Opt. 915 or E8400-80915) is available for use in rack-mount installations. All the modules installed in the mainframe are accessible when this door is open. The door hinges on the right so that its latch mechanism occupies the space outside Slot 0, allowing the door to close with the minimum recess into the rack. Its hinges are a lift-off type so that the door may be easily removed when open. The door is fabricated of acrylic to provide adequate strength and superior scratch resistance when compared to polycarbonate. The Tinted Acrylic Door Kit requires and is compatible with the Standard Adapter Kit (E8394A) only.

Documentation

The mainframe documentation consists of a User and Service Manual that is included with the mainframe. The manual is also distributed on the Agilent Universal Instrument Drivers CD-ROM supplied with the mainframe and a variety of other Agilent VXI products. It is also available on the Agilent Technologies Website. This documentation describes all mechanical aspects for the mainframe and its accessories.

Warranty

Agilent Technologies provides a standard 3-year return-to-Agilent warranty on these mainframes. Opt. W01 converts the standard warranty to 1-year on-site.

Product Specifications

Mechanical

Mainframe height:	352 mm (13.9 inches)(8 EIA rack units)
Mainframe width:	424.5 mm (16.7 inches)
Mainframe depth:	631 mm (24.9 inches)
Mainframe weight, E8401/03A:	24 kg (53 lbs.)
Mainframe weight, E8404A:	25 kg (55 lbs.)

Power

	E8401A	**E8403A/E8404A**
Temperature range:	0-55° C	0-55° C
Available power (90-264 Vac):	686 W	1902 W
Usable power (110-264 Vac):	500 W	1000 W
Usable power (90-110 Vac):	500 W	950 W

Available Current

	E8401A		**E8403A/E8404A**	
Voltage	**Peak Current I_{MP} (Amps) @ 55° C:**	**Dynamic Current I_{MD} (Amps) @ 55° C:**	**Peak Current I_{MP} (Amps) @ 55° C:**	**Dynamic Current I_{MD} (Amps) @ 55° C:**
+5 V:	50 A	5 A	90 A	9 A
+12 V:	6 A	1 A	15 A	2.5 A
–12 V:	4 A	1 A	15 A	2.5 A
+24 V:	4 A	1 A	15 A	5 A
–24 V:	4 A	1 A	15 A	5 A
–5.2 V:	20 A	2 A	60 A	8 A
–2 V:	10 A	1 A	30 A	5 A

Power Input

Input voltage:	90-264 Vac (single continuous range)
Input frequency:	47-66 Hz (across full input voltage range)
	360-440 Hz: Not recommended. Leakage currents may exceed safety limits, 132 Vac max.
DCV input:	Not recommended. Input connector is not certified for DCV input.

Inrush current

	E8401A	**E8403A/E8404A**
100 Vac input:	25 A typ.	40 A typ.
264 Vac input:	55 A typ.	70 A typ.

Power Switch

- On/Standby switch on front with lighted indicator.
- May be switched to On/Standby remotely via diagnostic connector (E8404A only).
- May be switched to On/Standby via SCPI command (E8404A only).

+5VSTDBY

(Power may be provided by the user to the +5VSTDBY bus on the VXI backplane.)

Current:	1 A max
Voltage range:	5.25 V max., 4.875 V min.
Connector:	Pins 8 and 21 of the diagnostic connector

External +5VSTDBY (E8404A only)

(Power may be provided by the user to operate the enhanced monitor in the absence of line power.)

Current:	500 mA min. (needed for enhanced monitor operation),1.5 A max. on connector.
Voltage range:	5.25 V max., 4.875 V min.
Connector:	Rear panel

Power Supply Protection

All voltages are protected from over-temperature, over-voltage, over-current, short-to-ground and short-to-other-output. Protection mode is full shutdown. Recovery occurs when the fault condition is removed and power on/standby is cycled.

Airflow and Cooling

Airflow

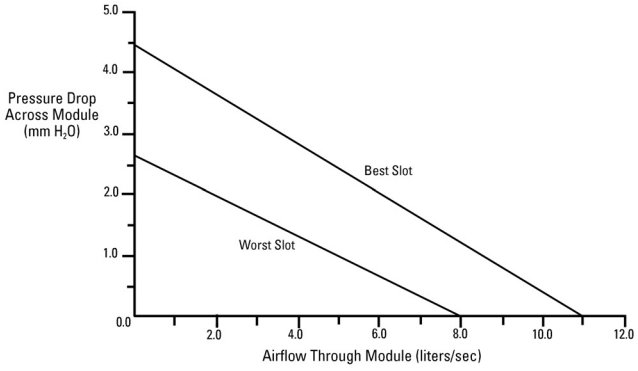
Airflow is routed into the rear and exhausted out the upper sides of the mainframe. Allow 50 mm of clearance for proper air flow.

Fan Speed

(Cooling Mode, High or Variable, switchable on the front panel. Controls both module impeller and power supply fan.)

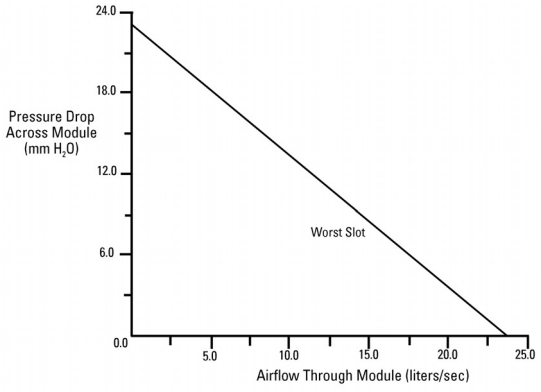
High fan speed mode:	Full airflow all the time
Variable fan speed mode:	Fan speed increments through 8 discrete speeds as a function of ambient, module, and power supply temperatures.

E8401A/03A/04A Cooling Specification Charts



VXI-8 Specification Draft 2.0. Fixture revision 1.7.

- VXI-8 Standard Modules installed in all other slots.
- Performance shown for Worst Slot (slot 1) and Best Slot (slot 10).
- Front-to-Rear Variance 13% worst case. Typically 10%-12% in most slots.
- Fans on Full Speed. Minimum airflow is approximately 50% with fans on Variable Speed.
- Air Filter Kit not installed. Airflow is reduced approximately 10% with clean air filters installed.
- Measurements taken at 1,500 m altitude.



All other slots blocked. Airflow decreases as additional slots are opened.

- Performance shown for Worst Slot (slot 2). Airflow is greater in all other slots.
- Fans on Full Speed. Minimum airflow is approximately 50% with fans on Variable Speed.
- Air Filter Kit not installed. Airflow is reduced approximately 10% with clean air filters installed.
- Measurements taken at 1,500 m altitude.

Backplane Specifications

- Solid-state automatic daisy-chain jumpering for BUS GRANT and IACK signals.
- Full differential distribution of CLK10.
- ACFAIL* and SYSRESET* in full compliance with the VMEbus and VXIbus Specifications.
- Surface mount construction and no sockets for maximum reliability.

Basic Monitor Specifications
(Applicable to all three mainframes)

Indicators:	• Power-on or Standby status • Power supply output voltages monitor • Power supply temperature monitor • Fans status monitor • Backplane activity monitor • Backplane SYSFAIL monitor
Switches:	• On/Standby • Fan Mode: Switches all fans between Full Speed and Variable Speed modes • Reset: Asserts backplane signals SYSRESET and ACFAIL
Diagnostic connector:	• Output all 7 backplane voltages for monitoring • Output +5 V and +12 V for remote applications. 1A max each • Input +5VSTDBY to backplane. 1A max total for pins 5 and 18 • Remotely operate On/Standby • Power supply temperature output • Reference temperature output • Fans OK output, same as Fans indicator • Backplane voltages OK output • SYSRESET*, input or output • ACFAIL*, output • Ground

Environmental

Temperature

Operating temperature range:	0° C – +55° C
Storage temperature range:	–40° C – +75° C

Humidity

Operating humidity range:	Up to 95% RH from 0° C to +40° C Up to 65% RH from +40° C to +55° C
Storage humidity range:	Up to 95% RH from 0° C to +55° C Up to 65% RH from +55° C to +75° C

Acoustic Noise

(Sound power at bystander position one meter in front of mainframe)

High-speed fan:	55 dBA
Variable fan on low speed:	42 dBA

Shielding

Front panel EMC gasketing:	Front panel gasketing provided per VXI Rev. 1.4, B.7.2.3
Backplane shielding:	Backplane connector shields per VXI Rev. 1.4, B.7.2.3
Intermodule chassis shielding:	Intermodule chassis shields per VXI Rev. 1.4, B.7.3.4

Altitude: Up to 3000 m

Standards Compliance

- 100% compatible with the VXIbus Specification Revision 1.4
- E8404A command set compatible with IEEE-488.1, IEEE-488.2, and SCPI-1995.0

Repair

(Diagnosis and troubleshooting through the front panel monitor and connector.)
MTTR = Mean Time to Repair

MTTR, power supply:	<10 min. (w/mainframe and modules fully installed in rack)
MTTR, impeller and/or fan:	<10 min. (w/mainframe and modules fully installed in rack)
MTTR, E8404A enhanced monitor control board:	<5 - 10 min. (w/mainframe and modules fully installed in rack)

E8404A Enhanced Monitoring

	Function	Specification	Interface		
			Display	VXI	RS-232
Temperature Monitor	Module exhaust temperature:	13 slots, front/mid/rear	Output	Output	Output
	Ambient temperature:		Output	Output	Output
	Power supply temperature:		Output	Output	Output
	Temperature limits:	Module absolute, ΔT, ambient	Output	In/Out	In/Out
	Stripcharts:	Modules, ambient	Output	Output	Output
	Histograms:	Modules, ambient	Output	Output	Output
	Warnings:	Out-of-limit conditions	Output	Output	Output
Power Monitor	Voltages:	7 VXI, 5VSTDBY	Output	Output	Output
	Current:	7 VXI	Output	Output	Output
	Power:	Calculated (V*I)	Output	Output	Output
	Voltage Limits:	Fixed		Output	Output
	Current Limits:	7 VXI	Output	In/Out	In/Out
	Power Limits:	Total	Output	In/Out	In/Out
	Stripcharts:	7 VXI, 5VSTDBY, total, PSTemp	Output	Output	Output
	Histograms:	7 VXI, 5VSTDBY, total, PSTemp	Output	Output	Output
	Warnings:	Out-of-limit conditions	Output	Output	Output
Fan Monitor	Fan speed: % full, RPM	Module impeller, PS fans	Output	Output	Output
	Stripcharts: RPM	Module impeller, PS fans	Output	Output	Output
	Histograms: RPM	Module impeller	Output	Output	Output
	Fan speed control:	Closed loop control in Var mode			
	Warnings:	Out-of-limit conditions	Output	Output	Output
History	System log:	Hrs on, last cal, etc.	Output	Output	Output
	Maintenance timer:		Output	In/Out	In/Out
	History queue:	Event description & time	Output	Output	Output
	Min/max values:	Temperature, power supply, fans		Output	Output
	Histograms:	Temperature, power supply, fans	Output	Output	Output
Time Base	Accuracy:	± 120 ppm			
	Aging:	± 5 ppm/year			
	Resolution:	2 sec			
Test & Calibrate	Calibration:	Temperature, voltage		Input	Input
	Self-test:		Output	In/Out	In/Out
VXI	VXI device type:	Message-based servant, programmable-interrupter, statically-addressed, A16 device			
	LADD:	Rear panel switch	Output	Output	Output
	Device code:	618		Output	Output
RS-232 Interface	Baud rate:	300, 1200, 2400, 4800, 9600	Output	In/Out	In/Out
	Parity:	Even, Odd, None	Output	In/Out	In/Out
	Character size:	7,8	Output	In/Out	In/Out
	Pace:	Xon/Xoff, None	Output	In/Out	In/Out
	Hardware handshake:	RTS	Output	In/Out	In/Out
Display	Resolution:	256 x 64 pixels			
	Colors:	16			
	Type:	Liquid Crystal Display			
	Size:	92mm x 25mm			
	Average bulb life:	25,000 hours			
	Language support:	English, French, German, Spanish			
	User-defined messages:	200 characters, 4 lines max	Output	In/Out	In/Out
	Display contrast:		In/Out		
	Screen saver On/Off:		In/Out	In/Out	In/Out
	Beeper On/Off:		In/Out	In/Out	In/Out

General Specifications

VXI Characteristics

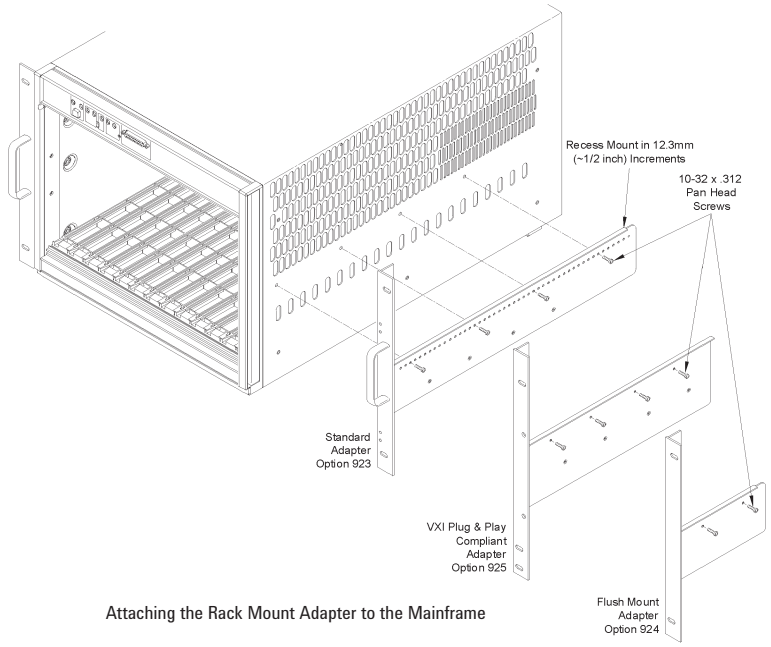
VXI device type:	Mainframe
Data transfer bus:	All per VXIbus Specification, Rev 1.4
Size:	C
Slots:	13 available
Connectors:	P1/P2
Shared memory:	n/a
VXI buses:	All per VXIbus Specification, Rev 1.4

E8404A Instrument Drivers - See the Agilent Technologies Website (http://www.agilent.com/find/inst_drivers) for driver availability and downloading.

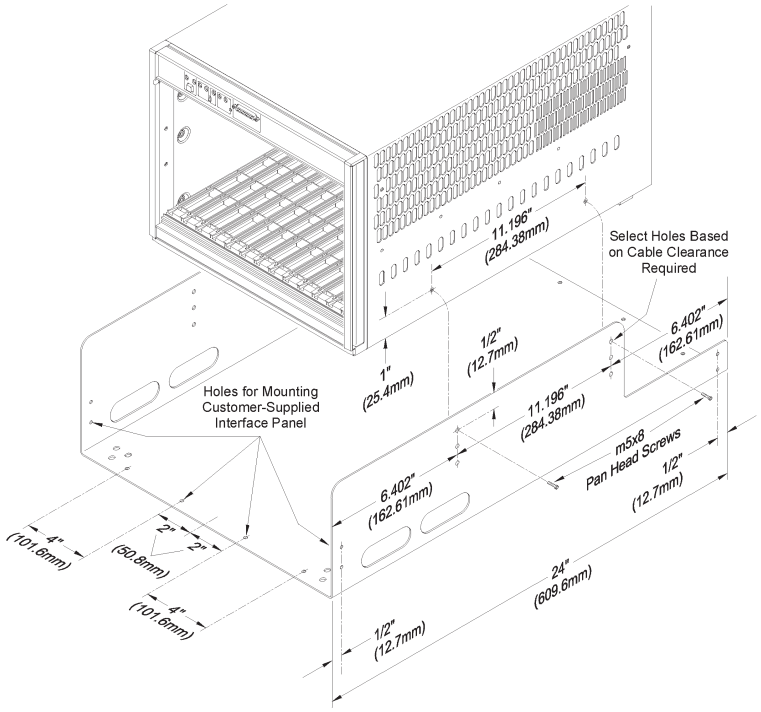
Command module firmware:	n/a
Command module firmware rev:	n/a
I-SCPI Win 3.1:	n/a
I-SCPI Series 700:	n/a
C-SCPI LynxOS:	n/a
C-SCPI Series 700:	n/a
Panel Drivers:	No
VXI*plug&play* Win Framework:	No
VXI*plug&play* Win 95/NT Framework:	Yes
VXI*plug&play* HP-UX Framework:	No

Ordering Information

Description	Product No.
Mainframes	
13-Slot, C-Size VXI Mainframe, with 500 W Power Supply and Basic Monitoring	E8401A
13-Slot, C-Size VXI Mainframe, with 1000 W Power Supply and Basic Monitoring	E8403A
13-Slot, C-Size High-Performance VXI Mainframe, with 1000 W Power Supply and Enhanced Monitoring	E8404A
Mainframe Options	
Tinted Acrylic Door Kit	Option 915
Installed Backplane Connector Shields	Option 918
Flush Rack Mount Kit	Option 924
VXI*plug&play* (VPP-8) Compatible Rack Mount Kit	Option 925
VXI*plug&play* Adapter Kit for Non-Agilent Racks	Option 926
Convert 3 yr. Return-to-Agilent to 1 yr. On-Site Warr	Option W01
Accessories	
Extra User and Service Manual for E8401A/E8403A	E8401-90000
Extra User and Service Manual for E8404A	E8402-90001
Cable Tray Kit	E8393A
Tinted Acrylic Door Kit	E8400-80915
Backplane Connector Shields Kit	E8400-80918
Intermodule Chassis Shield Kit	E8400-80919
EMC Filler Panel (1-slot)	E8400-60202
VXI Slot Filler Panel (1-slot)	E8400-44305
VXI Slot Filler Panel (3-Slot)	E8400-44306
Standard Rack Mount Adapter Kit	E8394A
Flush Rack Mount Kit	E8400-80924
VXI*plug&play* (VPP-8) Compatible Rack Mount Kit for Agilent Racks	E8400-80925
Air Filter Accessory Kit	E8395A
Support Rail for Standard Rack Mount Adapter or Flush Rack Mount Kit	E3664AC
Support Rail Kit for VXI*plug&play* (VPP-8) Rack Mount Kit (used w/E8397A)	E3663AC
Rack Slide Kit for Standard Adapter Kit or VXI*plug&play* (VPP-8) Compatible Rack Mount Kit	1494-0411
Replacement 500 W Power Supply for E8401A (Remanufactured)	E8401-69276
Replacement 1000 W Power Supply for E8403A/E8404A (Remanufactured)	E8403-69277



Attaching the Rack Mount Adapter to the Mainframe



Installing the Cable Tray

Agilent Technologies' Test and Measurement Support, Services, and Assistance

Agilent Technologies aims to maximize the value you receive, while minimizing your risk and problems. We strive to ensure that you get the test and measurement capabilities you paid for and obtain the support you need. Our extensive support resources and services can help you choose the right Agilent products for your applications and apply them successfully. Every instrument and system we sell has a global warranty. Support is available for at least five years beyond the production life of the product. Two concepts underlie Agilent's overall support policy: "Our Promise" and "Your Advantage."

Our Promise

Our Promise means your Agilent test and measurement equipment will meet its advertised performance and functionality. When you are choosing new equipment, we will help you with product information, including realistic performance specifications and practical recommendations from experienced test engineers. When you use Agilent equipment, we can verify that it works properly, help with product operation, and provide basic measurement assistance for the use of specified capabilities, at no extra cost upon request. Many self-help tools are available.

Your Advantage

Your Advantage means that Agilent offers a wide range of additional expert test and measurement services, which you can purchase according to your unique technical and business needs. Solve problems efficiently and gain a competitive edge by contracting with us for calibration, extra-cost upgrades, out-of-warranty repairs, and on-site education and training, as well as design, system integration, project management, and other professional engineering services. Experienced Agilent engineers and technicians worldwide can help you maximize your productivity, optimize the return on investment of your Agilent instruments and systems, and obtain dependable measurement accuracy for the life of those products.

By internet, phone, or fax, get assistance with all your test & measurement needs.

Online assistance:
www.agilent.com/find/assist

Phone or Fax

United States:
(tel) 1 800 452 4844

Canada:
(tel) 1 877 894 4414
(fax) (905) 282 6495

China:
(tel) 800 810 0189
(fax) 1 0800 650 0121

Europe:
(tel) (31 20) 547 2323
(fax) (31 20) 547 2390

Japan:
(tel) (81) 426 56 7832
(fax) (81) 426 56 7840

Korea:
(tel) (82 2) 2004 5004
(fax) (82 2) 2004 5115

Latin America:
(tel) (305) 269 7500
(fax) (305) 269 7599

Taiwan:
(tel) 080 004 7866
(fax) (886 2) 2545 6723

Other Asia Pacific Countries:
(tel) (65) 375 8100
(fax) (65) 836 0252
Email: tm_asia@agilent.com

Product specifications and descriptions in this document subject to change without notice.

Printed in USA September 1, 2001
5988-2342EN

Agilent Technologies