## µFlashTCP

- TCP/IP & DOS with Flash File System
- 10BASE-T Ethernet (NE2000 Compatible)
- 32 Pin Dip Socket to accept 512K SRAM, 512K Flash or M-Systems DiskOnChip
- 386 Ex, 25 MHz / 512K Flash, 512K SRAM
- 10 Digital I/O Lines
- PC Compatible Serial Ports
  1 RS232
  1 RS232 / RS485, Software Selectable
- 5V DC Power, 400mA nominal
- Dimensions 3.75" x 2.50"



The  $\mu$ *FlashTCP* packs a 386 DOS computer and 10BASE-T Ethernet onto a board slightly larger than a credit card. This is an ideal platform for new applications requiring network connectivity, bridging existing equipment to Ethernet networks or an embedded web server. The powerful Intel 386Ex processor, NE2000 compatible Ethernet, and DOS operating system allow design and debugging in a familiar environment. The PC compatible serial ports, counter/timers, and interrupt controller are fully compatible with the IBM PC at both the hardware and software levels - making integration a snap. An extensive array of integrated peripherals for the  $\mu$ *FlashTCP* include the  $\mu$ *I/O* (shown below), flexible storage options or the addition of a battery backed clock calendar using the on board 32 Pin Dip socket. With additional features such as the watchdog timer, RS-485 serial port capability, and aggressive pricing, the  $\mu$ *FlashTCP* covers many embedded designs.

The *µFlashTCP Development Kit* (99-0029) includes a *µFlashTCP* controller, Programming Cable, Connector Kit, Ethernet Cables, 110 VAC Adapter, Setup Guide, Schematic and CD with Borland C/C++ V4.52 Compiler, utilities, sample programs and documentation.

### μΙ/Ο Peripheral Board For μFlashTCP

- 4 Channel 12 Bit A/D
- 2 Channel 12 Bit D/A
- 8 Protected Digital Inputs
- 4 One Ampere Relay Drivers
- Dimensions 3.75" x 2.50" (63.5mm x 95 mm)
- Software Drivers for C, Quickbasic, and Assembly



The JK microsystems  $\mu I/O$  expansion board gives users the ability to add analog inputs and outputs, digital inputs and isolated high current drivers to the  $\mu Flash TCP$  single board computer. Each  $\mu I/O$  board adds 4 channels of 12 bit A/D, 2 channels of 12 bit D/A, 8 digital inputs, and 4 relay output drivers. If more I/O is required, several boards can be added to the system. Boards connect using 10 pin IDC style ribbon cables. A driver library with functions callable from C or QuickBASIC and example programs are available to eliminate the hassle of programming devices on a serial bus.

The  $\mu IO$  Peripheral Kit (99-0030) includes a  $\mu IO$  board, interface cable, shells and pins kit, standoffs, and users manual for use with the  $\mu Flash TCP$ .

## JK microsystems, Inc.

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# µFlashTCP

#### **Specifications**

Processor	25Mhz Intel 386Ex
Operating System	XDOS
	(MS/PC DOS 3.3 compatible)
Memory	512K SRAM, 512K Flash
Ethernet	10BASE-T, NE2000 compatible
	Link status and Activity LEDs
Serial Port 1	RS-232 with 5 handshake lines
	COM1, address 0x3F8, IRQ 4
	115200 baud maximum
Serial Port 2	RS-232 no handshaking or
	RS-485 half duplex,
	COM2, address 0x2F8, IRQ 3
	115200 baud maximum
Digital I/O	10 Bits (P3.0-P3.5 & P1.4-P1.7)
	Pin configurable as input or output
	P3.3 and P3.4 configurable as
	interrupts
	8mA source/sink
Watchdog	Programmable timeout,
	Generates processor NMI
Sync. Serial	Full duplex,
	Independent Rx and Tx clocks,
	Master or Slave operating mode
Supply Voltage	5V DC ±10%
Supply Current	400mA (nominal)

Humidity	5 - 90%, non-condensing
Temperature	-4° to 185°F (-20° to 85°C)
Weight	1.6 oz (45 gm)
Dimensions	3.75" x 2.50" x 0.63"
	(95mm x 63.5mm x 16mm)

#### **Connectors and Jumpers**

- J1 General I/O & Synchronous Serial
- J2 RS-485
- J3 COM1
- J4 COM2 / Console
- J5 Multi-I/O Bus (General I/O)
- J8 Power
- J10 Ethernet
- JP1 Watchdog NMI Enable
- JP2 Socket Memory Type
- JP3 Boot Memory Location

#### **Optional Features**

- M-Systems DiskOnChip Flash Disk, 512K SRAM, 512K Flash or Battery backed clock calendar chip with 128K SRAM (20-0074)
- Multi-I/O or μI/O peripheral boards for I/O expansion.





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