

# iServer Embedded MicroServer™

# EIS-PCB

- Embedded solution for Serial-to-Ethernet communications
- Connects any serial device with RS-232, RS-485, or RS-422 to an Ethernet network and the Internet
- Replaces dedicated wiring and PC's for serial connections
- Small enough to fit into almost any size device
- Well-developed TCP/IP Stack
- Web based interface for easy configuration and access without any special software
- Configuration option via Telnet and Serial
- Supports TCP, UDP, ARP, Telnet, DHCP, DNS, HTTP, and MODBUS protocols
- Includes a Windows based COM port redirection software to redirect data destined for a serial COM port to the Ethernet port on a PC
- Includes a Windows based utility to access and configure the iServer over the network
- Digital input/output lines
- Password protection for Security
- Firmware upgradeable
- Custom firmware and private labeling for OEM's
- A plug-and-play evaluation unit is available

The award-winning NEWPORT® iServer is the simplest, easiest, most economical way for Original Equipment Manufacturers to network enable their products. Any device with Serial Communications capability (RS-232, 422, 485, or TTL) can now connect to an Ethernet network and the Internet.

The smallest World Wide Web Server, the NEWPORT iServer-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 and absolutely no need to write a single line of code.

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 NEWPORT iServer that makes it extremely easy and simple for the manufacturer's customers to start using their product on an Ethernet network.

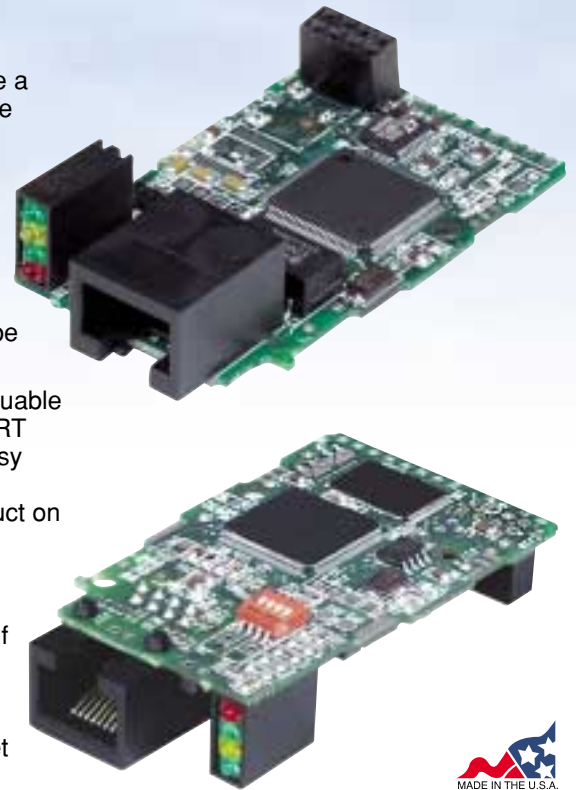
The OEM or end users can easily assign a static IP address to the product instead of a dynamic one, if necessary. The IP address can be assigned locally through its serial connection, as well as remotely over an Ethernet network via Telnet or a Web browser, using its factory default IP address.

The NEWPORT 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 & measurement instrumentation, PLC's, 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. NEWPORT 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 displays 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 50 feet on an RS-232 connection. The NEWPORT 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.

OEM's 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 OEM's 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.

NEWPORT iServer products are designed and manufactured in Santa Ana, California.

# Embedded MicroServer™

## Specifications

### Serial Interface

**Interface:** RS-232, RS-485, RS-422, CMOS, or TTL

**Connector:** Pin header holes (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/O's:** 4 digital input/output lines

### Network Interface

**Interface:** Ethernet 10Base-T

**Connector:** RJ45

**Protocols:** TCP/IP, UDP/IP, ARP, ICMP, DHCP, DNS, HTTP, Telnet, and MODBUS/TCP

### Indicators (LED's)

Network Activity, and Serial Transmit/Receive

### Processor

**CPU:** Enhanced 8051, 22 MHz

**Memory:** 512Kbyte Flash, 16Kbyte SRAM

### Management

Embedded Web server, Telnet login, Serial login

### Embedded Web Server

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° also available

### Storage Temperature:

-40 to 125°C (-40 to 257°F)

**Weight:** 23 g (0.05 lbs.)

### Board Surface area:

approximately 3 sq. inches.

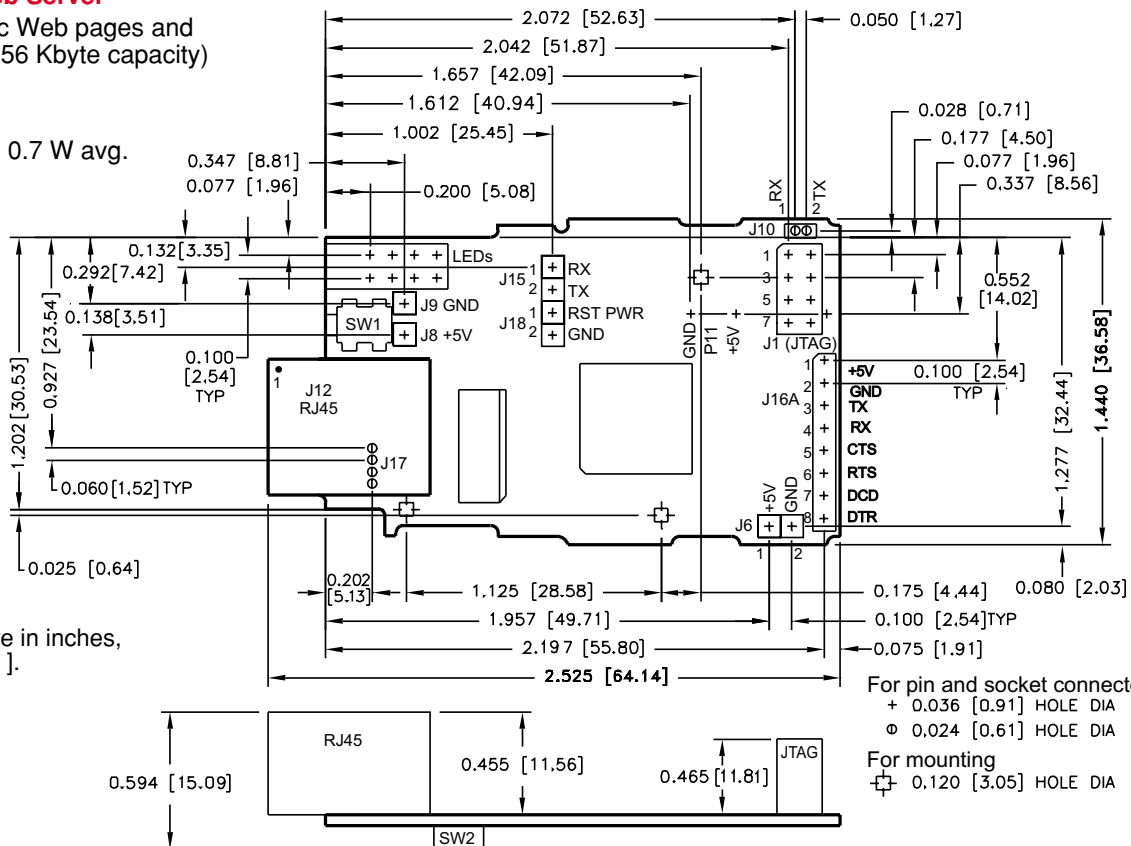
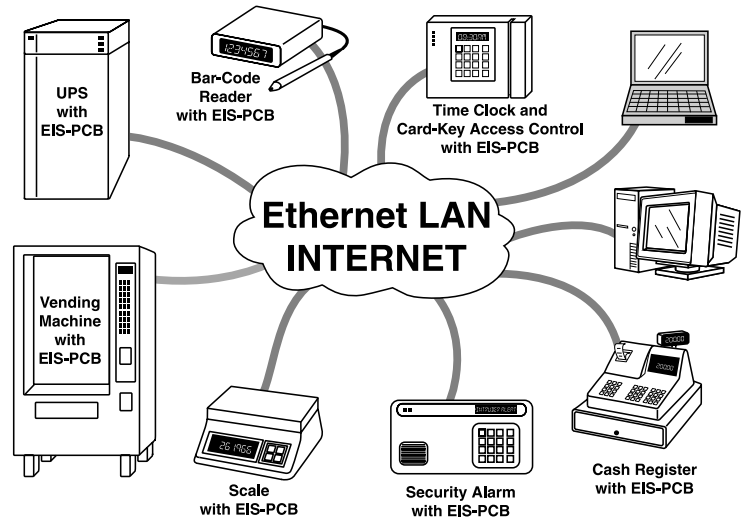
## Software

Firmware upgradeable (for iServer firmware upgrade package (**EIS-FW-CA** and **EIS-FW-CD**) contact [NEWPORT\\_oem@newportUS.com](mailto:NEWPORT_oem@newportUS.com) or 714-540-4914)

COM Port redirector (**iPORT**)

Configuration software utility (**iCONNECT**)

Compatible with Windows 9x / ME / NT / 2000 / XP software and related utilities



Model No.	Description	Price
EIS-PCB	Embedded MicroServer™ with RS-232/RS-485 Serial Interface	*
EIS-PCB-TTL	Embedded MicroServer™ with TTL Serial Interface	*
EIS-PCB-ET	Embedded MicroServer™ with RS-232/RS-485 Serial Interface with Extended Operating Temperature	*

\*Consult NEWPORT OEM team for application assistance and quantity pricing.

[oem@newportUS.com](mailto:oem@newportUS.com) - 714-540-4914