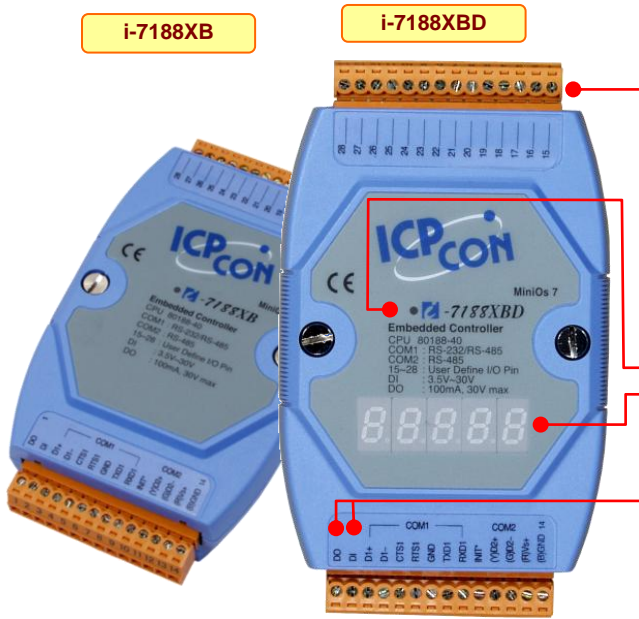


# i-7188XB / i-7188XBD

**Palm-size PAC – with 1 DI / 1 DO**



**Main Features**

- 80188-40 embedded CPU
- OS: MiniOS7
- 512K SRAM, 512K Flash
- Built-in RTC, 31B NVRAM, 2048B EEPROM
- 2 COM ports : RS-232, RS-485
- User defined Pins: 14 Pins via X-board
- Power / Communication Indicator Red LED
- 5-digit 7-segment LED Display
- Built-in 1 DI & 1 DO channels

**COM1 : RS-232 / RS-485**

RS-232: TXD, RXD, RTS, CTS, GND  
 RS-485: D1+, D1- (self-tuner ASIC)  
 Default is RS-232  
 Program download port  
 1 byte FIFO

**COM2 : RS-485**

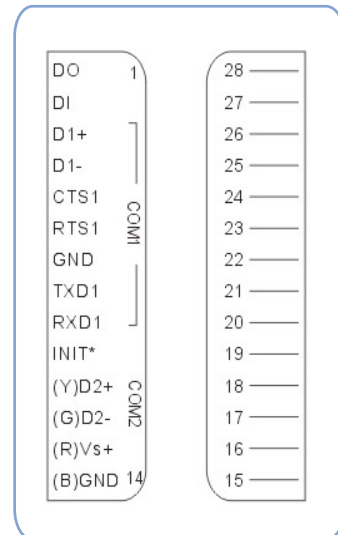
RS-485: D2+, D2-  
 Self-tuner ASIC  
 1 byte FIFO

## Features

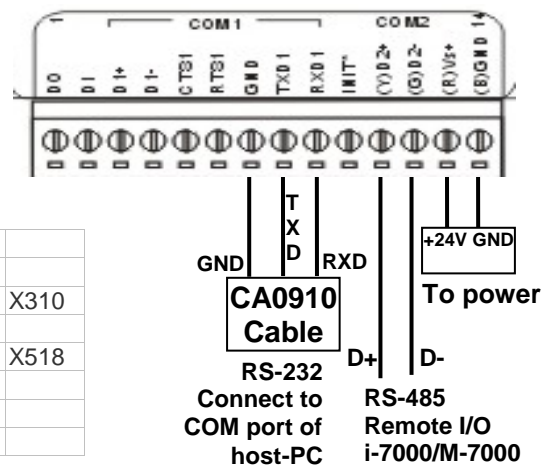
- Built-in Watch dog timer & 64-bit hardware unique serial number
- Built-in power protection circuit & RS-485 network protection circuit
- Easy use software development toolkits
- COM driver support interrupt & 1K QUEUE Input / Output buffer
- Built-in 1 digital input channels & 1 open-collector output channels
- Built-in self-tuner ASIC controller on RS-485 port
- Program language : TC/TC++/BC/MSC/MSVC
- Program download port: COM1
- Re-loadable OS, software & programs
- built-in one expansion bus to add-on an expansion board
- Support remote telephone line or radio modem control



## Pin Assignments



## Wiring



## Expansion Board Selection Guide

Category:	X-Boards:						
Prototype, Testing	X002	X004	X005	X006			
DI/O, photo mos, PWM	X107	X109	X110	X111	X116	X119	
A/D, D/A, DI/O	X202	X203	X303	X304	X305	X308	X310
RS-232/485	X503	X504	X505	X506	X511		
RS-232/485/422, DI/O	X507	X508	X509	X510	X510-128	X518	
Flash ROM	X600	X601					
Battery Backup SRAM	X607	X608					
Motion Control	X702	X703					

▣ Specifications

Series : Palm-size PAC > 1<sup>st</sup> Generation > i-7188X > i-7188XB/XBD

PACs	i-7188XB	i-7188XBD
<b>■ CPU</b>		
CPU	80188, 40MHz or compatible	
SRAM	512K bytes	
Flash Memory	512K bytes; Erase unit is one sector (64K bytes); 100,000 erase/write cycles.	
EEPROM	2048 Bytes (8 block, each block contains 256byte) Data retention > 100 years; 1,000,000 erase/write cycles	
NVRAM	31 Bytes (battery backup, data valid up to 10 year)	
RTC (Real Time Clock)	Yes; Seconds, minutes, hours, date of the month; month, year, valid up from 1980 to 2079	
64-bit Hardware Serial Number	Yes	
Built-in Watchdog Timer	Yes	
<b>■ Communication Interface</b>		
COM1	RS-232 or RS-485 (default is RS-232); Program download port, 1 byte FIFO RS-232 (TXD, RXD, RTS, CTS, GND) RS-485 (D1+, D1-, self-tuner ASIC inside)	
COM2	RS-485 (D2+, D2-, self-tuner ASIC inside), 1 byte FIFO	
<b>■ COM Port Formats</b>		
Communication Speed	115200 bps max. for all ports	
<b>■ Digital Input/Output</b>		
Digital Input	Channels : 1 Input type : non-isolated On voltage level : +1VDCmax (Connect to GND) Off voltage level : +3.5V~30VDC(Open)	
Digital Output	Channels : 1 Output type : Open-collector Output current : 100mA Max load voltage : +30VDC	
<b>■ LED Display</b>		
5-Digit 7 Segment LED Display	--	Yes
System LED Indicator	Yes, one red LED	
<b>■ Hardware Expansion</b>		
I/O expansion bus	Yes	
User defined I/O Pins	14 Pins	
<b>■ Dimensions</b>		
L x H x D (mm)	119 x 72 x 33	
<b>■ Operating Environment</b>		
Operating Temperature	-25°C to +75°C ( -13° F to +167° F)	
Storage Temperature	-40°C to +80°C ( -40° F to +176° F)	
Humidity	5% ~ 90%, non-condensing	
<b>■ Power</b>		
Protection	Power reverse polarity protection	
Required Supply Voltage	+10 to +30VDC	
Power consumption	2.0 W	3.0 W



▣ Ordering Information

Model Number	Description
<b>I-7188XB-512 CR</b>	Palm-size PAC, 80188-40 CPU, 512K Flash, 2 COM ports (RoHS)
<b>I-7188XBD-512 CR</b>	Palm-size PAC, 80188-40 CPU, 512K Flash, 4 COM ports, LED display (RoHS)
<b>OEM Version</b>	
<b>I-7188XB-512-DW CR</b>	OEM Palm-size PAC; same as i-7188XB-512 CR, but the pin-header of local bus is in the up side down direction, and without plastic box (RoHS)
<b>I-7188XAD-512-DW CR</b>	OEM Palm-size PAC; same as i-7188XA-DW CR with 5-digit 7-segment LED Display (RoHS)
<b>Options &amp; Accessories</b>	
<b>DIN-540A/DIN-KA52F</b>	Power supply; DIN-540A: 42Amp / DIN-KA52F: 1.05Amp
<b>X002 / X005 / X006</b>	X-board, for Prototype expansion: X002(114*170), X005(64*38), X006(64*72)
<b>X310</b>	X-board for A/D, D/A, DI/O expansion, 0.9W power consumption
<b>X600 / X601</b>	X-board for NAND Flash memory expansion: X600(4M), X601(8M)
<b>X607 / X608</b>	X-board for battery backup SRAM memory expansion: X607(Wide 128K), X608(512K)
<b>X-Board</b>	Other add-on expansion boards refer to expansion board selection guide

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Palm - size PAC - μPAC

μPAC 7186 EX

μPAC 7186 EG

μPAC 7186 XG

μPAC 7186 XB

i-7188 E

i-7188 G

i-7188 X