



PRODUCT BRIEF VG230-PROT PROTOTYPING KIT

Overview

The Vadem VG230-PROT Prototyping Kit provides a highly configurable platform for designers of battery-operated, PC-based personal electronic products to show proof-of-concept, evaluate design tradeoffs or prototype software and hardware. The designer can evaluate all the features and configuration options of the Vadem VG230 single-chip PC platform and quickly configure a first-cut approximation of the target system. Some example uses:

- Evaluate software early in development process
- Study performance vs. power tradeoffs
- Evaluate power consumption with different memory types
- Configure matrix keyboard key layout

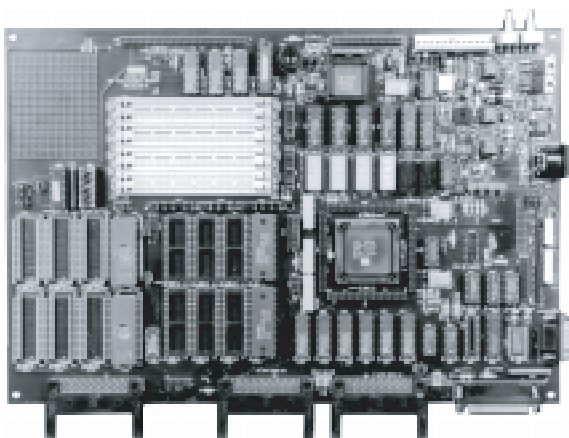
Up to two PCMCIA 2.1 (JEIDA 4.1) compatible PC card slots are supported. These slots support PCMCIA ROM, RAM and FLASH memory cards. Also supported are PCMCIA I/O cards.

The VG230-PROT board provides a standard serial port configurable for COM1 or COM2. A standard parallel printer port at LPT1, LPT2 or LPT3 is also available when the standard XT keyboard configuration is selected.

An on-board 8473 floppy disk controller provides support for easy software loading from up to two floppy drives. The standard formats of 360K, 720K, 1.2M and 1.44M are supported.

A special card-format firmware expansion slot is also included.

VG230-PROT Photo



Key Features

- Complete XT motherboard based on the Vadem VG230 16MHz single-chip PC platform
- LCD interface for 640 x 400 AT&T, CGA and smaller panels
- Support for standard XT-style keyboard or X-Y keyboard matrix
- Bidirectional parallel printer interface
- RS-232 serial port interface
- Support for up to two PCMCIA 2.1 (JEIDA 4.1) PC card slots
- Support for DRAM, SRAM, PSRAM and Self-Refresh DRAM
- Support for up to 1MB EPROM
- Support for FLASH EPROM
- Floppy disk interface supports up to 1.44MB floppies
- Option switches allow quick reconfiguration of I/O
- Expansion header provides access to ISA signals
- Wire-wrap area for prototyping custom circuitry
- Dual Hex LEDs display Power-On Self Test (POST) codes
- Includes standard BIOS plus significant extensions
- Includes Microsoft® MS-DOS® ROM Version 5.00 for instant boot-up
- Piggyback connector for optional Vadem VG230-ICE adapter (allows debugging with a standard ICE)
- Card-format firmware expansion slot facilitates development of ROM-based code.

Additional Information

- The VG230-PROT board supports up to 32 MB of RAM. Maximum RAM configuration depends on memory type. Maximums for each RAM type are shown below.

DRAM: (256K, 1M or 4M SIMMs)
(or Self- Refresh) Up to 32M bytes using 16 or 8 bit arrays

SRAM: (128K x 8 packages)
Up to 1M bytes using 16 or 8 bit arrays

PSRAM: (512K x 8 packages)
Up to 8M bytes using a 16 bit array

- The EPROM array supports 128Kx8 EPROM devices in JEDEC packages. Sockets for 8 devices provide up to 1MB of ROM. Optionally a ROM IC card may be used for arrays up to 32 MB.
- The VG230 supports either a scanned X-Y matrix keyboard or a standard serial XT-style keyboard. Configuration jumpers on the VG230-PROT board allow the user to select either one.
- The included Vadem BIOS provides a basic PC-compatible BIOS core. In addition, the BIOS provides support for these advanced features:

- ✓ Power management
- ✓ Suspend/Resume
- ✓ PCMCIA card
- ✓ Scanned keyboard
- ✓ VG230 setup configuration

- RAM type
- Display type
- Keyboard select
- Floppy drive type select

- ✓ Serial I/O debugger
- ✓ Power On Self Test (POST)
- ✓ Real Time Clock support

- The on-board EPROM includes Microsoft® MS-DOS® ROM Version 5.00 with utilities. The VG230-PROT board can be booted directly from ROM.

- The following accessories are also included in the VG230-PROT Prototyping Kit:

- ✓ Utility Disk
 - EMS 4.0 drivers
 - BIOS Configuration Utility
 - VG230-PROT schematics in Orcad format
 - VG230-PROT parts list
- ✓ 8 x 12 Matrix Keyboard with cable
- ✓ VG230-PROT User's Manual
- ✓ VG230 Data Manual
- ✓ VG230 Technical Reference

Mechanical Specifications:

Physical	9.25 in. x 13.0 in.
Electrical	+5V ±5% @ 1A max
Environmental	Temperature: 0° to 50°C Humidity: 8% to 80%
Order Number	VG230-PROT

