



II-EVB-PIC-2128™

Serial-to-Ethernet LAN Device Server

General Description:

Connect One's II-EVB-PIC-2128 evaluation board is based on Connect One's iChip™ CO2128 Secure IP controller and Microchip's PIC24FJ64GA006 host CPU.

II-EVB-PIC-2128 provides networking capabilities via the iChip CO2128, which streams data over TCP or UDP sockets (up to 10 simultaneous active sockets are available), and manages two listening sockets. A secure socket (SSL3/TLS1) is fully supported.

Additional features include the ability to send and receive email messages with or without attachments, a built-in web server with two internal websites: one for remote control and management of the evaluation board, and the other for the host device; HTTP, FTP, and TELNET clients.

The reference design is intended for designers of open and flexible internet-enabled applications.

Features and benefits:

- Dual core, secure Internet architecture
- Flexible development environment based on the established PIC host architecture
- Flexible, low cost, PHY-independent design
- Evaluation board can be used for application development targeting LAN, cellular, or WiFi applications

The Internet engine inside the evaluation board is Connect One's remotely updateable iChip CO2128 Secure IP Controller.

Connect One's AT+i™ protocol eliminates the need for any protocol porting or development on the host, and provides all Internet networking and security functionality in a simple-to-use protocol.

Software Support:

A set of software drivers and high-level API functions is available on a CD provided with the evaluation board. These API functions enable the PIC host CPU to communicate with the iChip CO2128.

To develop applications based on the PIC Host Driver API functions, the following environment needs to be installed on your PC:

- MPLAB IDE 8.0 or higher
- MPLAB C30 'C' compiler
- MPLAB ICD 2 debugger/programmer

Internet Protocols:

ARP, ICMP, IP, UDP, TCP, DHCP, DNS, NTP, SMTP, POP3, MIME, HTTP, FTP and TELNET

Security Protocols:

SSL3/TLS1, HTTPS, FTPS, RSA, 3DES, AES-128/256, RC-4, SHA-1 and MD-5

Protocols Accelerated in HW:

AES, 3DES and SHA

Hardware Description:

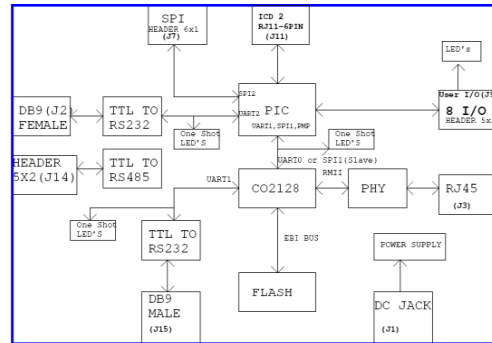
The II-EVB-PIC-2128 package includes the following items:

- II-EVB-PIC-2128 motherboard
- RS232 male/female cable
- RJ45 Cat 5 100BaseT cable
- 110V or 220V power supply adapter
- Resource CD

Configuration:

The iChip firmware can be easily configured via the web or via Connect One's iChipConfig utility. This Windows-based utility enables quick configuration of the iChip CO2128 via a local serial connection. The iChipConfig utility also enables packaging of the application's website.

The PIC firmware can be compiled by the C30 compiler and programmed by the ICD 2 debugger available from Microchip. For more details, visit the Microchip website at www.microchip.com.



II-EVB-PIC-2128 Block Diagram

Typical Applications:

- Connecting an RS-485 Modbus network to the Internet.
- Connecting several sensors to the Internet.

Ordering Information:

II-EVB-PIC-2128-110: Evaluation board with 110V power supply adapter.

II-EVB-PIC-2128-220: Evaluation board with 220V power supply adapter.

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