





# μPAC-7186EX(D)-MTCP

Palm-sized Programmable Modbus Gateway with 80186-80 CPU, Modbus Firmware (7-Segment LED Display)

# **■** Features

- Incorporate Serial Devices in an Ethernet Network
- Supports Modbus TCP to RTU Gateway
- Built-in High Performance MiniOS7 from ICP DAS
- Easy-to-use Software Development Tool Kits (Using C language)
- Various Communication Interfaces
  - 10/100 Base-TX Ethernet
  - RS-232/RS-485
- 64-bit Hardware Serial Number
- I/O Expansion Bus Interface
- Build-in Watchdog Timer











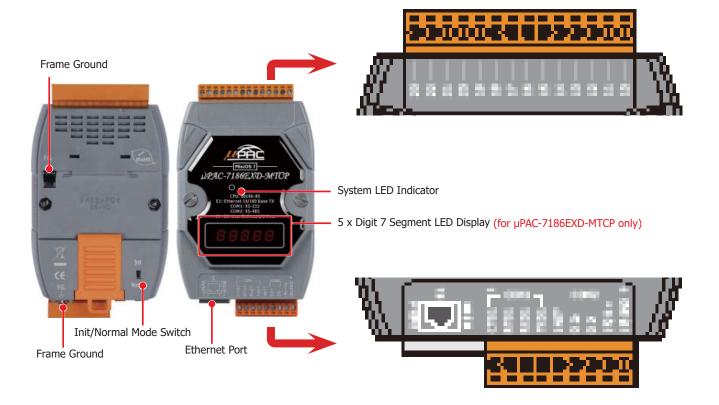
#### **■** Introduction

The  $\mu$ PAC-7186EX(D)-MTCP is a family of Programmable Device Servers, also known as "Serial-to-Ethernet gateway", that are designed for linking RS-232/485 devices to an Ethernet network. The  $\mu$ PAC-7186EX(D)-MTCP also works as a Modbus TCP to RTU gateway that supports most SCADA/HMI communications based on the Modbus TCP protocol.

ICP DAS provides easy-to-use software development tool kits (MiniOS7 framework, Modbus libraries). Users can use them to easily integrate serial devices to have Ethernet/Internet communication ability and through the standard Modbus protocol to communicate with SCADA software (Indusoft, ISaGARF, DasyLab, Trace Mode, Citect, iFix, etc.).

For hardware expansion, the  $\mu$ PAC-7186EX(D)-MTCP also supports an I/O expansion bus. A cost-effective I/O expansion board with A/D, D/A, D/I, D/O and serial ports is available. Nearly all kinds of I/O functions can be implemented by this bus. But the bus can support only one board. There are more than 50 boards available for  $\mu$ PAC-7186EX(D)-MTCP, you can choose one of them to expand hardware features.

### Appearances



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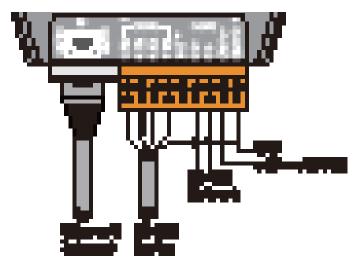
# **■ Specifications**

| Model                         | μPAC-7186EX-MTCP  | μPAC-7186EXD-MTCP               |  |  |
|-------------------------------|---|---------------------------------|--|--|
| Software                      |   |                                 |  |  |
| OS                            | MiniOS7   |                                 |  |  |
| Development                   | C Language  |                                 |  |  |
| CPU Module                    |   |                                 |  |  |
| CPU                           | 80186 or compatible, 16-bit and 80 MHz  |                                 |  |  |
| SRAM                          | 512 KB  |                                 |  |  |
| Flash                         | 512 KB  |                                 |  |  |
| EEPROM                        | 16 KB   |                                 |  |  |
| NVRAM                         | 31 Bytes  |                                 |  |  |
| RTC (Real Time Clock)         | Provide seconds, minutes, hours, dates, day of week, month, year                          |                                 |  |  |
| 64-bit Hardware Serial Number | Yes   |                                 |  |  |
| Watchdog Timer                | Yes   |                                 |  |  |
| Display                       |   |                                 |  |  |
| Туре                          | -   | 5 x Digit 7 Segment LED Display |  |  |
| LED Indicator                 |   |                                 |  |  |
| Status                        | 1 x System  |                                 |  |  |
| Communication Interface       |   |                                 |  |  |
| Ethernet                      | 1 x RJ-45, 10/100 Base-TX (Auto-negotiating, Auto MDI/MDI-X, LED indicators)              |                                 |  |  |
| COM1                          | RS-232 (TXD, RXD, RTS, CTS, GND), Non-isolated, Speed: 115200 bps Max.                    |                                 |  |  |
| COM2                          | RS-485 (Data+, Data-) with internal self-tuner ASIC; Non-isolated, Speed: 115200 bps Max. |                                 |  |  |
| I/O Expansion                 |   |                                 |  |  |
| I/O Type                      | X-board   |                                 |  |  |
| User Defined I/O PINs         | 14  |                                 |  |  |
| Mechanical                    |   |                                 |  |  |
| Dimension (W x H x D)         | 72 mm x 123 mm x 35 mm  |                                 |  |  |
| Installation                  | DIN-Rail Mounting   |                                 |  |  |
| Environmental                 |   |                                 |  |  |
| Operating Temperature         | -25 ∼ +75 °C  |                                 |  |  |
| Storage Temperature           | -40 ~ +80 °C  |                                 |  |  |
| Humidity                      | 5 ~ 90 % RH, Non-condensing   |                                 |  |  |
| Power                         |   |                                 |  |  |
| Input Range                   | +10 ~ +30 VDC   |                                 |  |  |
| Consumption                   | 1.5 W   | 2.5 W                           |  |  |

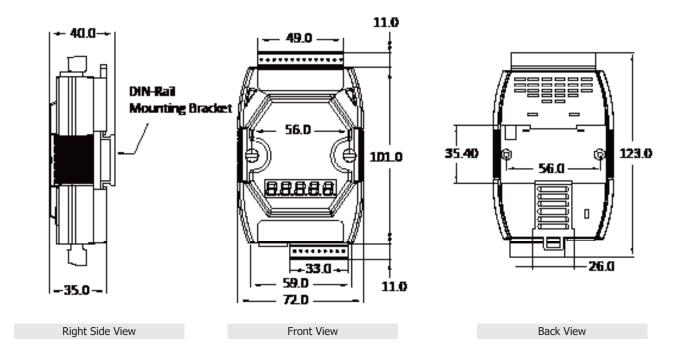
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# Wiring Connections



# **■** Dimensions (Units: mm)



# **■ Ordering Information**

| μPAC-7186EX-MTCP-G CR  | Palm-sized Programmable Modbus Gateway with 80186-80 CPU and Modbus Firmware            |  |
|------------------------|---|--|
| μρας-7100Ex-Micr-6 CK  | (Gray Cover) (RoHS)   |  |
| μPAC-7186EXD-MTCP-G CR | Palm-sized Programmable Modbus Gateway with 80186-80 CPU, Modbus Firmware and 7-Segment |  |
|                        | LED Display (Gray Cover) (RoHS)   |  |

| <b>■ Accessories</b> |                            | A CONGO |
|----------------------|----------------------------|---------|
| X-Board              | Add-on I/O Expansion Board |         |
|                      |                            |         |

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