

Features

- 80188, 40 MHz CPU
- MiniOS7 Inside
- C Language Programming
- TCP/IP Library
- Modbus Library
- SNMP Library
- Various Storage Media
- 512 KB Flash
- 2 KB EEPROM
- 31 Bytes NVRAM
- Various Communication Interfaces
- 10 Base-T Ethernet
- RS-232/485
- 64-bit Hardware Serial Number
- I/O Expansion Bus
- Operating Temperature: -25 ~ +75°C



Introduction

The I-7188EX series is a palm-size PAC designed to survive in harsh environment and has ability to connect to the Internet world. It has a CPU, SRAM, Flash, Ethernet port and several RS-232, RS-485 ports. With a DOS-like OS (MiniOS7) and a developed firmware running inside, the I-7188EX series can act like a small PC.

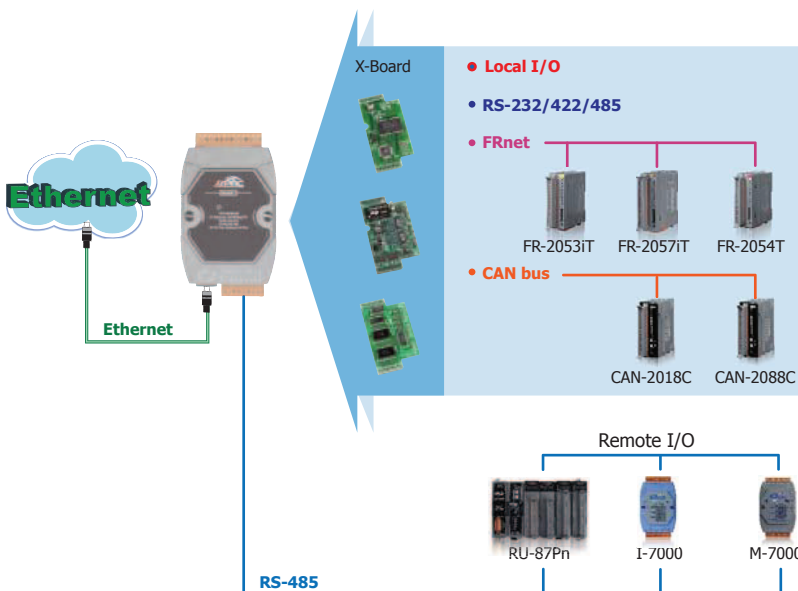
For the hardware expansion, it supports an I/O expansion bus to implement various I/O functions such as D/I, D/O, A/D, D/A, Timer/Counter, UART, flash memory, etc. Customers can develop their own I/O expansion boards or choose one of 50 available boards that ICP DAS has developed.

For the firmware developing, a 16-bit C compiler for 80188/80186 CPU and C language programming knowledge are needed. To shorten the developing time, there are many demo programs for reference. And for industrial applications, a Modbus library is provided to ease the developing.

Depending on the type of embedded firmware that is being developed, and which I/O expansion board, the I-7188EX series can be used as a single versatile controller. The application fields can be factory automation, building automation, machine automation, environment monitoring, etc.

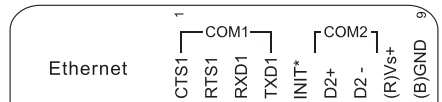
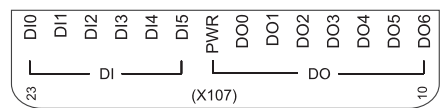
Applications

Rich I/O Expansion Ability



Pin Assignments

I-7188EA(D)



I-7188EX(D)



Specifications

| Models | I-7188EA(D) | I-7188EX(D) |
|-------------------------------|--|-------------|
| 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 | 80188, 40 MHz | |
| SRAM | 512 KB | |
| Flash | 512 KB | |
| EEPROM | 2 KB | |
| NVRAM | 31 Bytes (battery backup, data valid up to 10 years) | |
| RTC (Real Time Clock) | Provides 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) | |
| Communication Ports | | |
| Ethernet | RJ-45 x 1, 10 Base-T | |
| COM 1 | RS-232 (TxD, RxD, RTS, CTS, GND); non-isolated | |
| COM 2 | RS-485 (Data+, Data-) with internal self-tuner ASIC; non-isolated | |
| LED Indicator | | |
| System LED | Yes | |
| LED Display | 5-digit 7-segment LED display for (D) versions | |
| Digital Input | | |
| Channels | 6 | - |
| Input Type | Non-isolated | - |
| On Voltage Level | +3.5 ~ +30 V _{dc} Max. | - |
| Off Voltage Level | 1 V _{dc} Max. (Connect to GND) | - |
| Digital Output | | |
| Channels | 7 | - |
| Output Type | Open Collector | - |
| Load Current | 100 mA/channel | - |
| Load Voltage | +30 V _{dc} Max. | - |
| Hardware Expansion | | |
| I/O Expansion Bus | - | Yes |
| Mechanical | | |
| Dimensions (W x L x H) | 72 mm x 119 mm x 33 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} | |
| Protection | Power reverse polarity protection | |
| Power Consumption | 2 W; or 3 W for (D) version | |

Ordering Information

| | |
|----------------------|---|
| I-7188EA CR | μPAC with 10 M Ethernet and 6 DIs, 7 DOs (RoHS) |
| I-7188EA D CR | I-7188EA with display (RoHS) |
| I-7188EX CR | μPAC with 10 M Ethernet (RoHS) |
| I-7188EX D CR | I-7188EX with display (RoHS) |