

Prototyping Module (VMIP™)

Overview

The VXI Modular Instrumentation Platform (VMIP™) is the most popular modular instrumentation platform on VXIbus, and has been in use since 1994. The VMIP™, designed for high-performance instrumentation, provides the user with access to all of the features/benefits of the VXIbus, but in a modular fashion. Up to three VMIP™ instruments can be mounted in a single C-size VXIbus card, and can be mixed and matched for greater flexibility. The form factor for the VMIP™ also provides the real estate necessary to develop high-performance instruments such as precision system multimeters or arbitrary waveform generators.

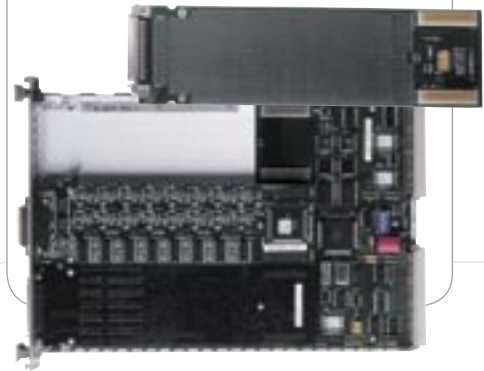
The VM7000 is a general-purpose prototyping card designed for the VMIP™. It provides the user with complete direct register access to the board, eliminating the need to develop the VXI interface logic and allowing concentration on the custom product design. Since the VM7000 is part of the VMIP™ family, up to three separate custom products can be designed on a single C-size VXIbus card, or combined with other VMIP™ modules to provide a multi-purpose instrument. Each one of these instruments has its own unique logical address (ULA), and can have its own VXI *plug&play* driver.

All seven-supply lines available on the VXIbus are brought out to the internal VMIP™ bus connectors for use by the VM7000. This allows virtually any type of instrument to be designed for the VXIbus, and does not limit the user to just the +5V and ±12 V supply lines. The VM7000 also provides 16 device-dependent registers that are located in the upper 32 bytes of the VXI instrument's logical address space. To develop simple functions controlled by static TTL I/O without having to understand the device-dependent registers, the VM7000 provides 32-bit digital I/O on board, configurable as input or output in groups of 8 bits.

Programming

Message-based programming commands are provided that allow access and control of the user's custom circuitry. The user has the ability to program the following using message based commands:

- ***IDN?** to query the module's manufacturer and model number
- **Change the module's manufacturer and model code**
- **Program the source of the interrupt status**
- **"Peek and poke" register commands**
- **Provide access to non-volatile memory for storing and retrieving user-defined data (i.e., calibration constants)**



Features

Ideal Tool for Development of VMIP™ Instruments or Custom Circuitry for VXIbus

Provides Access to All 16 VXI Device-dependent Registers

32 Digital I/O Lines are Available for Simple Control

Buffered VMIP™ Data Bus and Other Control Lines Available

Full VXIbus TTL Trigger Line Control

Access to All Fused VXIbus Power Supply Lines

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Complete documentation is also provided that shows the user how to develop a custom design and control the circuitry using register based data access.

Developmental Aids

The manual (available online) provides detailed information on the VXIbus standard, the VMIP™ platform, mechanical and timing information for the VMIP™, and comprehensive examples of developing products for VXI.

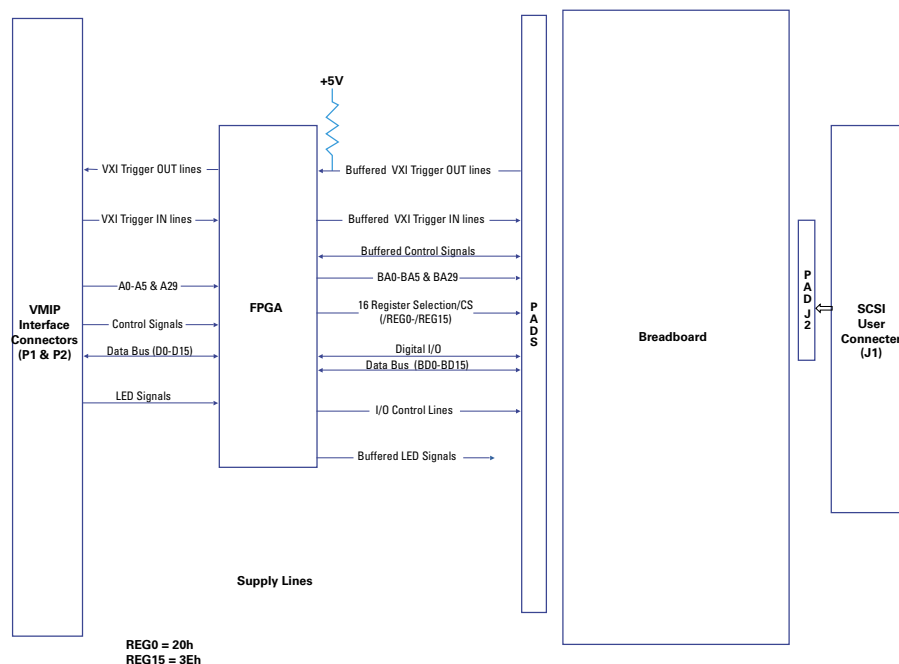
The heart of the VM7000 is the interface FPGA, which can be purchased separately and mounted on final PCBs once the design has been prototyped. Complete mechanical dimensions and bill of materials are provided with the VM7000.

For first time VXIbus developers, it is also recommended to obtain the latest VXIbus specifications as a reference.

Specifications

- BreadBoarding Space:** Approximately 17 square inches
- Front Panel Connectors:** 68-pin SCSI connector
- Data Access Types:** Register-based. Word serial commands are also provided to “peek and poke” the registers

VMIP Breadboard - VM7000



Ordering Information

- VM7000** VMIP™ Prototyping Module
- Option 55:** VMIP™ Interface FPGA

VM7000