# SocketEthernet IP®

## Embedded Serial-to-Ethernet Device Server

### Universal Socket Benefits

- Interchangeable communications devices
- Quick-to-market
- Global approvals
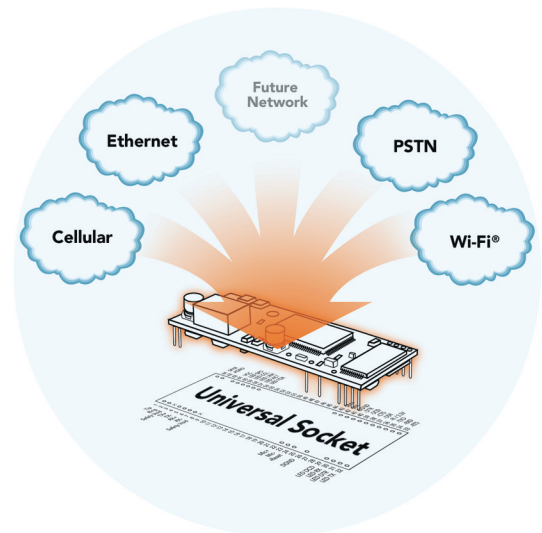- Easy migration to future networks
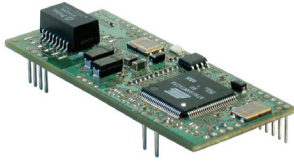
The SocketEthernet IP® device server connects serial devices to an IP network for remote monitoring, control and configuration. The space efficient communications device (1" x 2.5") integrates a complete TCP/IP protocol stack and a serial-to-Ethernet interface into a single, universal socket design. It can make your existing and next generation device, machine or system, IP-ready while you focus on developing its core features.

## Features

- Complete serial-to-Ethernet connectivity solution including network processor, media access controller and physical interface
- Serial interface supports DTE speeds to 230K bps
- Space efficient universal socket connectivity
- ARP, DHCP client, DNS, FTP client, ICMP (ping), IP, POP3, SMTP, TCP, Telnet server and UDP protocol support
- LED driver outputs for visual monitoring of speed, link, activity, collision and duplex mode
- 10/100BaseT auto-sensing Ethernet or configurable for 10MB, 100MB, half-duplex or full-duplex
- Models with medical/high voltage isolation (EN60601)
- AT command compatible
- Flash memory to update firmware with the latest enhancements
- Developer's kit available for testing, programming and evaluation
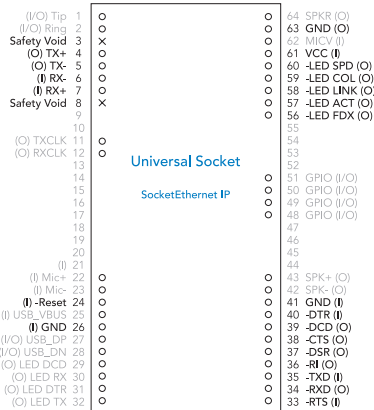- Two-year warranty

**Multi**Tech® Systems

## Highlights

**Applications.** The SocketEthernet IP device server will IP-enable any serial device to provide remote monitoring, control and configuration of any system. It is ideal for:

- Appliances
- ATM terminals
- Credit card and check verification systems
- Data collection
- Gas pumps
- Industrial and medical remote monitoring systems
- Point-of-sale terminals
- Remote diagnostics
- Remote metering
- Security systems
- Television set-top boxes
- Ticketing machines
- Vending/gaming machines

**Serial-to-Ethernet Technology.** The SocketEthernet IP device server provides the powerful ability to IP-enable serial devices allowing more options for data acquisition, device management, and industrial control than would otherwise be available. The communications device integrates a processor, operating system, TCP/IP stack and a network connection to provide a complete serial-to-Ethernet connectivity solution.

**SocketEthernet IP Pin-Out.** The SocketEthernet IP device server interfaces easily with existing products through a standard serial communication channel. The serial DTE channel is capable of transfer speeds to 230.4K bps and can be interfaced directly to a UART or microcontroller. The SocketEthernet IP device server also provides LED driver outputs for visual monitoring of speed, link, activity, collision and duplex mode.

| | | | |
|---|---|---|---|
| (I/O) Tip | 1 | | 64 SPKR (O) |
| (I/O) Ring | 2 | | 63 GND (O) |
| Safety Void | 3 | | 62 MICV (I) |
| (O) TX+ | 4 | | 61 VCC (I) |
| (O) TX- | 5 | | 60 -LED SPD (O) |
| (I) RX- | 6 | | 59 -LED COL (O) |
| (I) RX+ | 7 | | 58 -LED LINK (O) |
| Safety Void | 8 | | 57 -LED ACT (O) |
| | 9 | | 56 -LED FDX (O) |
| | 10 | | 55 |
| (O) TXCLK | 11 | | 54 |
| (O) RXCLK | 12 | | 53 |
| | 13 | | 52 |
| | 14 | | 51 GPIO (I/O) |
| | 15 | | 50 GPIO (I/O) |
| | 16 | | 49 GPIO (I/O) |
| | 17 | | 48 GPIO (I/O) |
| | 18 | | 47 |
| | 19 | | 46 |
| | 20 | | 45 |
| (I) | 21 | | 44 |
| (I) Mic+ | 22 | | 43 SPK+ (O) |
| (I) Mic- | 23 | | 42 SPK- (O) |
| (I) -Reset | 24 | | 41 GND (I) |
| (I) USB_VBUS | 25 | | 40 -DTR (I) |
| (I) GND | 26 | | 39 -DCD (O) |
| (I/O) USB_DP | 27 | | 38 -CTS (O) |
| (I/O) USB_DN | 28 | | 37 -DSR (O) |
| (O) LED DCD | 29 | | 36 -RI (O) |
| (O) LED RX | 30 | | 35 -TXD (I) |
| (O) LED DTR | 31 | | 34 -RXD (O) |
| (O) LED TX | 32 | | 33 -RTS (I) |

Universal Socket
SocketEthernet IP

**Universal Socket Connectivity.** Multi-Tech's universal socket is a flexible, comm-port architecture that provides cellular, Ethernet, PSTN or Wi-Fi network access with interchangeable communications devices. This means you can utilize one system design and populate it with your connectivity device of choice accommodating multiple connectivity requirements. In addition, you are assured a seamless migration to future technologies.

**Developer's Kit.** The Developer's Kit allows you to plug in the communications device and use it for testing, programming and evaluation. The kit includes one development board with RS-232 DB-25 connector, universal power supply, RJ-45 jack and RS-232 cable.

## Specifications

**Interfaces**
10/100BaseT Ethernet, Asynchronous Serial

**Power Requirements**
5VDC or 3.3VDC

**Power Usage**
Typical: 140mA @ 5V or 145mA @ 3.3V
Maximum: 160mA @ 5V or 3.3V

**Physical Description**
2.541" L × 1.045" W × 0.680" H; 0.6 oz.
(6.45 cm × 2.65 cm × 1.7 cm; 0.017 kg.)

**Operating Environment**
Temperature Range: 0° to +70° C

**Approvals**
EMC: FCC Part 15 Class B, Canada Class B, EN 55022 Class B, EN 55024
Safety: UL 60950, cUL 60950, EN 60950, CSA 950, AS/NZS 6950:2000

## Ordering Information

| Product | Description | Region |
|---|---|---|
| MT100SEM | Embedded Device Server | Global |
| MT100SEM-L | Embedded Device Server | Global |
| MT100SEM-L-HV | Embedded Device Server | Global |

**Ordering Codes**

| | |
|---|---|
| -L | 3.3V Power Input (Default is 5V) |
| -HV | High Voltage Dielectric Isolation (EN60601) |
| .Rx | Version control |

Made in Mounds View, MN, U.S.A.

Features and specifications are subject to change without notice.

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