

### HK68/V™ VME Family

### HK68/VE

#### Heurikon's Powerful Single Board Microcomputer for Real-Time and Dedicated Function Control Applications

Heurikon is proud to introduce the HK68/VE microcomputer, designed for real-time applications and function control tasks such as I/O and communications control. The VE is available as a basic processor with several options which allow you to choose the level of sophistication necessary to achieve your application goals.

Key features include:

■ No wait-state, 10 or 12.5 MHz Motorola 68000 MPU

- Up to 1 MByte of on-board, dual access DRAM with parity
- Up to 128K EPROM
- Optional 2 or 4-channel DMAC
- Optional on-board 68881 Floating Point Processor
- 20-bit programmable parallel I/O port with 8-bit DMA support
- 2 RS-232 serial ports (RS-422 optional)
- Full master/slave interface to VMEbus with 16-bit data path and 24-bit addressing
- Militarized versions available

Like the HK68/V10, a related product serving real-time applications, the VE incorporates the quality, performance and reliability resulting from over 13 years experience in microcomputer design and manufacturing. Finally, the HK68/VE is but one member of the HK68/V Family of VME products and complementary software . For more information, please consult your Heurikon representative or call Heurikon directly.

### **Technical Specifications**

### **Bus Interface**

■ VMEbus architecture with 16-bit data path, 24-bit addressing and 7 bus interrupts assures compatibility with a wide range of peripheral boards serving a variety of applications ■ Operates in Master or Slave Mode (Compliance Level: D16 A24 I(7)).

### **Processor**

■ No wait-state Motorola 68000 MPU operating at either 10 or 12.5 MHz ■ Watchdog Timer provided to terminate accesses otherwise causing system deadlock.

### Memory

### Random Access Memory

■ Up to 1 MByte of on-board dual access DRAM with parity in multiples of 128K.

#### **Read-Only Memory**

■ Up to 128K of EPROM (two 28-pin JEDEC ROM sockets).

### **Direct Memory Access**

■ Optional 2-channel 68440 or 4-channel 68450 DMAC increases system performance for memory to memory and device to memory data transfers ■ DMAC single cycle mode operation supported for transfers directly from I/O to memory in a single bus cycle ■ Programmable 8 or 16-bit word size.

### Peripheral Device Interfaces

#### Serial I/O

- Two RS-232 serial I/O ports provided via Z8530 Serial Communications Controller
- Separate software controlled baud rate generator for each port
- Both ports support asynchronous or synchronous communications including IBM BiSync, HDLC, SDLC and others RS-232-C standard with EIA RS-422 available on both ports
- Transfer rates of 38.4 K baud asynchronous and 1 Mbit synchronous obtainable.

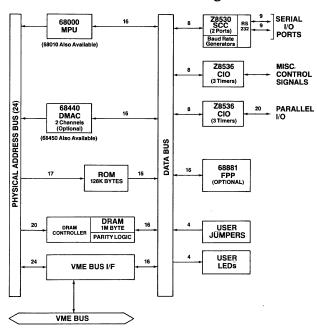
#### Parallel I/O Interface

■ 20-bit parallel port provided via Zilog Z8536 C10 chip ■ Configurable in various ways including an 8-bit port with full DMA support.

### Counter/Timers

■ Three programmable 16-bit Counter/Timer channels available.

### **HK68/VE Block Diagram**



### Floating Point Processor Module

- Motorola 68881 Floating Point Processor available on board
- System performance enhanced via execution of floating point operations in hardware at speeds of up to 100 times that of the 68010
- C, Fortran and Pascal compilers generating 68881 in-line code to be available.

## **Light Emitting Diodes and Jumpers**

■ Four user programmable LEDs and eight jumpers provided.

### Operating Systems Supported

■ Hunter and Ready VRTX® Real-Time Executive ■ Other operating systems to become available. (For complete information on software availability, please contact your Heurikon representative or Heurikon directly.)

### **Board Configuration Options**

■ MPU—10 or 12.5 MHz Motorola 68000 ■ DRAM—128K, 256K, 512K, 1 MB with Parity ■ DMAC—68440, 68450 ■ Floating Point Processor— 68881 ■ RS-422 on both serial ports.

# Physical and Environmental Characteristics

- Multilayer with ground and VCC planes Board size—23.35 cm x 16.0 cm (9.19 in x 6.3 in) Power Requirements: +5 VDC @ 4.75 A, +12 VDC @ .6 A, -12 VDC @ .2 A
- Operating Range: 0 to 55° C, 100% relative humidity (non-condensing).

For detailed information on the operation of the HK68/VE, please refer to the User's Manual. Specifications subject to change without notice.

For more information, please call:

1.800.356.9602



Heurikon Corporation 3201 Latham Drive Madison, Wisconsin 53713 608-271-8700 TLX. 469532.

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