

SOFTWARE DEVELOPMENT KIT

DESCRIPTION

The VXI-5526 Software Development Kit provides the programmer with an easy way to develop custom firmware for a VXI module that is based on the VXI-5526 VXI Interface Card. The custom firmware can be assembled and tested on any IBM clone PC running a MS Windows 3.1 or later operating system.

Easy Configurability

The user's custom program builds on the VXI-5526's standard program which includes support for all of the VXIbus instrument functions, all common IEEE-488.2 commands and includes a SCPI parser. The VXI-5526's standard program complies with VXI-1.4 which is the latest VXIbus Specification. The VXI-5526's standard program optionally includes support for VXIbus Fast Data Channels.

The basic steps to creating a custom program are to install the development kit in a PC, verify its installation, modify the VXI-5526's configurable functions and then add or modify the commands and functions in the VXI-5526's standard command set. The custom program can be tested in the PC before it is downloaded into the VXI-5526's RAM memory. The program is debugged and when done, the final version is recompiled and stored in the VXI-5526's Flash memory.

The VXI-5526's configurable functions include the VXI registers and VXI responses such as IDN message, manufacturer number, etc. These are modified to reflect the new module capabilities and manufacturer code. The changed values become the VXI-5526's default values when the card is reset or powered on.

An easy way to develop firmware for a custom VXIbus module.

- Includes all necessary software packages.
Nothing more to buy.
- Runs on any IBM clone PC with MS Windows.
Users virtually any PC with no special requirements
- Includes sample programs and make files.
Eliminates lengthy setups so you can start with a working code set.
- SCPI parser includes hooks for adding user's commands.
Easy customization of the VXI-5526's firmware for your application.
- Compiles debug and flash versions.
Debug programs in RAM and save final versions in the VXI-5526's Flash Memory.



VXI-5526 Interface Card and Software Development Kit

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Software Development Kit

The VXI-5526's firmware is designed so the user can easily add custom commands and functions to the parser. The new functions are linked to the existing firmware and the compiled code is downloaded and stored in the VXI-5526's flash memory. The new VXI-5526 functions are compiled using Watcom's C/C++ language compiler which runs on a PC. The necessary .mak file and the Systems & Software Inc. (SSI) Linker are included with the VXI-5526 Software Development Kit. Downloading and debugging are accomplished with the included Cyberquest Flash Loader and SSI 386EX Debugger.

The VXI-5526 Software Development Kit includes the necessary compiler, mak files, linker, flash loader and debugger programs. The Software Development Kit also includes a serial cable for connecting the VXI-5526's debugging port to a PC COM port, a description of the parser's operation, instructions on how to add additional commands and functions to the VXI-5526's firmware and programming examples. All of the components of the Software Development Kit were selected and have been tested for their compatibility and ease of use.

In addition to the supplied programs, the Microsoft MASM 6.11 assembler is required for assembly language routines such as interrupt service routines, etc. The MASM package also contains the Microsoft make utilities NMAKE and NMAKER needed by the SSI build utilities. This program is not supplied as part of the VXI-5526 SDK kit and must be purchased separately. However, most C language programmers already have the MASM package on their computer as it is supplied with most Microsoft compilers, including C6 and Visual C++.

VXI-5526 SDK: SPECIFICATIONS

Required Computer	Included Items
Intel 386/486 or later processor with 16 Mbytes of RAM, 110 Mbytes of available hard drive space and an available RS-232 COM port. The PC should be running MS Windows 3.1 or Windows 95. A 486 or later processor is preferred because of the need to run MS Windows.	Cyberquest: 386EX Flash Loader
The Watcom compiler requires a minimum of 8 Mbytes of RAM and 100 Mbytes of Hard Disk space.	Watcom: C/C++ language compiler
Microsoft MASM 6.11 assembler is required for assembly language routines such as interrupt service routines, etc. The MASM package also contains the Microsoft make utilities NMAKE and NMAKER needed by the SSI build utilities. The Microsoft MASM 6.11 assembler is supplied as part of most Microsoft compilers, including C6 and Visual C++ or it may be purchased from Microsoft.	SSI: PC based Link & Locate/386 Debugger
	SW: VXI-5526 Development Files which includes: VXI-5526 library files make files sample programs
	Serial cable VXI-5526 to PC COM port.
	Instruction manual program modification directions and reference library.

ORDERING INFORMATION

VXI-5526 Software Development Kit	Part Number 114598
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