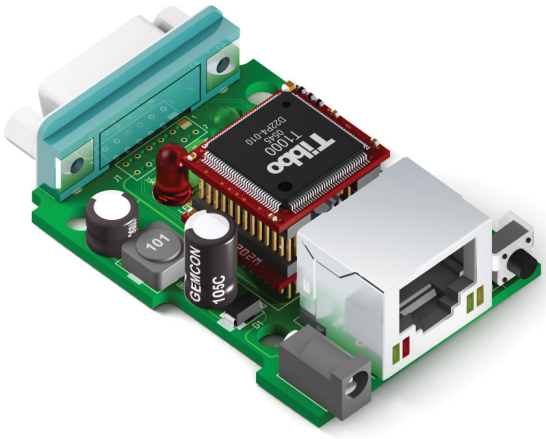
EM1202-EV BASIC-programmable Ethernet Board

Tibbo TECHNOLOGY

Features

- 10/100BaseT Ethernet port
- Compact (52.6x38.0mm)
- Up to 3.5 serial channels
- Based on the EM1202
- RS232 and TTL serial versions
- Free serial-over-IP Tibbo BASIC application available



About

The EM1202EV is a BASIC-programmable board designed primarily for serial-over-IP and serial control applications.

Being small enough to fit inside your product, the board offers a rapid development alternative to using modules, which require making new host PCB. The EM1202EV can also be used to evaluate and test the EM1202 module it is based on.

The unique feature of the EM1202EV is its multi-channel serial port. The board has a single serial port connector and is priced as a single-port product, yet it packs four independent serial channels. Have no use for those DSR and DTR lines? Turn them into RX and TX of an additional serial channel. Don't want CTS and RTS either? That's one more channel! In total, there are 15 different configurations to choose from.

The board is supplied in three versions offering various serial port and power options. It comes preloaded with a fully functional serial-over-IP application.

Specifications

- Three options: EM1202EV-RS, EM1202EV-TM, and EM1202EV-TS.
- Based on the EM1202 BASIC-programmable module.
- 10/100BaseT, auto-MDIX Ethernet port.
- 1024KB flash memory for firmware, application, and data.
- 2KB EEPROM for data storage.
- Up to six LEDs:
- EM12-2EV-RS: Green and red status LEDs on top of the device;
- Green and red status LEDs on the RJ45 jack;
- Link and speed Ethernet status LEDs on the RJ45 jack.
- Up to 3.5 serial channels:
  - EM1202EV-RS: RS232 port (DB9M connector);
  - EM1202EV-TM and "-TS": TTL serial port, 12-pin PCB connector.
  - Baudrates of up to 921,600bps;
  - None/even/odd/mark/space parity modes;
  - 7/8 bits/character modes;
  - Optional flow control;

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Specifications (continued)

- Up to 3.5 serial channels (continued):
  - Flexible mapping with 15 different options, such as:
    - A single channel: RX, TX, CTS, RTS, DSR, and DTR lines;
    - 3.5 channels: RX, TX, RX2, TX2, RX3, TX3, and RX4 lines.
- Software-controlled onboard PLL to select the clock frequency.
- Power:
  - EM1202EV-RS, "-TM": onboard regulator, 10-24V (12V nominal);
  - EM1202EV-TS: direct 3.3V input (must be regulated to +/- 5%).
- Board dimensions: 52.6x38mm.
- Firmware is upgradeable through the serial port or network.

Options

Available models and their features	EM1202EV-RS (RS232)	EM1202EV-TM (TTL master)	EM1202EV-TS (TTL slave)
Setup button	YES		
Status LEDs	YES	NO	
RS232 Transceiver and DB9M connector	YES	NO	
TTL interface connector	NO	YES	
Power jack and 12V-to-3.3V regulator	YES		NO

Programming

Platform Objects

- Sock — socket comms (up to 16 UDP, TCP, and HTTP sessions).
- Net — controls Ethernet port.
- Ser — up to 4 serial channels (UART, Wiegand, and clock/data modes).
- IO — handles I/O lines, ports, and interrupts.
- Fd — manages flash memory file system and direct sector access.
- Stor — provides access to the EEPROM
- Romfile — facilitates access to resource files (fixed data).
- Pat — "plays" patterns on up to five LED pairs.
- Button — monitors MD line (setup button).
- Sys — in charge of general device functionality.

Function Groups
String functions (27 in total!), date/time conversion functions (8), encryption/hash calculation functions (AES128,RC4, MD5, SHA-1), and more.

Variable Types
Byte, char, integer (word), short, dword, long, real, string, plus user-defined arrays and structures.

PC Software
This product is provided with a free, complete IDE.
For more information, see http://basic.tibbo.com/product/tide.html

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