

PICO SERV

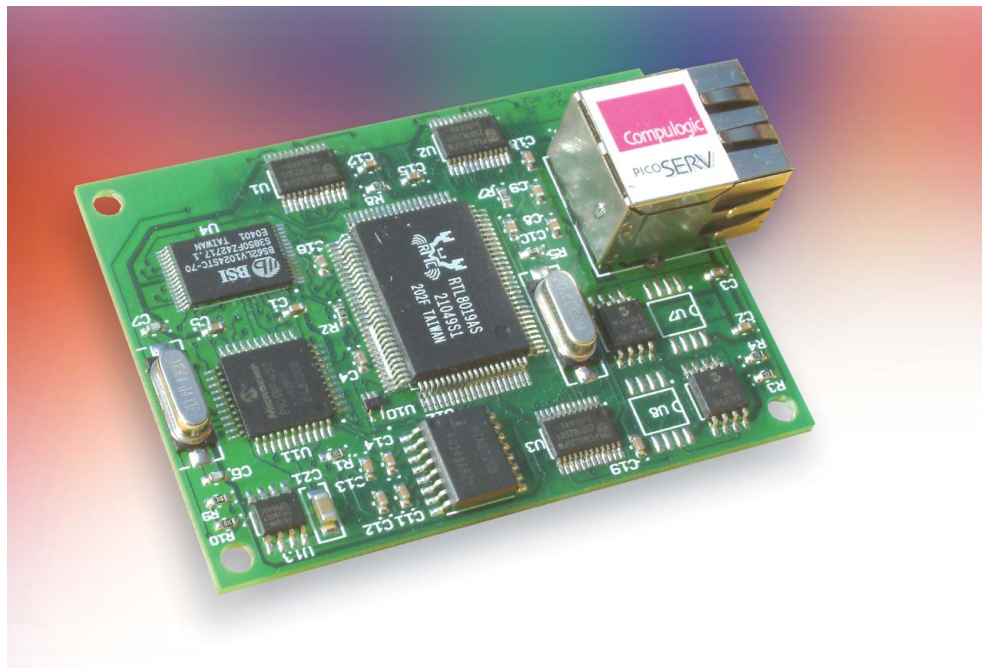
PicoServ HDI Integrated Miniature Web Server with 48 programmable I/O ports

A low cost, low power web server module featuring an integrated Ethernet interface, 48 programmable digital I/O ports, an RS232 serial interface and EEPROM file system.

The PicoServ HDI miniature web server module is an 'Internet engine' designed to be able to provide a web browser based interface over a LAN or the internet in a small space, at low power, at low cost and with minimal design effort.

The PicoServ HDI supports dynamic web pages enabling reading and writing of the I/O port values from a standard web browser.

Dynamic web pages are supported using an innovative and simple to use method which allows the real-world input and output port values to be displayed or changed using only simple HTML techniques. The EEPROM file storage area can support almost any type of file including HTML, GIF, JPEG, and JAVA, and means that only standard web authoring techniques are required to provide an eloquent and professional browser based interface for almost any system.



Digital I/O Ports

PicoServ HDI provides 48 on-board Digital I/O ports, programmable as inputs or outputs. The TTL level ports have a 50mA sink/source drive capability per output and a maximum drive of 600mA per module.

The digital I/O ports may be read, set or configured using either the built-in web server or alternatively via a simple UDP interface.

RS232 Serial Port

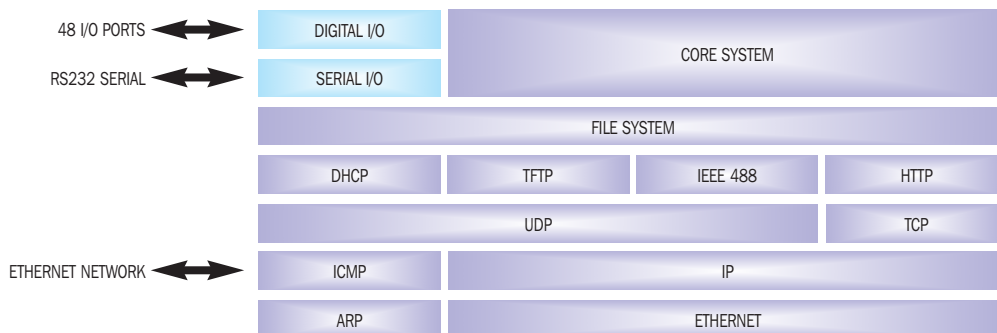
A general purpose full duplex asynchronous RS232 serial port allows communication with an off-board RS232 device. Web browser or UDP/SCPI commands can be used to send data to and read data from the serial port.

IEE 488.2 / SCPI Interface

In addition to the internal web server the PicoServ HDI module implements an IEE 488.2 / SCPI over IP/UDP protocol for reading and setting the digital I/O ports and other system parameters from applications other than a web browser. The IEE 488 / SCPI command structure makes integration of the PicoServ HDI into test and measurement environments particularly straight forward.



PicoServ HDI Functions



Specifications

Interfaces

Ethernet 10baseT, RJ45 Connector

RS232 Serial

Format 8 Data Bits, no parity

Baud Rates 2400 to 102400 bps

Protocols

Ethernet IEEE 802.2

IP Internet Protocol, RFC 791

TCP Transmission Control Protocol, RFC 793. 16 simultaneous TCP connections supported.

DHCP Dynamic Host Configuration Protocol, RFC 2131. Supports DHCP client to enable automatic assignment of IP address on networks where a DHCP server is available.

ICMP Internet Control Message Protocol, RFC 792

HTTP Hypertext Transport Protocol, RFC 2616. Version HTTP/1.1.

UDP User Datagram Protocol, RFC 768.

TFTP Trivial File Transfer Protocol, RFC 783. Used for uploading web pages, files and system firmware updates.

ARP Address Resolution Protocol, RFC 826

IEEE488.2/SCPI UDP application protocol for I/O port control.

Digital I/O Ports

Number 48

Configuration Individually configurable as inputs or outputs.

Output Level TTL

Output Drive +/- 50mA per output, max 200mA per 16 port group.

Input Level TTL

IP Address Allocation

Static Programmable

Dynamic Using DHCP protocol

HTTP Port Programmable

SCPI UDP Port Programmable

File System

User File Capacity 260,096 Bytes

Max File Size 61,440 bytes

Max HTML File Size 59,322 bytes

Max Number of Files 64

Max Filename Length 25 characters inc. extension

Up-loadable Via TFTP or PicoRom

Electrical

Power Requirements 5.0 VDC +/- 10%, 50mA

Power Consumption 250mW

Environmental

Operating Temperature 0 - +70°C

Storage Temperature -40 - +95°C

Humidity 0-95% non-condensing

Dimensions

70mm x 50mm x 22mm

I/O Connector

2 x 32 pin .1" x .1" 2 row socket.

Compulogic

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