NEW **iP-8441-MTCP**

NEW **iP-8841-MTCP**

☑ Highlight Information

- 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
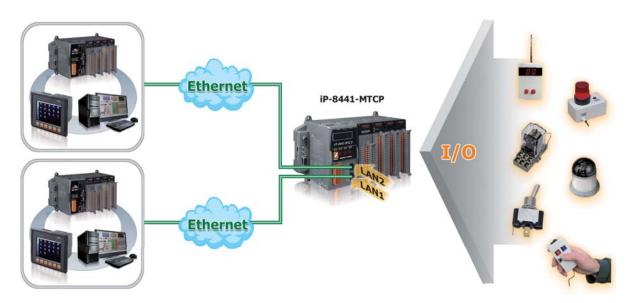- Operating Temperature: -25 ~ +75 °C

☑ Introduction

iP-8000-MTCP series 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 V$_{DC}$), 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 built-in 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.

Further more, the iP-8000-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-8000-MTCP. The SDK provides rich functions for Modbus communication, such as Modbus TCP master/slave, Modbus RTU master/salve, Modbus ASCII master/slave, etc.

☑ Applications

Specifications

Models	iP-8441-MTCP	iP-8841-MTCP
System Software		
OS	MiniOS7 (DOS-like embedded operating system)	
Program Download Interface	RS-232 (COM1) or Ethernet	
Programming Language	C language	
Compilers to create.exe Files	TC++ 1.01 TC 2.01 BC++3.1 ~ 5.2x MSC 6.0 MSVC++ (before version 1.5.2)	
CPU Module		
CPU	80186 or compatible (16-bit and 80 MHz)	
SRAM	768 KB	
Flash	512 KB (100,000 erase/write cycles) with Flash protection switch	
Expansion Flash Memory	microSD socket (can support 1/2 GB microSD)	
Dual Battery Backup SRAM	512 KB; data valid up to 5 years	
EEPROM	16 KB	
NVRAM	31 bytes (battery backup, data valid up to 5 years)	
RTC (Real Time Clock)	Provide second, minute, hour, date, day of week, month, year	
64-bit Hardware Serial Number	Yes, for Software Copy Protection	
Watchdog Timers	Yes (0.8 second)	
NET ID	8-pin DIP switch to assign NET ID as 1 ~ 255	
Communication Ports		
Protocol	Modbus TCP Slave	
	Modbus RTU/ASCII Slave	
	Modbus TCP to RTU Gateway	
Ethernet	RJ-45 x 2, 10/100 Base-TX (Auto negotiating, Auto MDI/MDI-X, LED indicators)	
COM 0	Internal communication with the high profile I-87K series modules in slots	
COM 1	RS-232 (to update firmware) (RxD, TxD and GND); non-isolated	
COM 2	RS-485 (D2+, D2-; self-tuner ASIC inside); 3000 V_{DC} Isolation	
COM 3	RS-232/RS-485 (RxD, TxD, CTS, RTS and GND for RS-232, Data+ and Data- for RS-485); non-isolated	
COM 4	RS-232 (RxD, TxD, CTS, RTS, DSR, DTR, CD, RI and GND); non-isolated	
SMMI		
LED Display	Yes, 5-Digit	
Programmable LED Indicators	3	
Push Buttons	4	
Buzzer	Yes	
I/O Expansion Slots		
Slot Number	4	8
	Note: For High Profile I-8K and I-87K Modules Only	
Data Bus	8/16 bits	
Address Bus Range	2 K for each slot	
Mechanical		
Dimensions (W x L x H)	231 mm x 132 mm x 111 mm	355 mm x 132 mm x 111 mm
Installation	DIN-Rail or Wall Mounting	
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_{DC}	
Isolation	1 kV	
Redundant Power Inputs	Yes, with one power relay (1 A @ 24 V_{DC}) for alarm	
Capacity	30 W	30 W
Consumption	6.7 W	7.2 W

Ordering Information

iP-8411-MTCP	4 slots I/O Expansion Unit with Modbus TCP protocol
iP-8841-MTCP	8 slots I/O Expansion Unit with Modbus TCP protocol

Accessories

DP-660	24 V_{DC}/2.5 A, 60 W and 5 V_{DC}/0.5 A, 2.5 W Power Supply with DIN-Rail Mounting
DP-665	24 V_{DC}/2.7 A, 65 W Power Supply with DIN-Rail Mounting
I-7560 CR	USB to RS-232 Converter (RoHS)
3LMSD-2000 CR	2 GB microSD card (RoHS)