

PRODUCT BRIEF VG330-EVAL EVALUATION BOARD

Overview

The Vadem VG330 Evaluation board provides a highly configurable platform for designers of battery-operated 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 VG330 single-chip 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

A PCMCIA 2.1 (JEIDA 4.2) ExCA compatible PC card slot is supported. This slot supports PC Card ROM, RAM, FLASH and PC Card I/O cards.

The VG330-EVAL board provides a standard serial port configurable for COM1 or COM2. This port may also be used as an IrDA interface.

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.

Key Features

- Complete motherboard type design, based on the Vadem VG330 32MHz single-chip PC platform
- LCD interface for 640 x 480 AT&T, CGA and smaller panels
- Support for standard XT-style keyboard or X-Y keyboard matrix (supplied).
- RS-232 serial port interface
- IrDA serial interface
- PCMCIA 2.1 (JEIDA 4.2) ExCA[™] PC card slot
- Support for DRAM, SRAM, PSRAM and Self-Refresh DRAM
- Support for up to 512K EPROM
- Support for FLASH EPROM
- Floppy disk interface supports up to 1.44MB floppies
- Option switches allow quick reconfiguration of I/O ports
- Expansion connector 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 VG330-ICE adapter (allows debugging with a standard 286 ICE)
- Card-format firmware expansion slot facilitates development of ROM-based code.

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Functional Description

- Three types of RAM memory are supported via Memory Modules.
 - ✔ PSRAM/SRAM Memory Module
 - ✓ Up to 4 Mbytes using 8 512Kx8 PSRAMs, 16 bit array
 - ✓ Up to 1 Mbyte using 8 128K x 8 SRAMs, 16 bit array
 - ✓ X8 DRAM Memory Module
 - ✓ Up to 4 Mbytes using 512Kx8 DRAMs, 16 bit array
 - ✓ X16 DRAM Memory Module
 - ✓ Up to 4 Mbytes using 256Kx16 DRAMs, 16 bit array
- The EPROM array supports 128Kx8 EPROM devices in JEDEC packages. Sockets for 4 devices provide up to 512K of ROM. Optionally a ROM IC card may be used for arrays up to 32 MB.
- The VG330 supports either a scanned X-Y matrix keyboard or a standard serial XT-style keyboard. Configuration jumpers on the VG330-EVAL 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
 - ✓ VG330 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 VG330-EVAL board can be booted directly from ROM.
- The following accessories are also included in the VG330-EVAL board:
 - ✔ Utility Disk
 - EMS 4.0 drivers
 - BIOS Configuration Utility
 - VG330-EVAL schematics in Orcad format
 - VG330-EVAL parts list
 - ✓ 8 x 14 Matrix Keyboard with cable
 - ✓ VG330-EVAL User's Manual
 - ✓ VG330 Data Manual

Mechanical Specifications:

Physical 9.25 in. x 13.0 in. Electrical $+5V \pm 5\%$ @ 1A max

Environmental Temperature: 0° to 50° C Humidity: 8% to 80%

Order Number VG330-EVAL

