EIS-PCB is a printed circuit board, half the size of a business card, powered by 5 Vdc from the product’s main board. It connects the manufacturer’s product to an Ethernet network with a standard RJ45 connector. The OEM product can now become a node on an Ethernet network, or the Internet. The iServer is compatible with DHCP servers (dynamic host configuration protocol) and DNS servers (domain name system). This means that the OEM product can take a dynamically assigned IP address from a DHCP server on a LAN or the Internet, and can be identified by name or IP address. This DHCP client capability is a valuable and unique feature of the OMEGA iServer that makes it extremely easy and simple for the manufacturer’s customers to start using their product on almost any Ethernet network.

The OEM or end users can easily assign a static IP address to the product instead of the dynamic IP address, if necessary. The IP address can be assigned locally with its serial connection, as well as remotely over an Ethernet network using Telnet or a Web browser.

The OMEGA iServer is compatible with almost any device with a serial interface such as: time clocks, security alarms, card-key access controllers, telecommunications equipment, vending machines, bar code readers, electric power meters, UPS systems, test and measurement instrumentation, PLCs, serial printers, cash registers, and many more.

Users of these OEM products will be able to type the product’s IP address or unique name in the address line of a Web browser such as Internet Explorer and access the iServer’s configuration pages as well as the serial device attached to the iServer. OMEGA offers custom firmware engineering services for each application to enable the OEM product to serve a Web page with a custom template and actively changing data.

For example, an electric power meter could serve a Web page that displays whatever data is available from the meter such as current kilowatts, accumulated kilowatt hours, peak rate, or any other information.

A burglar alarm could serve a custom Web page that displayed current alarm status, log history, or anything else the alarm is capable of displaying. The OEM product can also be programmed to trigger an email or page to report an alarm or to update the current status.

Alternatively, the iServer can be used to create a virtual tunnel on an Ethernet/internet network simulating a local point-to-point serial connection between a manufacturer’s device and a PC. This replaces dedicated point-to-point wiring limited to 15 m (50’). The OMEGA iServer packages the Serial data in standard TCP/IP packets that can travel anywhere on the Ethernet LAN or over the Internet.

Using the embedded iServer, a manufacturer of time clocks will enable a payroll clerk to download data to a PC anywhere on a LAN or anywhere in the world. A manufacturer of process controllers would enable its customer to use a handheld computer with wireless Ethernet connectivity to log data and change settings on the controller.

OEMs do not need to rewrite the firmware for their serial devices to work with the iServer, and in some cases might not need to change their application software. The OEMs serial devices will function over the Ethernet network or the Internet as if they were connected directly to a PC. The COM port on the iServer simulates a local COM port on the PC.
Specifications

Serial Interface
Interface: RS-232, RS-422 or RS-485, CMOS or TTL
Connector: Pin header holes [2.5 mm (0.1”) pitch]
Data Rates: 300 to 115.2 Kbps
Characters: 7 or 8 data bits
Parity: odd, even or none
Stop bits: 1 or 2
Flow Control: Hardware (RTS/CTS) and software (Xon/Xoff)
Digital I/Os: 4 digital input/output lines

Network Interface
Interface: Ethernet 10 Base-T
Connector: RJ45
Protocols: TCP/IP, UDP/IP, ARP, ICMP, DHCP, DNS, HTTP, Telnet and MODBUS/TCP
Indicators (LED): Network activity and serial transmit/receive

Processor
CPU: Enhanced 8051, 22 MHz
Memory: 512 kbyte flash, 16 kbyte SRAM

Management
Embedded web server, Telnet login, serial login

Embedded Web Server
Uses: Serves dynamic web pages and Java applets (256 kbyte capacity)

Power
Input: 5 Vdc
Consumption: 0.7 W avg/1 W max

Environmental
Operating Temperature: 0 to 70°C (32 to 158°F)
Note: -40 to 85°C (-40 to 185°F)
Storage Temperature: -40 to 125°C (-40 to 257°F)

Agency Approvals
FCC-B, CE, C/UL
Software: Firmware upgradeable. Compatible with Windows 9x/ME/NT/2000/XP software and related utilities

To Order (Specify Model Number)

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Description</th>
<th>Price</th>
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</thead>
<tbody>
<tr>
<td>EIS-PCB</td>
<td>Embedded MicroServer™ with RS-232/RS-485 serial interface</td>
<td>*</td>
</tr>
<tr>
<td>EIS-PCB-TTL</td>
<td>Embedded MicroServer™ with TTL serial interface</td>
<td>*</td>
</tr>
<tr>
<td>EIS-PCB-ET</td>
<td>Embedded MicroServer™ with RS-232/RS-485 serial interface and extended temperature range</td>
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* Consult Omega OEM team for application assistance and quantity pricing (sales@omega.com or 1-800-TC-OMEGA)
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