

# 9-Slot VXI/VME Mainframe

VXI-1200 FlexFrame

## VXI-1200 FlexFrame

High-performance flexible VXI/VME mainframe

9 slots

6 C-Size VXIbus

3 B-Size VXI or VME

Unique backplane design –

Slot 0 control from either C or B slots

High power – 720 W usable power

Rugged lightweight design suitable for field or benchtop applications

Optional rack-mount kits



## Overview

The National Instruments VXI-1200 FlexFrame is a high-power, low-cost mainframe that can house six C-size VXI modules and three B-size VXI or VME modules for a total of nine usable slots. Fully compliant with the latest revision of the VXIbus specification, the FlexFrame is an innovative solution for using both C-size VXI and B-size VXI/VME resources in a single system to drive down the system costs. Not only are adapters no longer needed for interfacing B-size modules into a C-size chassis, but now you can also use a B-size VXI controller. You can use all six C-size slots for instruments. You can easily configure the FlexFrame with the slot 0 resource in either the front (C-size) or rear (B-size) of the chassis, thanks to the unique backplane design.

## Flexible Slot-0 Interface

You can use a standard C-size slot 0 VXI controller in your system while using the three B-size VXI or VME slots in the rear of the chassis to incorporate VME memory cards or special purpose modules. The buses are physically connected and appear as a single bus for seamless communication. You can also configure the FlexFrame to recognize a B-Size slot 0 VXI control interface, such as the VXI-MXI-2/B, in the rear of the chassis. Because the B-size slots are completely VXI compliant, you can take advantage of all of the VXI capabilities for slot identification, resource initialization, and management with lower cost, while you use all six C-size slots for instrument modules.

To switch the slot 0 resource from the front to the rear and vice versa is easy and requires no tools. You simply switch the orientation of a "personality" card located on the inside panel of

the FlexFrame – an operation that you can perform in seconds. The FlexFrame was designed to be compact, to be configured easily, and to deliver the utmost in power and cooling to handle even the most demanding applications and harsh environments. With 720 W of usable power, the FlexFrame provides more power than many full-size 13 slot chassis while taking up less than half of the space.

## B-Size Control

The flexible slot 0 feature of the FlexFrame enables you to use B-size controllers to control the VXI backplane. You can use either the VXIpc-600 series embedded controller or the VXI-MXI-2/B module in the FlexFrame. The smaller size and the absence of EMI shielding reduces the cost of the B-size controllers

The VXIpc-600 Series high-performance two-slot B-size embedded computers employ state-of-the-art technology and packaging to create fully PC-compatible controllers for VXI systems. The VXIpc-600 Series includes two models – the VXIpc-650/233 and the VXIpc-650/166. Both models are identical except that the VXIpc-650/233 incorporates a 233 MHz Pentium MMX processor and the VXIpc-650/166 uses a 166 MHz Pentium MMX processor.

The VXIpc-600 Series are an excellent VXI controller choice when used with the VXI-1200 FlexFrame. You can use a VXIpc-600 Series controller in the back of the FlexFrame, leaving six C-size VXI slots available for instruments. Because the buses serving the C and B-size modules are physically connected, the VXIpc-600 Series can control the entire system to drive down overall system costs.

VXI Mainframes

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VXI Mainframes



VXI-1200 FlexFrame - Front View



VXI-1200 FlexFrame - Back View

If you wish to control a FlexFrame System from a desktop computer using a MXI-2 interface, the VXI-MXI-2/B delivers the same performance as the standard C-Size interface but at a lower cost. Using the VXI-MXI-2/B in the back of the FlexFrame, you can use all size C-size VXI slots located in the front of the chassis for instruments. The smaller size and the absence of EMI shielding reduce the cost of the B-size VXI-MXI-2 versus the C-size module. EMI shielding is required for C-size instrument and control modules but not for B-size. Because of the FlexFrame design, you simply insert the VXI-MXI-2/B into the leftmost B-size slot located in the rear of the FlexFrame to physically isolate the VXI-MXI-2/B from the C-size instruments, eliminating potential EMI problems.

## Bundled Systems

You can use any of the standard computer-based MXI-2 interface boards, including the high-performance PCI-MXI-2, to deliver transfer rates up to 23 Mbytes/s. You can also order a bundled system that includes the PCI-MXI-2, the VXI-MXI-2/B, a 2 m MXI-2/M1 cable, and the VXI-1200 FlexFrame for a special discount.

## Rack-Mount Hardware

You can use the FlexFrame for portable or desktop applications, or you can order a rack-mount kit for mounting it in a standard 19 in. rack side ways to conserve rack space. There are two FlexFrame rack-mount kits that you may order. The first option comes with rack-mount hardware including slides so you can easily insert and remove the chassis in a rack. You can also order the rack-mount hardware with rails, rather than slides, to mount

## Ordering Information

### VXI-1200 FlexFrame

U.S. 120 VAC .....	777432-01
Switzerland 220 VAC .....	777432-02
Australia 240 VAC .....	777432-03
Universal Euro 240 VAC.....	777432-04
North American 240 VAC.....	777432-05
United Kingdom 240 VAC.....	777432-06

### Options

Rack-Mount Kit w/slides and cable tray.....	777433-01
Rack-Mount Kit w/rail and cable tray.....	777433-02

### Bundled Systems

Systems include PCI-MXI-2, B-size VXI-MXI-2/B, 2 m MXI-2/M1 cable, NI-VXI/VISA software, and the U.S. version of the VXI-1200 FlexFrame.

### PCI-MXI-2 FlexFrame Systems

DOS/Windows/3.1 .....	777444-01
Windows NT .....	777444-02
Windows 95.....	777444-03
Mac OS.....	777444-04

### VXIpc-600 Series FlexFrame Systems

(controller and VXI-1200 FlexFrame)

VXIpc-650/233 (233 MHz Pentium MMX) for:

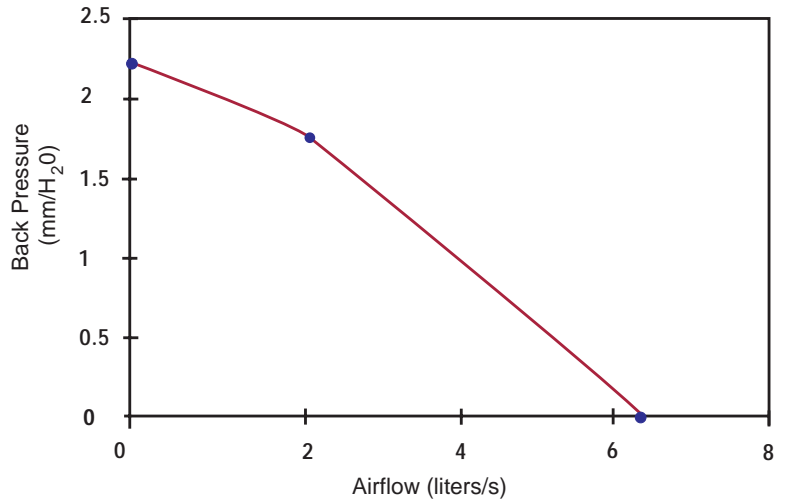
Windows NT .....	777444-12
Windows 95.....	777444-13
VxWorks * .....	777444-14

# 9-Slot VXI/VME Mainframe

VXI-1200 FlexFrame

VXIpc-650/166 (166 MHz Pentium MMX) for:  
 Windows NT .....777444-22  
 Windows 95.....777444-23  
 VxWorks\* .....777444-24

\* The VXIpc-600 Series VXI Development and Run-Time Systems do not include VxWorks installed on the hard drive. Please contact Wind River Systems at (800) 545-WIND



VXI-1200 Chassis Cooling

## Specifications

### Electrical Performance

#### Input

AC voltage ..... 90-250 VAC, autoranging  
 AC line frequency..... 47-440 Hz  
 Input power..... 1440 VA, maximum

#### Peak and Dynamic Current

+24 VDC	+12 VDC	+5 VDC	-2 VDC	-5.2 VDC	-12 VDC	-24 VDC
4 A	8 A	54 A	12 A	12 A	8 A	4 A

#### Max Ripple Noise

+24 VDC	+12 VDC	+5 VDC	-2 VDC	-5.2 VDC	-12 VDC	-24 VDC
150 mVpp	50 mVpp	50 mVpp	50 mVpp	50 mVpp	50 mVpp	150 mVpp

Max power available to modules ..... 720 W, 0 to 50 °C (90-250 V),  
 derate 25%/°C over 50 °C  
 Total available power ..... 750 W  
 Total usable power (0 to 55 °C) ..... 720 W  
 Periodic and random deviations ..... (PARD) 24 V ±150 mVpp  
 All others ..... 50 mVpp

#### Acoustic Noise

(Fan speed control set to max) ..... 56 dBA

#### Auxiliary DC Outputs

(fused, self healing)  
 +5 VDC ..... 1 A  
 +12 VDC ..... 1 A  
 +24 VDC ..... 1 A  
 +5 VDC ..... Standby input rear panel inputs  
 (2 A max)

#### Cooling

Cooling capacity ..... 80 W per slot at 0.36 mm H<sub>2</sub>O

#### Minimum Performance Curve (VXI-8 D.1.1)

Slot calculation  
 (VXI-8 D.1.4) ..... 58.4 W  
 Maximum airflow variation  
 (VXI-8 D.1) ..... 28%

#### Environmental Data

(MIL-T-28800 Type III, Class 5, Style F)  
 Temperature range  
 Operating ..... 0 to 55 °C  
 Storage ..... -40 to 71 °C  
 EMC compliance ..... FCC 47 CFR, Part 15  
 EN50081-1  
 EN50082-1

Safety compliance..... UL 3111-1, IEC1010-1,  
 CSA 22.2 No. 1010.1

#### Random Vibration

Operations ..... 0.0013 in double amplitude  
 5 to 55 Hz

#### Physical

VXIbus C-size slots ..... 6  
 VXIbus B-size slots ..... 3  
 Weight  
 Bench top model ..... 15.23 kg (33.5 lb)  
 Dimensions ..... 35.61 by 21.9 by 71.86 cm  
 (14.02 by 8.62 by 28.29 in.)

VXI Mainframes