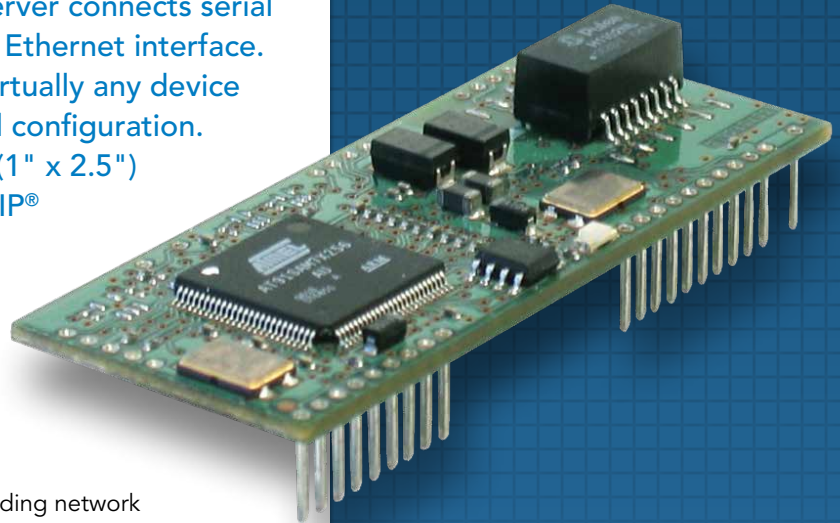


# SocketEthernet IP®



## Intelligent Serial-to-Ethernet Device Server

The SocketEthernet IP® intelligent device server connects serial devices to an IP network via a 10/100BaseT Ethernet interface. It enables you to build IP networking into virtually any device allowing for remote monitoring, control and configuration. The space efficient communications device (1" x 2.5") integrates Multi-Tech's intelligent Universal IP® stack, and can make your existing and next generation device, machine or system, IP-ready while you focus on developing its core features.

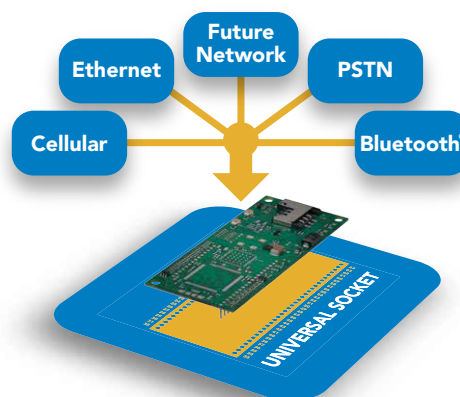


### Features

- Complete serial-to-Ethernet connectivity solution including network processor, media access controller and physical interface
- Serial interface supports DTE speeds to 230K bps
- Universal Socket connectivity
- Intelligent Universal IP stack for enhanced M2M functionality
- 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

### Universal Socket Benefits

- Interchangeable communications devices
- Intelligent Universal IP stack
- Quick-to-market
- Easy migration to future



## Specifications

### Interfaces

10/100BaseT Ethernet, Asynchronous Serial

### Power Requirements

5VDC or 3.3VDC

### Power Usage

Typical: 137mA (.41w @ 3.3VDC)

Maximum: 168mA (.50w @ 3.3VDC)

Typical: 187mA (.94w @ 5VDC)

Maximum: 194mA (.97w @ 5VDC)

### Physical Description

2.541" L x 1.045" W x 0.680" H; 0.6 oz.

(6.45 cm x 2.65 cm x 1.7 cm; 0.017 kg.)

### Operating Environment

Temperature Range: -40° to +85° 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

RoHS 2002/95/EC Compliant

## 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, Universal IP stack and a network connection to provide a complete serial-to-Ethernet connectivity solution.

## Universal Socket Connectivity.

Multi-Tech's Universal Socket is a flexible, common 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.

## Universal IP for Enhanced M2M Connectivity

Multi-Tech's Universal IP® stack consists of a common set of TCP/IP and other common modem functions that are implemented using a standard set of AT commands. The result for customers is reduced development time when using more than one cellular technology or when a cellular module/radio goes end-of-life. Multi-Tech products with Universal IP are designed for applications needing enhanced M2M communications connectivity, including:

- Auto Connect/Persistent Connectivity – Allows a modem to connect and stay connected without being managed by an intelligent device. It can also work with remote wake up to start a connection, as well as ping and TCP keep alive to keep the connection active.
- Device Monitoring – Acts as a watchdog to monitor and manage the connection. If the device becomes unresponsive, the device monitor can perform a reset to get it back to a known state.
- Event Monitoring and Reporting via GPIO – Uses general purpose input/outputs to monitor the state of a connected device. Universal IP can be configured to send status updates when the state of the connected device has passed pre-configured thresholds.

## 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.

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

## 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.

## Services & Warranty

Multi-Tech's comprehensive Support Services programs offer a full array of options to suit your specific needs. These services are aimed at protecting your investment, extending the life of your solution or product, and reducing total cost of ownership. Our seasoned technical experts, with an average tenure of more than 10 years, can walk you through smooth installations, troubleshoot issues and help you with configurations. Products include a 2-year warranty.

## Installation Support

Multi-Tech's Installation Support Service delivers priority service with the ability to work one-on-one with an experienced Multi-Tech technical support engineer, to guide you through the installation process for our products.

## Technical Support Services

At Multi-Tech, we're committed to providing you personalized attention and quality service while providing you a quick response to your product support needs. We have several options of support for you to choose from.

For additional information on Support Services as well as other service offerings, please contact your Multi-Tech representative or visit [www.multitech.com/support.go](http://www.multitech.com/support.go).

## Ordering Information

Product	Description	Region
MT100SEM-IP	Intelligent Device Server	Global
MT100SEM-L-IP	Intelligent Device Server	Global
MT100SEM-L-HV-IP	Intelligent Device Server	Global

### Ordering Codes

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

### World Headquarters

Multi-Tech Systems, Inc.  
2205 Woodale Drive  
Mounds View, MN 55112 U.S.A.  
Tel: 763-785-3500  
Toll-Free: 800-328-9717  
Email: [sales@multitech.com](mailto:sales@multitech.com)  
[www.multitech.com](http://www.multitech.com)

### EMEA Headquarters

Multi-Tech Systems (EMEA)  
Unit 1, Thames Court  
2 Richfield Avenue  
Reading, Berkshire RG1 8EQ  
United Kingdom  
Tel: +(44) 118 959 7774  
Email: [sales@multitech.co.uk](mailto:sales@multitech.co.uk)

Produced in the U.S. of U.S. and non-U.S. components. Features and specifications are subject to change without notice.

**Trademarks and Registered Trademarks:** Multi-Tech and the Multi-Tech logo, SocketEthernet IP, Universal IP: Multi-Tech Systems, Inc. All other products and technologies are the trademarks or registered trademarks of their respective holders.

4/13 • 86002109 • © 2013 by Multi-Tech Systems, Inc. All rights reserved.

