

## Highlight Information

- Two Ethernet Ports for Daisy-Chain Topology
- LAN Bypass Feature
- Supports Modbus TCP
- LED Indicators for Fault Detection
- Auto Configuration
- 4/8 I/O Slots for I-87K Modules
- Operating Temperature: -25 ~ +75 °C



## Introduction

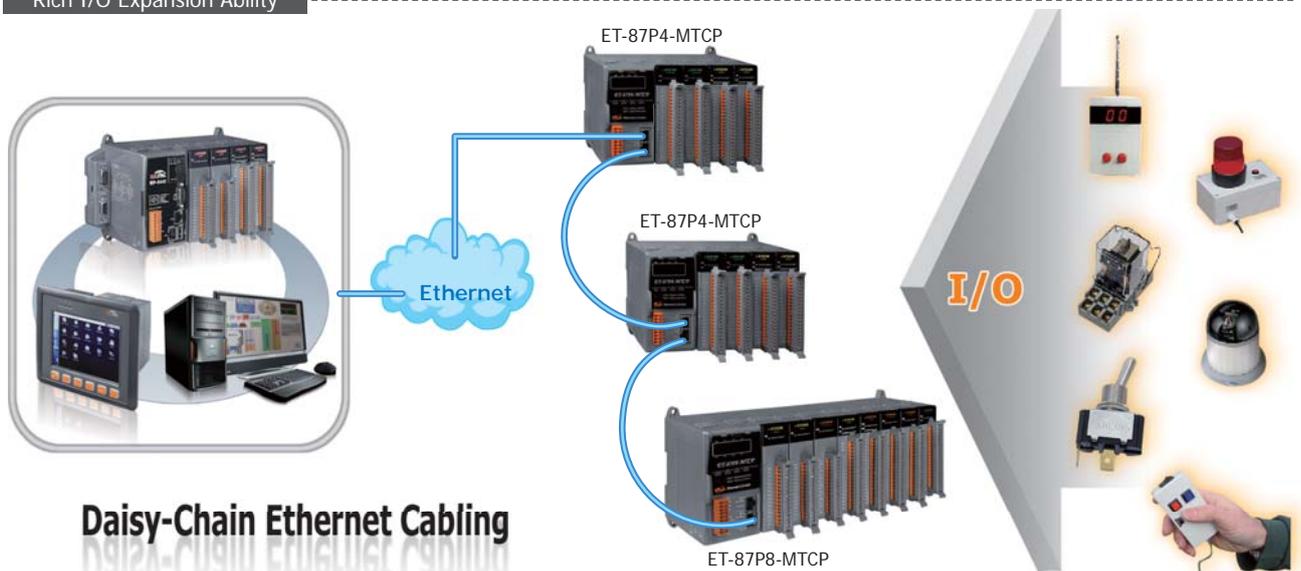
ET-87Pn-MTCP series is a Modbus TCP I/O expansion unit to expand I-87K series I/O modules over the Ethernet for industrial monitoring and controlling applications. It offers two Ethernet switch ports for daisy-chain topology. The daisy-chain feature allows ET-87Pn to connect in series to each other or other Ethernet devices. Users can easily simplify the cabling and save installation space with the feature.

It is designed to be used in harsh and noisy environment, so the hardware is manufactured with wide power input range (10 ~ 30 V<sub>DC</sub>), isolated power input and can operate under wide temperature (-25 ~ +75 °C). There are more than 50 I/O modules supported with the unit, including analog input/output, digital input/output, DI counter modules. To simplify installation and maintenance of I/O modules, it provides many useful features, such as: auto configuration, LED indicators for fault detection, dual watchdog to keep alive, programmable power on and safe values for safety.

Modbus is a very wide known protocol in the industrial manufacturing and environment monitoring fields. Many SCADA software, HMI and PLC has builtin driver to support Modbus devices. Besides, we also provide SDK on different platforms, such as Windows XP, Window CE 5.0/6.0, Linux, MiniOS7. Therefore, it is very easy to integrate remote I/O to customer's applications.

## Applications

Rich I/O Expansion Ability



**Daisy-Chain Ethernet Cabling**

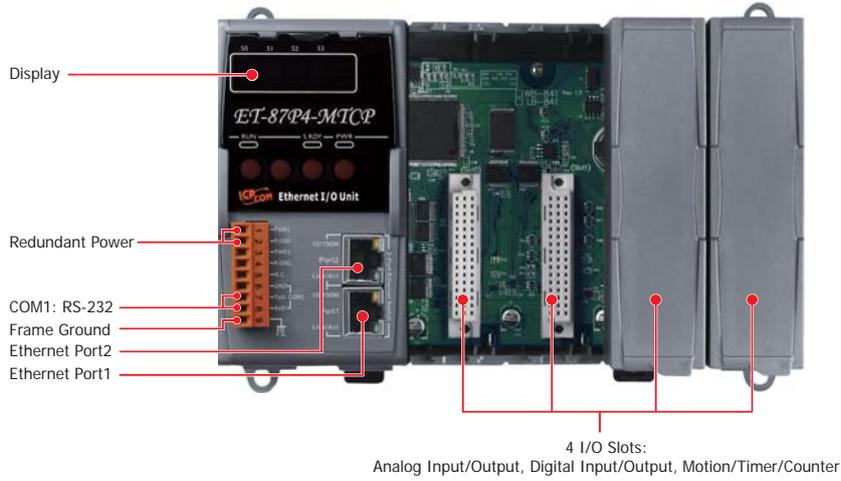
ET-87P4-MTCP/ET-87P8-MTCP

## Specifications

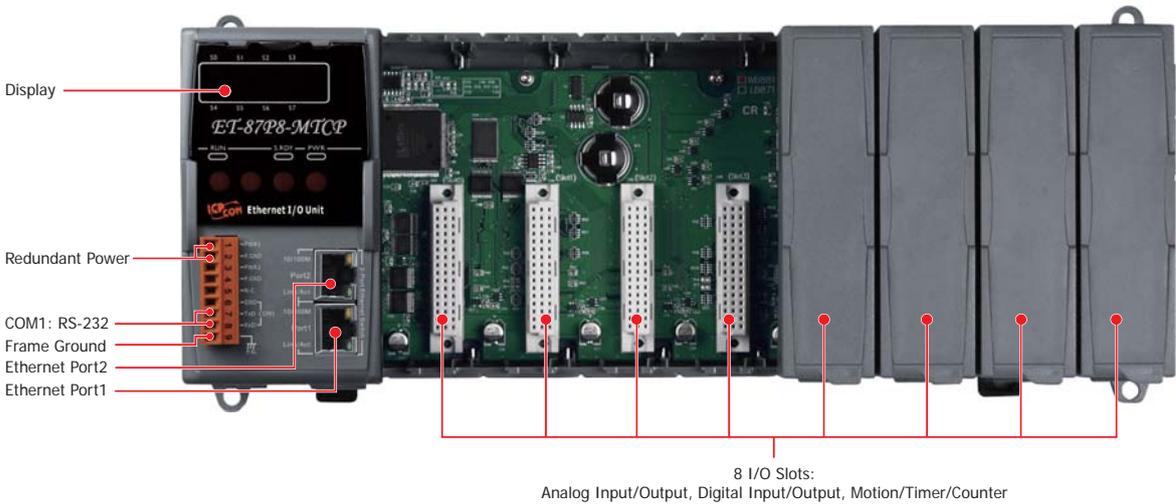
Models	ET-87P4-MTCP	ET-87P8-MTCP
Interface Type: Ethernet		
Port	RJ-45 × 2 10/100Base-TX (Auto-negotiating, Auto MDI/MDI-X, LED indicators)	
Cabling	Daisy-Chain Ethernet Cabling	
Isolation	1500 V <sub>DC</sub>	
ESD Protection	+/- 4 K Contact Discharge and +/- 8 K Air Discharge	
Communication Protocol	Modbus TCP, Modbus RTU/ASCII	
LED Display/Indicators		
Power	Yes	
System Ready	Yes	
Module Offline	Yes	
Watchdog Timer	Yes	
IP Address	Yes (with push buttons to configure IP address)	
I/O Expansion Slots		
Hot Swap	Yes	
Auto Configuration	Yes	
Support Module Type	High profile I-87K module only	
Slots Numbers	4	8
Mechanical		
Dimensions (W x H x D)	188 mm x 132 mm x 111 mm	312 mm x 132 mm x 111 mm
Environmental		
Operating Temperature	-25 ~ +75 °C	
Storage Temperature	-30 ~ +80 °C	
Ambient Relative Humidity	10 ~ 90% RH (non-condensing)	
Power		
Input Range	+10 ~ +30 V <sub>DC</sub>	
Redundant Input	Yes	
Reverse Polarity Protection	Yes	
Isolation	1000 V <sub>DC</sub>	
Frame Ground	Yes	
Consumption	6 W	
Output Capacity	5 W supply to CPU and Backplane 25 W supply to I/O expansion slots Total: 30 W	

## Appearance

ET-87P4-MTCP

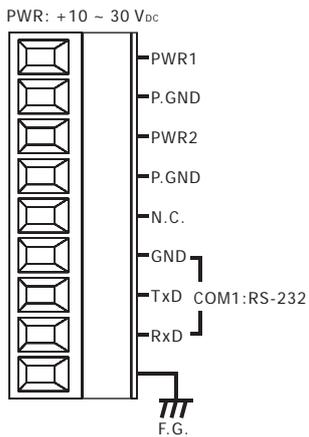


ET-87P8-MTCP



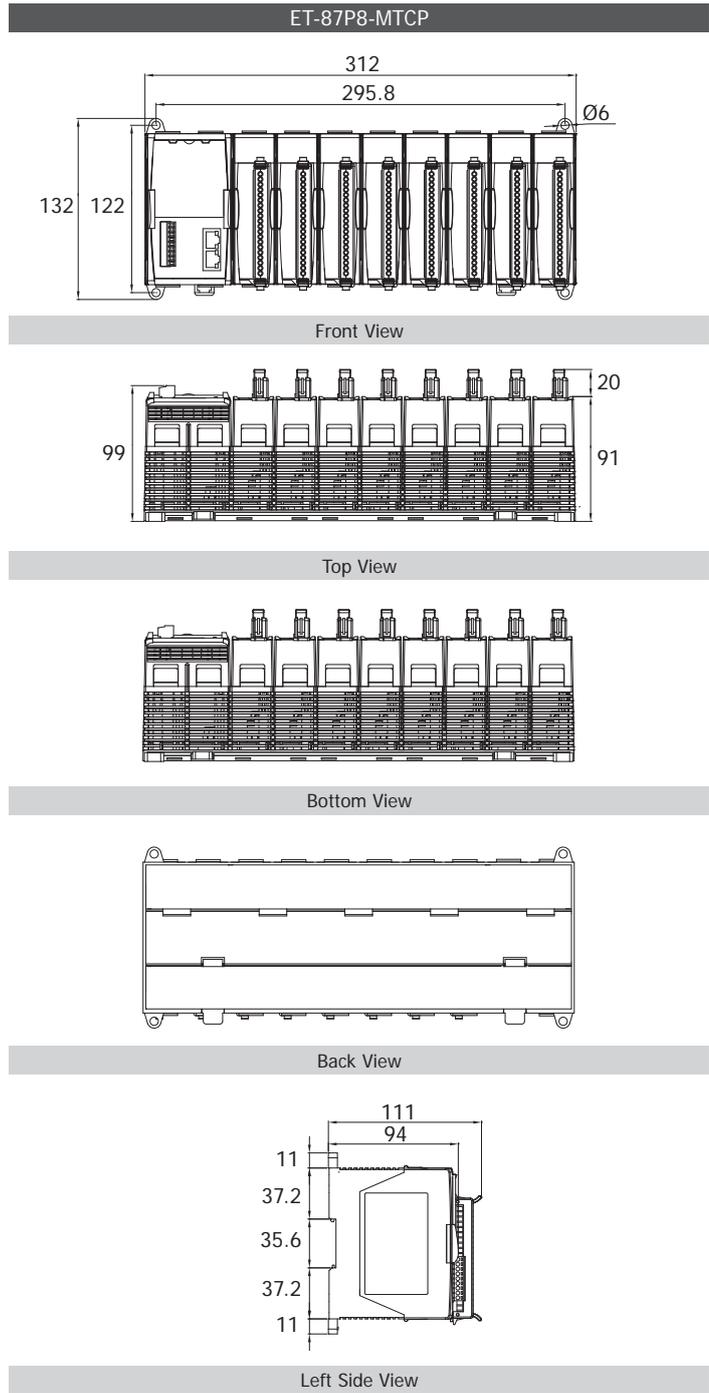
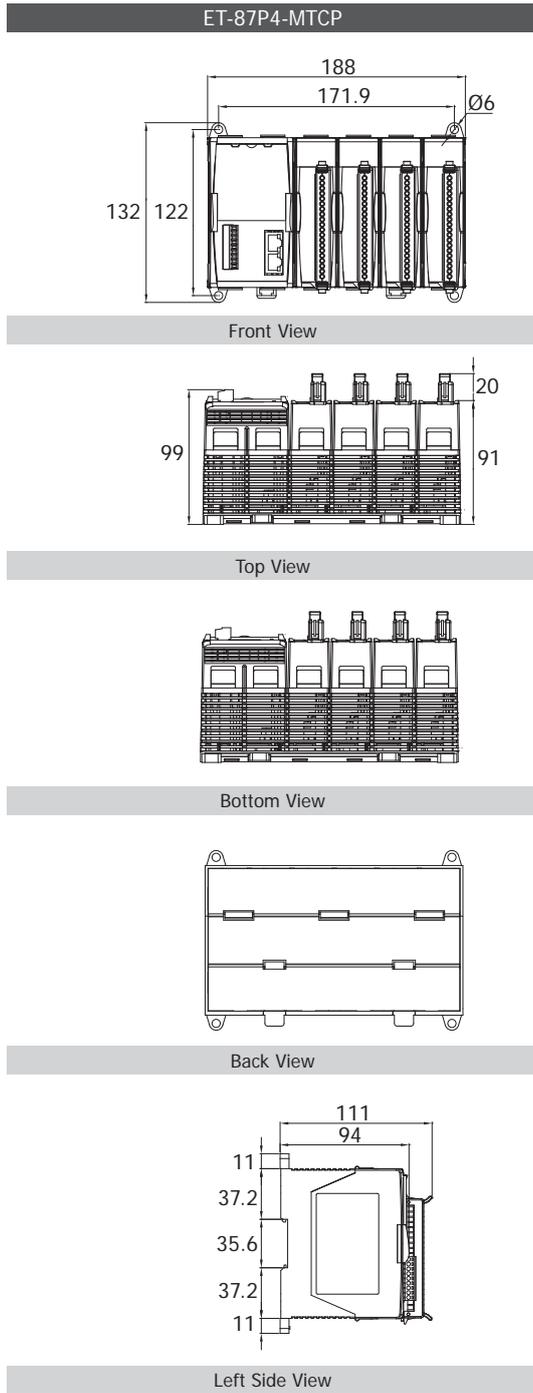
## Pin Assignments

ET-87P4-MTCP/ET-87P8-MTCP Terminal Block



ET-87P4-MTCP/ET-87P8-MTCP

## Dimensions (Unit: mm)



## Ordering Information

ET-87P4-MTCP CR	4 slots I/O Expansion Unit
ET-87P8-MTCP CR	8 slots I/O Expansion Unit

## Accessories

DP-660	24 V <sub>DC</sub> /2.5 A, 60 W and 5 V <sub>DC</sub> /0.5 A, 2.5 W Power Supply with DIN-Rail Mounting
DP-665	24 V <sub>DC</sub> /2.7 A, 65 W Power Supply with DIN-Rail Mounting
DP-1200	24 V <sub>DC</sub> /5.0 A, 120 W Power Supply with DIN-Rail Mounting
MDR-20-24	24 V <sub>DC</sub> /1.0 A, 24 W Power Supply with DIN-Rail Mounting
I-7560 CR	USB to RS-232 Converter (RoHS)