

# Agilent E1421B 6-Slot, C-Size VXI Mainframe

## Data Sheet

- 6-Slot, C-size
- Compact size, low cost
- Portable or rack-mount
- Ultra-reliable power supply
- Power supply serviceable through the rear panel
- Pressurized air channel cooling

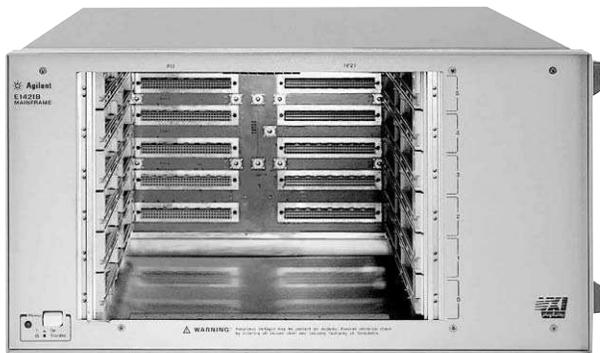
## Description

The Agilent Technologies E1421B C-size, 6-slot VXI mainframe is a compact, cost-effective solution for configurations requiring fewer slots than the 13-slot E1401B or E84XX series C-size mainframes.

The smaller size and weight of the E1421B make it an excellent choice for either portable or rack-mount applications. The E1421B complies with the VXIbus Specification by providing injector surface rails used by the QUIC easy module insertion and extraction system.

Agilent has incorporated its industry-leading Pressurized Air Channel cooling system into the design of the E1421B. It ensures clean, uniform airflow to each module. For greater power supply serviceability, power input intake is through the rear of the mainframe. Airflow is through the right side and exhausts through the left.

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



Agilent E1421B



## General Characteristics

### Airflow and Power Supply Serviceability

- Power input through the rear
- Power supply serviceable through the rear panel
- Cooling air enters through right side and exhausts through the left side
- No air filters

### Backplane

- High performance
- Monolithic
- 6 slots
- VXI P1 and P2 connectors

The backplane features solid state automatic daisy-chain jumpering for the VMEbus grant and interrupt acknowledgment lines, eliminating the need for hand selection of switch settings. The E1421B backplane is compatible with the Agilent backplane connector shield kit, P/N E1400-80920.

## Product Specifications

### Mechanical Specifications

|  | mm                 | inches |
|--|--------------------|--------|
| Height without bottom feet:                  | 221.5              | 8.72   |
| Height with bottom feet:                     | 233.4              | 9.19   |
| Width without side feet:                     | 425.5              | 16.75  |
| Width with side feet:                        | 447.8              | 17.63  |
| Depth with rear feet + power supply handles: | 558.8              | 22.00  |
| Weight:                                      | 13.9 kg / 30.6 lbs |        |

### Power

The power supply generates backplane logic signals ACFAIL\* and SYSRESET\* in full compliance with the VXI Specification, Revision 1.4.

**Usable power:** 450 W maximum at 55° C

### Power Supply Protection

All outputs are protected from over-temperature, over-voltage, over-current, and short-to-ground.

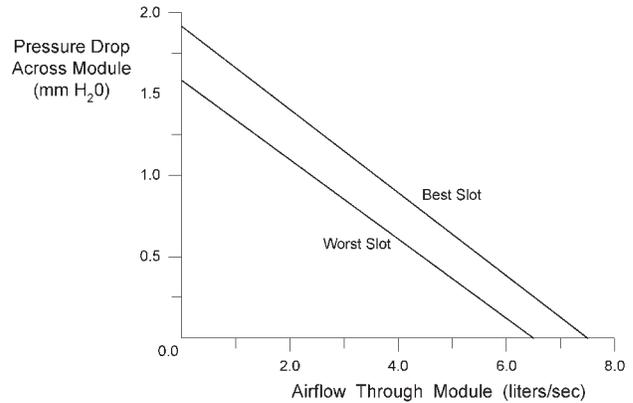
### Power Input

**50-60 Hz input power:**  
Automatic voltage ranging, nominal range: 100-240 Vac  $\pm 10\%$   
Nominal frequency range: 50-60 Hz  $\pm 10\%$

**400 Hz input power:**  
Nominal voltage range: 100-120 Vac  $\pm 10\%$   
Nominal frequency: 400 Hz  $\pm 10\%$

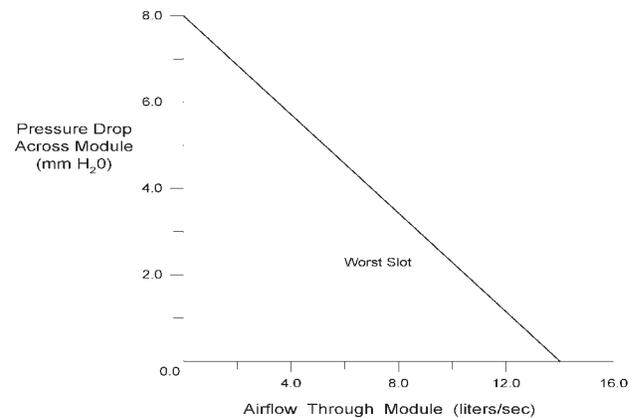
**Inrush current:** 40 A max

## Agilent E1421B 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 4).
- Front-to-Rear Variance 19% worst case.
- Fans on Full Speed.
- Measurements taken at 1,500 m altitude.



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

- Performance shown for Worst Slot (slot 1). Airflow is greater in all other slots.
- Fans on Full Speed.
- Measurements taken at 1,500 m altitude.

## Environmental and Regulatory

|                        |   |
|------------------------|---|
| <b>Acoustic noise:</b> |   |
| Low-speed fan:         | 53 dBA sound pressure (at bystander position) |
| High-speed fan:        | 59 dBA sound pressure (at bystander position) |

## Shielding

|                             |   |
|-----------------------------|---|
| <b>Intermodule:</b>         | Gasketing per VXI Rev. 1.4, B.7.2.3. is provided.   |
| <b>Backplane:</b>           | Backplane Connector Shields per VXI Rev. 1.4, B.7.2.3 (available as Option 918 or as a separate accessory, p/n E1400-80920) |
| <b>Intermodule chassis:</b> | Intermodule chassis shields per VXI Rev 1.4, B.7.3.4 (available as a separate product, p/n E1409B)                          |

## Electromagnetic Compliance

To ensure compliance with RFI levels specified in standards EN55011 and CISPR11, the Backplane Connector shields must be installed in the mainframe. Order Option 918 to get shields factory installed.

The Agilent E1409B C-Size Chassis Shield allows grounded shielding between mainframe slots in the E1401B and E1421B VXI Mainframes. This shield fits between slots – not using up a mainframe slot.

## General Specifications

### VXI Characteristics

|                           |   |
|---------------------------|---|
| <b>VXI device type:</b>   | Mainframe                                       |
| <b>Data transfer bus:</b> | All per VXIbus specification, Rev. 1.4          |
| <b>Size:</b>              | C   |
| <b>Slots:</b>             | 6   |
| <b>Connectors:</b>        | P1/2  |
| <b>Shared memory:</b>     | n/a   |
| <b>VXI buses:</b>         | All per VXIbus Standard Specification, Rev. 1.4 |

### Available Current

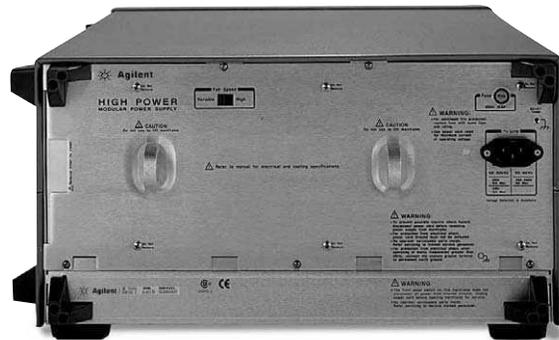
|        | Peak Current (Amps)<br>$I_{MP}$ | Dynamic Current (Amps)<br>$I_{MD}$ |
|--------|---------------------------------|------------------------------------|
| +5 V:  | 45.00                           | 5.00                               |
| +12 V: | 8.00                            | 2.50                               |
| -12 V: | 8.00                            | 2.50                               |
| +24 V: | 8.00                            | 4.00                               |
| -24 V: | 8.00                            | 4.00                               |
| -5.2 V | 40.00                           | 5.00                               |
| -2 V:  | 15.00                           | 3.50                               |

## Cooling/Slot

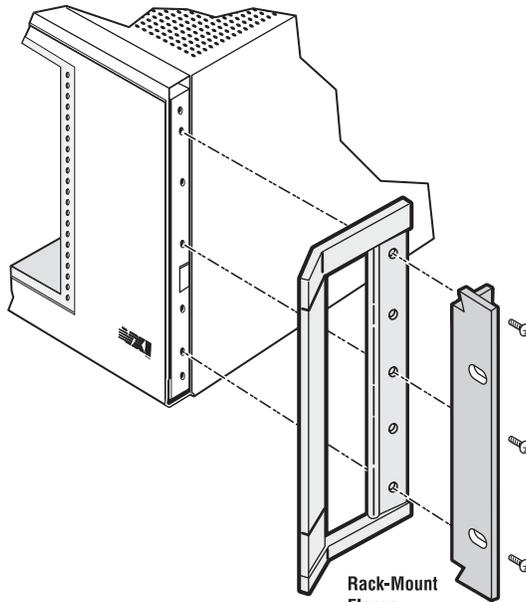
|   |                   |
|---|-------------------|
| <b>Watts/slot:</b>                              | 60 W (10° C rise) |
| <b><math>\Delta P</math> mm H<sub>2</sub>O:</b> | n/a               |
| <b>Air Flow liter/s:</b>                        | n/a               |

## Ordering Information

| Description   | Product No.  |
|---|--------------|
| 6-Slot, C-Size VXI Mainframe  | E1421B       |
| Flange Kit  | E1421B 80908 |
| Flange Kit (if ordered separately)  | 5063-9216    |
| Handle and Flange Kit   | E1421B 80909 |
| Handle and Flange Kit (if ordered separately)                                   | 5063-9223    |
| Smoked Acrylic Door   | E1421B 80905 |
| Smoked Acrylic Door (if ordered separately)                                     | E1421-61205  |
| Recess Flange Mounting Kit  | E1421B 80916 |
| Recess Flange Mounting Kit (if ordered separately)                              | E1421-80916  |
| Flush Rack Flange Kit   | E1421-65000  |
| Backplane Connector Shield Kit for 6-Slot Mainframe                             | E1421B 80921 |
| VXI Backplane Connector Shield Kit for 6-Slot Mainframe (if ordered separately) | E1421-80920  |
| Filler Panel 1 Slot   | E1400-60202  |
| Series C Chassis Shield for E1401B  | E1409B       |
| Rack Slide Kit  | 1494-0060    |
| Rack Slide Kit for Non-Agilent Rack   | 1494-0061    |
| VXI Rail Kit  | E3665AC      |

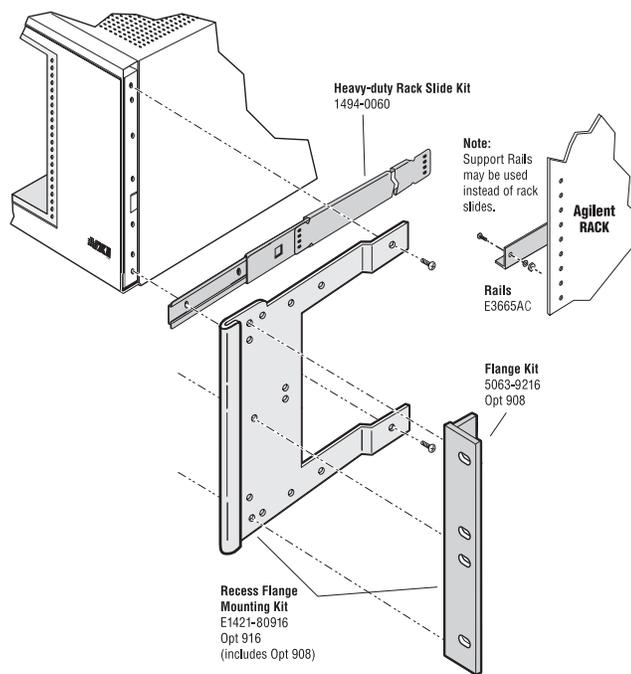


E1421B



**Rack-Mount  
Flange  
with Handle**  
5063-9223  
Opt 909

E1421B



**Heavy-duty Rack Slide Kit**  
1494-0060

**Note:**  
Support Rails  
may be used  
instead of rack  
slides.

**Rails**  
E3665AC

**Flange Kit**  
5063-9216  
Opt 908

**Recess Flange  
Mounting Kit**  
E1421-80916  
Opt 916  
(includes Opt 908)

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