

Features

- 80188, 40 MHz or 20 MHz CPU
- MiniOS7 Inside
- C Language Programming
- Modbus Library
- CAN Bus Library
- Various Storage Media
- 512 KB Flash
- 2 KB EEPROM
- 31 Bytes NVRAM
- Various Communication Interfaces
- RS-232/485
- 64-bit Hardware Serial Number
- I/O Expansion Bus
- Operating Temperature: -25 ~ +75°C



Introduction

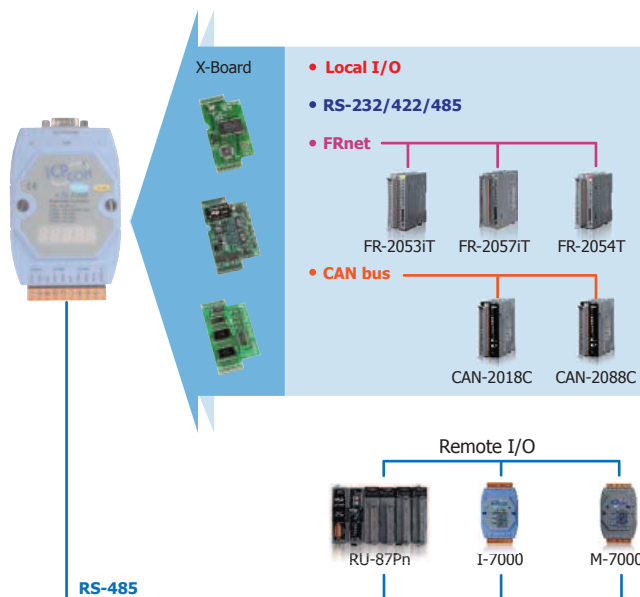
The I-7188 series is a palm-size PAC designed to work in harsh environment. It has a CPU, SRAM, Flash and several RS-232, RS-485 ports. With a DOS-like OS (MiniOS7) and a developed firmware running inside, the I-7188 can act like a small PC.

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 and CAN bus library are provided to ease the developing.

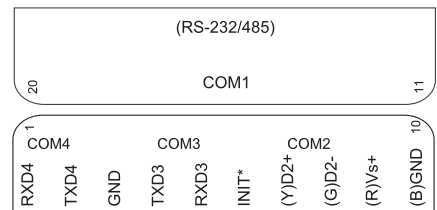
Applications

Rich I/O Expansion Ability

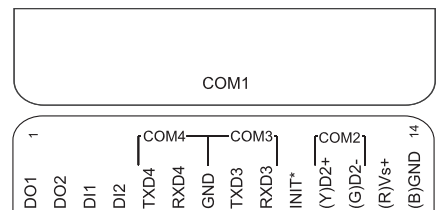


Pin Assignments

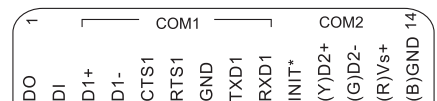
I-7188(D)



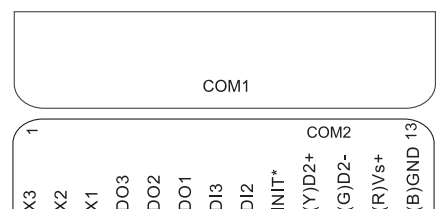
I-7188XA(D)



I-7188XB(D)



I-7188XC(D)



Specifications

Models	I-7188(D)	I-7188XA(D)	I-7188XB(D)	I-7188XC(D)
System Software				
OS	MiniOS7 (DOS-like embedded operating system)			
Program Download Interface	RS-232 (COM4)		RS-232 (COM1)	
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			80188, 20 MHz
SRAM	256 KB	512 KB		128 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		-
Watchdog Timers	Yes (0.8 second)			
Communication Ports				
COM 1	RS-232 with modem control or RS-485	RS-232 with modem control or RS-485 with internal self-tuner ASIC; non-isolated	RS-232 or RS-485 with internal self-tuner ASIC; non-isolated	
COM 2	RS-485, non-isolated	RS-485 with internal self-tuner ASIC; 3000 V _{DC} isolated	RS-485 with internal self-tuner ASIC; non-isolated	
COM 3	RS-232 (TxD, RxD, GND)		-	
COM 4	RS-232 (TxD, RxD, GND)		-	
LED Indicator				
System LED	Yes			
LED Display	5-digit 7-segment LED display for (D) versions			
Digital Input				
Channels	-	2	1	2
Contact	-	Dry		
On Voltage Level	-	Connect to GND		
Off Voltage Level	-	Open		
Digital Output				
Channels	-	2	1	3
Type	-	Open Collector		
Load Current	-	100 mA/channel		
Load Voltage	-	+30 V _{DC} Max.		
Hardware Expansion				
I/O Expansion Bus	-	Yes (for memory board only)	Yes	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-7188/512 CR	µPAC with 4 COM ports (RoHS)
I-7188D/512 CR	I-7188/512 CR with display
I-7188XA CR	µPAC with 4 COM ports and 2 DI, 2 DO (RoHS)
I-7188XD CR	I-7188XA CR with display
I-7188XB-512 CR	µPAC with 2 COM ports and 1 DI, 1 DO (RoHS)
I-7188XB-512 CR	I-7188XB-512 CR with display
I-7188XC-512 CR	µPAC with 2 COM ports and 2 DI, 3 DO (RoHS)
I-7188XC-512 CR	I-7188XC-512 CR with display