iP-8441-MTCP/iP-8841-MTCP

4/8-slot Modbus TCP I/O Expansion Unit
(Modbus TCP Protocol)

Features

- 2 independent Ethernet ports
- Supports Modbus TCP
- Supports Modbus RTU/ASCII
- Supports Modbus TCP to RTU Gateway
- Auto Configuration
- 4/8 I/O Slots for I-8K and I-87K Series Modules
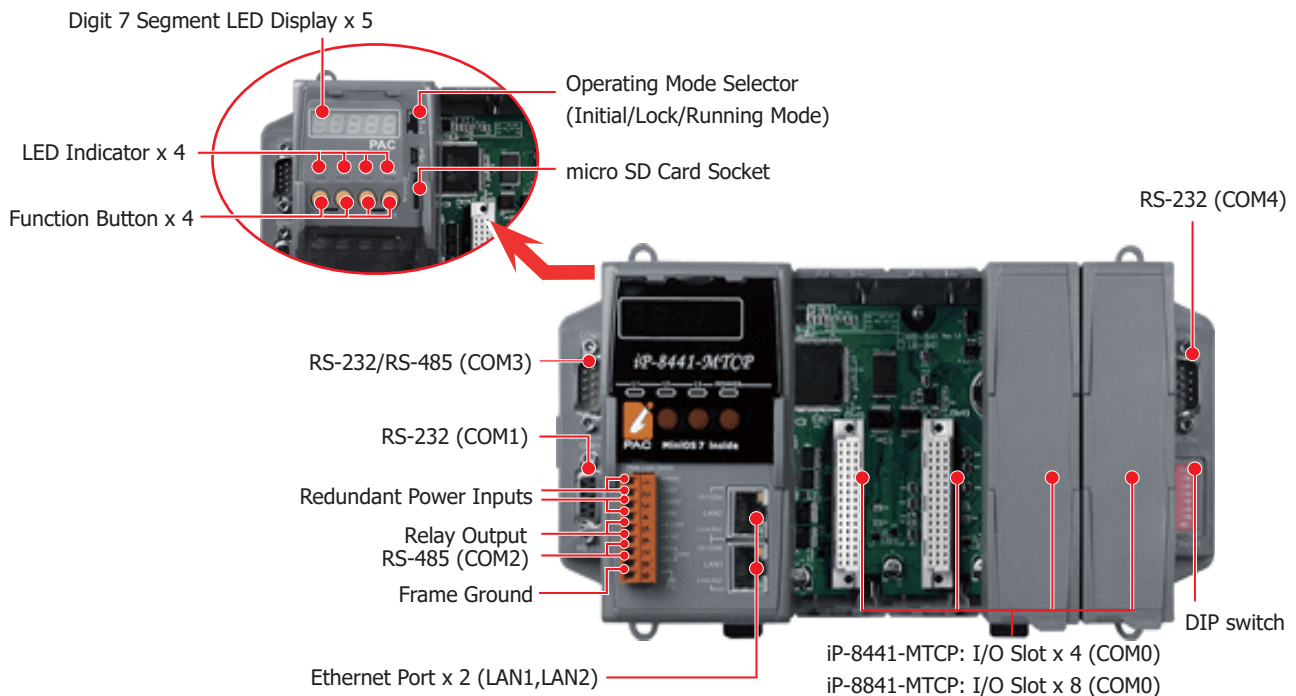- Operating Temperature: -25 ~ +75 °C

Introduction

iP-8441-MTCP/iP-8841-MTCP is a Modbus TCP I/O expansion unit to expand I-8K and I-87K series I/O modules over the Ethernet for industrial monitoring and controlling applications. There are more than 50 I/O modules supported with the unit, including analog input/output, digital input/output, counter, frequency I/O modules. It is designed to be used in harsh and noisy environment, so the hardware is manufactured with wide power input range (10 ~ 30 VDC), isolated power input and can operate under wide temperature (-25 ~ +75 °C). 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.

Furthermore, the iP-8441-MTCP/iP-8841-MTCP is also a c language based programmable controller that equipped a DOS-like OS (MiniOS7). Programmers can use C compilers that can create 16 bit executable file (*.exe) to customize the Modbus firmware which preinstalled in the iP-8441-MTCP/iP-8841-MTCP. The SDK provides rich functions for Modbus communication, such as Modbus TCP master/slave, Modbus RTU master/salve, Modbus ASCII master/slave, etc.
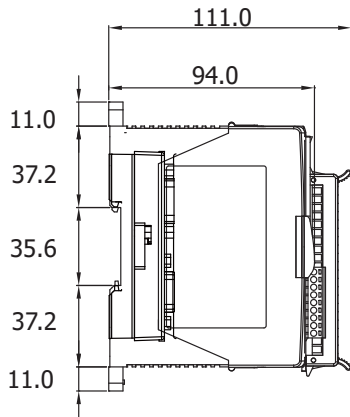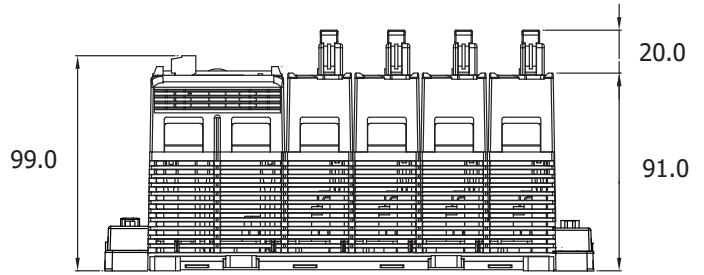
Appearance

Digit 7 Segment LED Display x 5
Operating Mode Selector (Initial/Lock/Running Mode)
LED Indicator x 4
micro SD Card Socket
Function Button x 4
RS-232 (COM4)
RS-232/RS-485 (COM3)
RS-232 (COM1)
Redundant Power Inputs
Relay Output
RS-485 (COM2)
Frame Ground
DIP switch
Ethernet Port x 2 (LAN1,LAN2)
iP-8441-MTCP: I/O Slot x 4 (COM0)
iP-8841-MTCP: I/O Slot x 8 (COM0)

■ Specifications

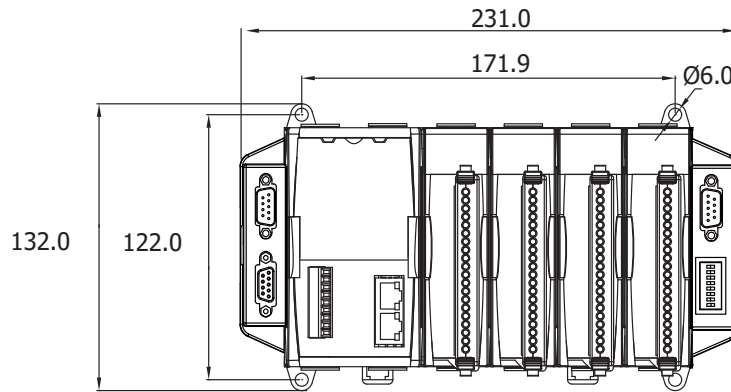| Models	iP-8441-MTCP	iP-8841-MTCP
Software		
OS	MiniOS7	
Development	C Language	
CPU Module		
CPU	80186 or compatible, 16-bit and 80 MHz	
SRAM	768 KB	
Dual battery backup SRAM	512 KB, data valid up to 5 years	
Flash	512 KB	
EEPROM	16 KB	
NVRAM	31 Bytes	
Storage Expansion	4 GB microSD card (up to 32 GB)	
RTC (Real Time Clock)	Provide seconds, minutes, hours, dates, day of week, month, year	
64-bit Hardware Serial Number	Yes	
Watchdog Timer	Yes	
DIP Switch	8-bit for address	
Communicate Ports		
Protocol	Modbus TCP Slave, Modbus RTU/ASCII Slave, Modbus TCP to RTU Gateway	
COM0	Internal communication with the high profile I-87K series modules in slots	
COM1	RS-232 (to update firmware) (RxD, TxD and GND); Non-isolated	
COM2	RS-485 (Data+, Data-) with internal self-tuner ASIC; 3000 VDC isolated	
COM3	RS-232/RS-485 (RS-232: RxD, TxD, CTS, RTS, GND, RS-485: Data+, Data-); Non-isolated	
COM4	RS-232RS-232 (RxD, TxD, CTS, RTS, DSR, DTR, CD, RI and GND); Non-isolated	
SMMI		
7-Segment Display	5	
LED Indicator	1 x Run, 1x Module offline, 1 x WDT, 1 x Power	
Push Button	4	
I/O Expansion		
I/O Type	I-8K, I-87K series	
Slots	4	8
Mechanical		
Dimension (W x L x H, unit: mm)	231 x 132 x 111	355 x 132 x 111
Installation	DIN-Rail, Wall mounting	
Environmental		
Operating Temperature	-25 ~ +75 °C	
Storage Temperature	-30 ~ +80 °C	
Humidity	10 ~ 90 % RH, Non-condensing	
Power		
Input Range	+10 ~ 30 VDC (1 kV Isolated)	
Redundant Power Inputs	Yes	
Power consumption	6.7 W	7.2 W

📁 Dimensions (Units: mm)
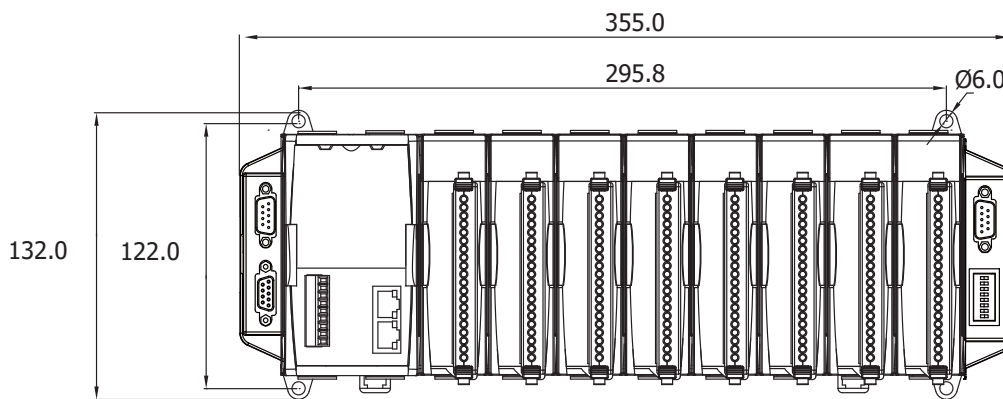
iP-8411-MRTU/iP-8811-MRTU

Left Side View

Bottom View

iP-8411-MRTU

Front View

iP-8811-MRTU

Front View

📁 Ordering Information

iP-8441-MTCP-G CR	4-slot Modbus TCP I/O Expansion Unit (Modbus TCP Protocol) (RoHS)
iP-8841-MTCP-G CR	8-slot Modbus TCP I/O Expansion Unit (Modbus TCP Protocol) (RoHS)