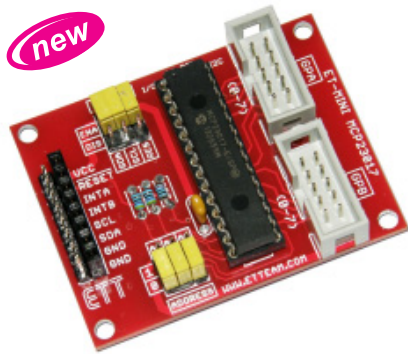


ET-MINI I/O BOARD SET

ET-MINI MCP23017 (P-ET-A-00501)



This Board expands amount of PORT I/O for MCU, it is 16 BIT I/O and it can be connected with MCU that uses 1.8V-5.5V.

- Use IC 28 PIN DIP No. MCP23017 from MICROCHIP Divide I/O PORT 16 BIT into 8BIT 2 PORT for I2C INTERFACE
- Can SET 8 ADDRESS for MCP23017 in the same BUS



- Use CLOCK for I2C INTERFACE at 100KHz, 400KHz, 1.7MHz; use Power Supply in the range of 1.8V-5.5V; and can connect with MCU 3.3V
- Can set any occurrence of INTERRUPT from PORT
- Signal on the side of LOGIC uses Connector PIN HEADER 1x8 MALE and 1x8 FEMALE
- Has 2 of I/O PORT IDE 10 PIN HEADER BLOCK
- ET-MINI MCP23017 includes...

1. Board ET-MINI MCP23017
2. CD-ROM User's Manual and Example Program



ET-MINI POWER RELAY

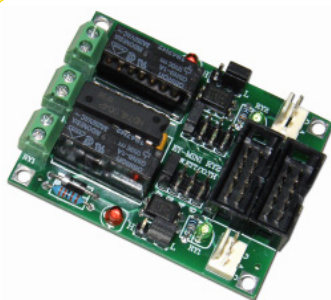
(P-ET-A-00503)



This POWER RELAY 1 OUTPUT has NO RELAY Contact with the maximum Current of 30A/240VAC, 30A/30VDC, and DC COIL RELAY 12VDC; it can be connected with Board 3.3V or 5V.

- Use Power Supply in the part of TTL 3.3 – 5VDC, Power Supply for RELAY 12VDC/100mA
- Control the operation of RELAY by LOGIC TTL 3.3 – 5VDC
- Command the operation of RELAY to run at LOGIC " 0 " or LOGIC " 1 " by SET JUMPER
- Has 2 types of connection for Connector OUTPUT of NO RELAY and customer and choose the preferable one. Firstly, it connects through TERMINAL BLOCK 2 PIN BARRIER STYLE (11.1 mm.); and secondly, it directly connects through RELAY by using Ring Terminal/ Forked Spade Terminal (16-14 AWG)
- PCB size is 4.3 x 5.6 cm. (3.2 cm. in height)

ET-MINI RELAY2 (P-ET-A-00360)



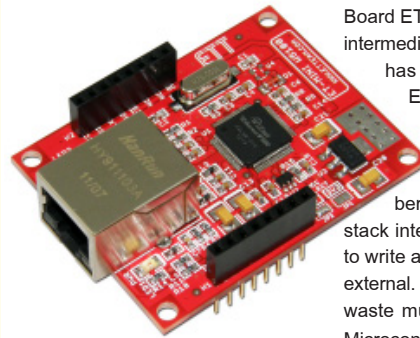
It is MINI Board version from ETT that uses 2 mini LOW POWER RELAY Circuits on board.

- Use 2 mini RELAY 12VDC, 1 CONTACT, 3A/250VDC
- Connect INPUT TTL to be 2 I/O 10 PIN ET Connectors, be able to select Bit by Jumper and 2 sets of 3 PIN INPUT Connector (WAFER 3 PIN 2.54 mm.)

- 2 Output RELAY Contact that are 2 PIN TERMINAL type
- 5VDC Power Supply and 12 VDC Power Supply for Coil RELAY



ET-MINI W5100 (P-ET-A-00478)



Board ET-MINI W5100 is designed to be intermediate between Microcontroller that has no any PORT Ethernet and Ethernet Network. This board uses Chip Ethernet Controller No.W5100 from WIZnet. The strong point of this Chip number is to have Hardwired TCP/IP stack internal Chip; so, it is unnecessary to write any Software TCP/IP Stack from external. It is easier to use and it does not waste much resource of the connected Microcontroller.



- It interfaces with Board in the format of SPI BUS; it can be connected with Board Controllers. In the picture, it connects with Board ET-BASE AVR EASY328.

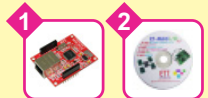
Specifications of ET-MINI W5100

- Use Chip No.W5100(80 PIN LQFP TYPE) from WIZnet to be IC Ethernet Controller that has Hardwired TCP/IP internal Chip
- Support the connection of TCP/IP Protocols TCP, UDP, ICMP, IPv4 ARP, IGMP, PPPoE, Ethernet
- Support the connection of 10BaseT/100BaseTX
- Use SPI BUS to interface with board, so it can be connected with Board Controllers
- Be compatible with both 3.3V and 5V Power Supply; it can choose the Power Supply level by set JUMPER.

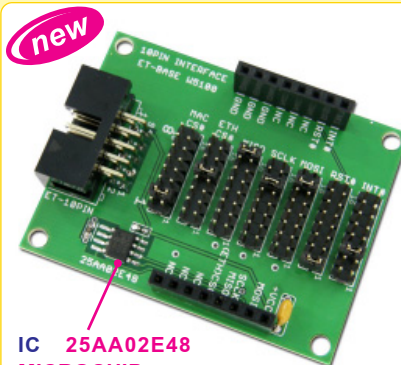
- Can be used with Board ET-BASE AVR EASY88/168/328 directly

- PCB SIZE: 4.6 x 5.6 cm
- ET-MINI W5100 consists of ...

1. Board ET-MINI W5100
2. CD-ROM User's Manual and Example Program



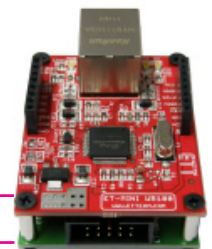
ET-BASE W5100 (P-ET-A-00492)



Board ET-BASE W5100 is an intermediate between Board ET-MINI W5100 and Board Microcontrollers from ETT that use the standard 10PIN Connector of ETT.

IC 25AA02E48 MICROCHIP

EXAMPLE : ET-MINI W5100 CONNECT ET-BASE W5100



Specifications of Board ET-BASE W5100

- Design to interface with Board ET-MINI W5100 in order to connect with Connector 10PIN of ETT
- Has 8 JUMPERS, it can choose to connect with 8 PIN of Connector 10PIN independently. It can choose any PIN to interface with any PIN of board independently.
- Provide IC 25AA02E48 of MICROCHIPS on Board, it is 256 BYTE IC SPI SERIAL EEPROM; include UNIQUE numeric code to be code reference of MAC ADDRESS for TCP/IP, it can be used either for EUI-48 (standard of IPV4) and EUI-64 (standard of IPV6)
- Has 2 of Connector 8PIN FEMALE to interface with ET-MINI W5100
- Has Connector 10PIN ETT to interface with ETT Boards
- Board size: 4.4 x 5.6 mm.
- Use Power Supply from Connector 10PIN that can be either to be 3.3V or 5V (it has to set Jumper on Board ET-MINI W5100 to choose the correct power supply for board).

ET-BASE W5100 10PIN consists of...

1. Board ET-BASE W5100 10PIN
2. CD-ROM Manual and Example

