QUIKDATA COMPUTER SERVICES INC.

2618 Penn Circle ● Sheboygan, Wisconsin 53081

- Heath/Zenith Computer Support
- H-SCOOP Newsletter
- Computer Control & Interfacing
- Word Processing

Henry E. Fale
(414) 452-4172

- Zenith Business Systems
- Computer Consulting
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Quikdata Computer Services, Inc. is pleased to announce that we are the exclusive distributors for all the UltiMeth products. All products are in stock and available for shipping within 24 hours of order placement. We will do whatever we can to support these products. When ordering, know what you want and be certain it will work with your particular system configuration. Once you purchase it, it's yours. Prices and specifications subject to change without notice.

UltiMeth Corporation PRODUCT LIST

24025 Fernlake Drive
Harbor City, CA   90710
213/539-4276 8-9AM M-F (Pacific time)

UltiMeth Corporation provides high-quality systems software for the Heath H8 and H89 computers. We offer products which enhance existing hardware and software from Heath and other vendors, allowing the user to get more performance from his computer.

PRODUCT DESCRIPTION

MTRHEX, MTROCT, and **MTR4K** are replacement monitor ROMs for the H89 which provide increased HDOS processing speed and debugging capability. Additional monitor debugging commands have been provided to display and alter all Z-80 registers, to read and write to I/O ports, to single step and breakpoint programs, and to restart HDOS. With an optional hardware modification, the monitor will allow the RESET key to interrupt a program.

The HDOS clock value in memory (TICCNT) has been extended to a four byte counter; the monitor clock interrupt processing routine has been rewritten, giving an effective 16% CPU speed increase to HDOS programs running on a 2 MHz system.

Each 2K type ROM is available in either a split octal (MTROCT) or hexadecimal (MTRHEX) version as a direct plug replacement for the Heath MTR-88/ -89 in TMS2716 (Heath standard) or 5 volt 2716 or 2716-1 format; or in a 4K octal/ hexadecimal (MTR4K) version as a direct plug replacement for the Heath MTR-90 in 2732 or 2732-1 format.

MTR4K supports all of the following features; MTRHEX and MTROCT support any three of the following features (specify when ordering): an expanded debugging format (counts as 1/2 feature); booting (HDOS and Heath or Magnolia CP/M) from the H-17*, H-37*, H-47, H-67, Magnolia's 8"/5" DD board*, Livingston's 8" SD board#, CDR's DD 8"/5" board#, Corvus hard disk, or Magnolia's memory board pseudo disk (*=standard option for MTRHEX and MTROCT; #=counts as 1-1/2 features). **Price: $50** (2716 or TMS2716), **$60** (2716-1 or 2732), **$65** (2732-1).

DKH17V3.DVD is a replacement HDOS 2.0 disk device driver for the H8 and H89 which supports the Heath H17 hard-sector floppy disk controller using single- and double-sided and 40-and 80-track 5" disk drives, and provides individually SETtable step times for each disk drive, increased I/O speed, an optional fast media check during INITialization, and improved disk operation error recovery. **Price: $40.**

DKFMDV3.DVD is an HDOS 2.0 disk device driver which supports the Magnolia Microsystem's soft-sector, double-density floppy disk controller board for the H89, using Heath H-37 and H-47

compatible formats. **Price: $50.**

CACHEMMS.ABS/AXMMS.DVD are an HDOS 2.0 program and device driver which supports the Magnolia Microsystem's 128K memory board for the H89. AXMMS makes the memory board appear as a 111K "disk"; CACHEMMS reduces actual disk references by "remembering" the contents of frequently referenced disk sectors. **Price: $50.**

CACHES89.ABS/AXS89.DVD are an HDOS 2.0 program and device driver which supports the D-G Electronics Development Co's SUPER-89 CPU board for the H89, similar to CACHEMMS/AXMMS above. The CPU board must contain at least 128K of memory. **Price: $50.**

CACHEDG8.ABS/AXDG8.DVD are an HDOS 2.0 program and device driver which supports additional D-G Electronics Development Co's 64K memory boards for the H-8, similar to CACHEMMS/AXMMS above. The CPU must be a Z-80, and all memory boards must be D-G 64K memory boards. **Price: $50.**

MMS4MHZ is a set of patch files and instructions for converting Magnolia Microsystems CP/M v2.242 to 4 MHz CPU operation. **Price: $45.**

Source code is not available for any of our products.

Note: We try to make our products compatible, insofar as feasible, with other known products. Unfortunately, we have found that most developers of software or hardware do not share this attitude. As a result, you may find another product that is not compatible with one of our products, particularly if the other product was developed after our product. Because of the above, we do not provide any of our products on a trial basis, subject to refund, nor do we always update our products when incompatibilities are found. Any such updates may or may not be available for a reduced price.

We are sorry, but UltiMeth cannot provide, except on a prepaid fee consulting basis, subject to schedule availability, assistance in the following areas:

1. Installing or configuring anyone else's software or hardware.
2. Tracking down general system problems.
3. Modifying our software.
4. Designing and implementing software or hardware.
5. Providing advice or technical information (except for the operation of our products).

The following comments apply to the use of extended memory and our related products:

The 8080 and Z-80 CPU chips cannot reference more than 64K of memory at one time; therefore, it requires a extensive rewrite of both the operating system AND editors, compilers, interpreters (such at MBASIC), etc., in order to support general user references to any additional memory. Our software which supports additional memory does so by effectively treating the additional memory as a very high speed disk.

The following comments apply to the operation of any of our products at CPU speeds of other than 2 MHz:

All of our software products have supported 4 MHz CPU operation since November, 1981, and were all designed for operation at a constant CPU speed (i.e., no CPU speed switching during operation). Together, they allowed a properly modified H-89 CPU running at either 2 or 4 MHz to be fully supported under HDOS 2.0 and Magnolia Microsystems' CP/M 2.242 (the monitor ROMs, in conjunction with Livingston Logic Labs products, also fully supported 2 or 4 MHz operation under Heath CP/M 2.2.03). It was, of course, not possible to design our products around other products that did not yet exist.

For those software products of ours that are CPU-speed sensitive, the CPU speed is normally measured when our software first receives control. This avoids accuracy problems which can occur in repeatedly measuring CPU speeds in an interrupt-enabled environment.

In the December 15, 1981 issue of BUSS (#45), we printed a request for software suppliers to get together to exchange information to help eliminate incompatibilities between software products; we received only one response (from Livingston Logic Labs).

Now there are at least three software-CPU-speed-switching modifications on the market (including the REMark article); none of them are compatible with each other, and may or may not be compatible with our previously issued software, depending upon how they are configured in a system. Two of these product vendors did contact us, but rather than adapt their new product to our existing products, they asked that we adapt our software to their new product. Being "nice guys", we made the adaptations for some of our products. Because of the effort involved in making and supporting those adaptations, and because we do not recommend software-CPU-speed-switching, we do not offer a reduced price for upgrading to the adapted products.

All of our software will run at any CPU speed from 2 to 6 MHz, if the CPU speed is not changed by other software. The following is a list of our products with a comment on the software-CPU-speed-switching compatibility of each product:

MTRHEX/MTROCT/MTR4K: The ROM itself may or may not run in a particular computer at a CPU speed above 2 MHz, depending upon the CPU and the type of ROM. The code in the ROM supports software-CPU-speed-switching, except for switching CPU speed before booting from the H-17 hard-sector controller, unless pin 13, P512 (on the CPU board) remains at 2.048 MHz during 4 MHz CPU operation.

MMS4MHz: Does not support software-CPU-speed-switching for 8" double-density floppies.

DKH17V3.DVD: Supports software-CPU-speed-switching IF port 362Q/F2H is used to control the CPU speed OR IF pin 13, P512 (on the CPU board) remains at 2.048 MHz during 4 MHz CPU operation.

DKFMDV3.DVD: Supports software-CPU-speed-switching IF port 362Q/F2H is used to control the CPU speed.

CACHExxx.ABS/AXxxx.DVD: Supports software-CPU-speed-switching.

All prices include documentation and shipping to U.S. addresses. Payment must be in U.S. funds on a U.S. bank, (prepaid), or Master Card and Visa accepted. WI residents add 5% salex tax.