i-7188 *I/O Expansion Boards* SERIES
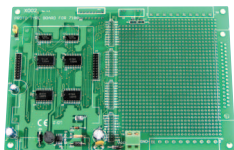
Used with I-7188XB/EX/XG/EG
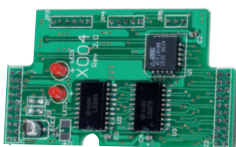
Prototype Board
X002 (114mm x 170mm)
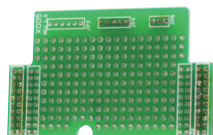

Self-test Board
X004 (64mm x 38mm)
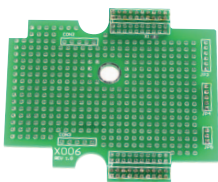

Prototype Board
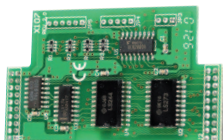**X005** (38mm x 64mm)

Prototype Board
X006 (72mm x 65mm)

DI/O Board
X107 (64mm x 37mm)

Specifications:
- 7 channels Open collector output; 30V/100mA
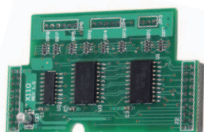- 6 channels DI (3.5V~30V)

PhotoMos Board
X109 (64mm x 37mm)

Specifications:
- Channels: 7 (Form A)
- Continuous load current:120mA (peak AC)
- Peak load current: 0.3A
- Output Power dissipation : 0.3W
- Output Off state leakage current: 1uA
- Output On resistance : 25Ohm
- Load voltage : 350V(peak AC)
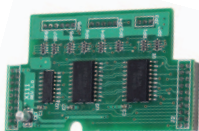- Input / Output Isolation : 1,500V AC

DI Board
X110 (64mm x 37mm)

Specifications:
- Channel : 14
- Input Range/Type :
  Logic high level (3.5V~30V),
  Logic low level (0V~1V)
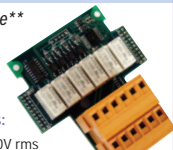
DO Board
X111 (64mmX37mm)

Specifications:
- Channel : 13
- Open-collector Output :70 mA / 30V max
- Isolated : none

DI/O Board
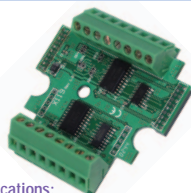**X116** (64mm X 57mm)

Without Case

Specifications:
- DI channel :4
- Isolation: 3750V rms
- Input Voltage: 3.5V ~ 30 V
- Response time: 10 KHz Max.
- DO channel :6 (Form "A", Normal Open)
- Max. Switching capacity : 60W, 60VA
- Max. Switching voltage : 220Vdc, 250Vac
- Max. Switching current : 5A
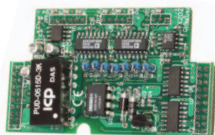- Max. Continuous current : 2A

DI/O Board
X119 (72mm x 57mm)

Specifications:
- 7 Channels : DO
- 7 Channels : DI

Without Case

AD Board
X202 (64mmX37mm)

Specifications:
- Channel : 7
- Resolution : 12bit
- Input Range/Type : 0 ~ 20 mA
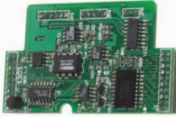
AD Board
X203 (64mmX37mm)

Specifications:
- Channel : 2
  Resolution : 12bit
  Input Range/Type : 0 ~ 20 mA
- 2 channels DI
- 6 channels DO

i-7188 SERIES

I/O Expansion Boards

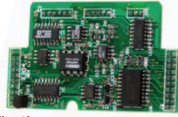### Used with I-7188XB/EX/XG/EG

AD, DA Board
X303 (64mm x 37mm)

Specifications:
- One channel A/D, 12-bit
  Input Range: +/- 5 V
- One channel D/A, 12-bit
- Output Range: +/- 5 V
- 4 channels DI
- 6 channels DO

AD Board
X304 (64mmX37mm)

Specifications:
- 3 channels AD
  Resolution : 12bit
  Input Range/Type : +/- 5 V
- 1 channel DA
  Resolution : 12bit
  Output Range/Type : +/- 5 V
- 4 channels DI
- 4 channels DO

AD Board
X305 (64mmX37mm)

Specifications:
- 7 channels AD
  Resolution : 12bit
  Input Range/Type : +/- 5 V
- 1 channel DA
  Resolution : 12bit
  Output Range/Type : +/- 5 V
- 2 channels DI
- 2 channels DO

AD Board
X308 (64mm x 37mm)

Specifications:
- 4 channels AD
- Resolution : 12bit
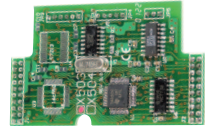 Input Range/Type : 0~10V
- 6 channels DO

AD Board
X310 (64mmX37mm)

Specifications:
- 2 channels AD
  Resolution : 12bit
  Input Range/Type :
  Ch0:0~20 mA; Ch1:0~10 V
- 2 channels DA
  Resolution : 12bit
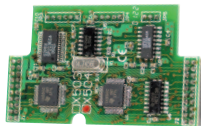 Output Range/Type:0~10 V
- 3 channels DI
- 3 channels DO

RS-232 Board
X503 (64mm x 37mm)

Specifications:
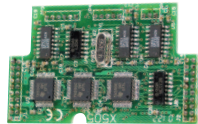- COM3: RS-232 port;
  CTS3, RTS3, RXD3, TXD3

RS-232 Board
X504 (64mm x 37mm)

Specifications:
- COM3: RS-232 port;
  CTS3, RTS3, RXD3, TXD3
- COM4: RS-232 port;
  RI4, CTS4, RTS4, DSR4,
  DTR4, TXD4, RXD4, DCD4

RS-232 Board
X505 (64mm x 37mm)

Specifications:
- COM3: RS-232 port;
  CTS3, RTS3, RXD3, TXD3
- COM4: RS-232 port;
  CTS4, RTS4, RXD4, TXD4
- COM5: RS-232 port;
  CTS5, RTS5, RXD5, TXD5

RS-232 Board
X506 (64mm x 37mm)

Specifications:
- COM3: RS-232 port; RXD3, TXD3, GND
- COM4: RS-232 port; RXD4, TXD4, GND
- COM5: RS-232 port; RXD5, TXD5, GND
- COM6: RS-232 port; RXD6, TXD6, GND
- COM7: RS-232 port; RXD7, TXD7, GND
- COM8: RS-232 port; RXD8, TXD8, GND

RS-422 Board
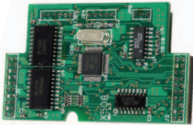**X507** (64mm x 37mm)

Specifications:
- COM3: RS-422 port;
  RXD3+, RXD3-, TXD3+, TXD3-
- 4 channels DI
- 4 channels DO

i-7188 I/O Expansion Boards
SERIES

i-7188

RS-232 Board
X508 (64mm x 37mm)

Specifications:
- COM3: RS-232 port
  TXD, RXD, RTS, CTS, GND
- 4 channels DI
- 4 channels DO

RS-232 Board
X509 (64mm x 37mm)

Specifications:
- COM3: RS-232 port
  TXD, RXD, GND
- COM4: RS-232 port
  TXD, RXD, GND
- 4 channels DI
- 4 channels DO

RS-232 Board
X510 (64mm x 37mm)

Specifications:
- COM3: RS-232 port
  TXD, RXD, GND
- 5 channels DI
- 5 channels DO
- EEPROM: 128K x 2 bytes
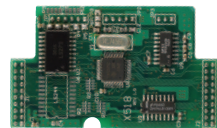
RS-232 Board
X510-128 (64mm x 37mm)

Specifications:
- COM3: RS-232 port
  TXD, RXD, GND
- 5 channels DI
- 5 channels DO
- EEPROM: 128K bytes

RS-485 Board
X511 (64mm x 37mm)

Specifications:
- COM3: RS-485 port; Data+, Data-
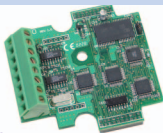- COM4: RS-485 port; Data+, Data-
- COM5: RS-485 port; Data+, Data-

RS-232 Board
X518 (64mm x 37mm)

Specifications:
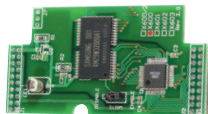- COM3: RS-232 port
- TXD, RXD, RTS, CTS, GND
- 8 channels DO

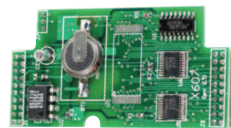## RS-232 Board
X560 (72mm x 65mm)   ***Without Case***

Specifications:
- COM3 : RS-232 port; RXD3,TXD3,GND
- COM4 : RS-232 port; RXD3,TXD3,GND
- COM5 : RS-232 port; RXD3,TXD3,GND
- 8M bytes NAND Flash:
  Endurance : 1,000,000
- Program/Erase Cycles
- Data Retention : 10 years

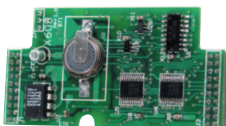## Flash Memory Board
X600/X601 (64mm x 32mm)

Specifications:
- X600: 4M bytes NAND; Flash; 0.3W
- X601: 8M bytes NAND; Flash; 0.4W
- Endurance:1,000,000 Program/Erase Cycles
- Data Retention: 10 years

Battery Backup SRAM Board
X607 (64mm x 32mm)

Specifications:
- SRAM: 128K Bytes

Battery Backup SRAM Board
X608 (64mm x 32mm)

Specifications:
- SRAM: 512K Bytes

Encoder Input Board
X702 (64mm x 37mm)

NEW!!

Specifications:
- 2-axis encoder
- 24-bit encoder counter
- Encoder counting mode:
  Quadrant, CW/CCW
  Pulse / Direction
- Max counting rate : 1 MHz
- Isolated power output: 5V

Encoder Input Board
X703 (64mm x 41mm)

NEW!!

Specifications:
- 3-axis encoder
- 24-bit encoder counter
- Encoder counting mode:
  Quadrant, CW/CCW
  Pulse / Direction
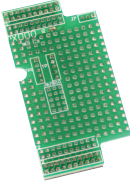- Max counting rate : 1 MHz
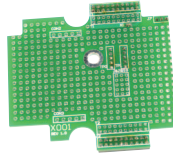- Isolated power output: 5V

i-7188 SERIES
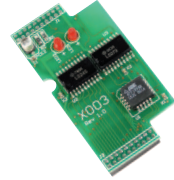## I/O Expansion Boards

Used with I-7188XC

Prototype Board
X000 (64mm x 32mm)
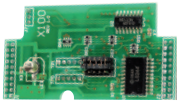
Prototype Board
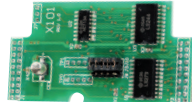**X001** (64mm x 70mm)

Self-test Board
X003 (64mm x32mm)

DI/O Board
X100 (64mm x 32mm)

Specifications:
■ 8 D/I channels
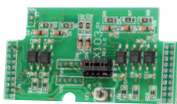■ Input voltage range: 3.5V~30V

DI/O Board
X101 (64mm x 32mm)

Specifications:
■ 8 D/O channels
■ Type: TTL Level;
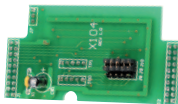 Sink current: 64mA

Relay Board
X102 (64mm x 32mm)

Specifications:
■ 2-channel relay output
■ Contact rating:
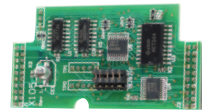 0.5A/125VAC; 1A/30VDC

DI/O Board
X103 (64mm x 32mm)

Specifications:
■ 7 isolated D/I channels
■ Input voltage range: 3.5V~30V

DI/O Board
X104 (64mm x 32mm)

Specifications:
■ 8 D/I channels
■ Each channel can be
  programmed to D/I or D/O
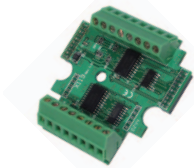■ Non-isolated, TTL level

DI/O Board
X105 (64mm x 32mm)

Specifications:
■ 8 channel DI/O
■ 8 channel programmable
■ Non-isolated, TTL level

DI/O Board
X106 (64mm x 32mm)

Specifications:
■ 2 channels Open collector
  output; 30V/250mA or
  3 channels DI (3.5V~30V)

DI/O Board
X119 (72mm x 57mm)

Specifications:
■ 7 Channels : DO
■ 7 Channels : DI   **Without Case**

A/D Board
X200 (64mm x 32mm)

Specifications:
■ Channel : 1
■ Input Range: 0~2.5V, 12-bit

4-31

i-7188 *I/O Expansion Boards*
SERIES

DA Board
X300 (64mm x 32mm)

Specifications:
- Channel : 2
- Output Range: 0~4.095V, 12-bit

AD, DA Board
X301 (64mm x 32mm)

Specifications:
- One channel AD, 12-bit
  Input Range: 0~2.5V
- One channel DA, 12-bit
  Output Range: 0~4.095V

AD, DA Board
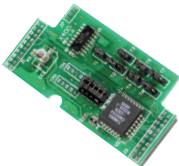**X302** (64mm x 32mm)

Specifications:
- One channel AD, 12-bit
  Input Range: +/- 5 V
- One channel DA, 12-bit
  Output Range: +/- 5 V

Timer/Counter Board
X400 (64mm x 32mm)

Specifications:
- 3channels 16-bit timer/counter

RS-232 Board
X500 (64mm x 38mm)

Without Case

Specifications:
- COM: RS-232 port: RI4, CTS4,
  RTS4, DSR4, TXD4, RXD4, DCD4, DTR4

RS-232 Board
X501 (64mm x 32mm)

Specifications:
- COM3: RS-232 port;
  CTS3, RTS3, RXD3, TXD3

RS-232 Board
X502 (64mm x 32mm)

Specifications:
- COM3: RS-232 port;
  CTS3, RTS3, RXD3, TXD3
- COM4: RS-232 port;
  RXD4, TXD4

Flash Memory Board
X600/X601 (64mm x 32mm)

Specifications:
- X600: 4M bytes NAND: Flash: 0.3W
- X601: 8M bytes NAND: Flash: 0.4W
- Endurance: 1,000,000
  Program/Erase Cycles
- Data Retention: 10 years

Battery Backup SRAM Board
X607 (64mm x 32mm)

Specifications:
- SRAM: 128K Bytes

Battery Backup SRAM Board
X608 (64mm x 32mm)

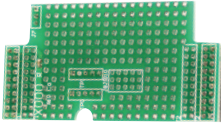**Specifications:**
- SRAM: 512K Bytes
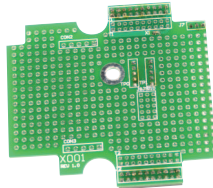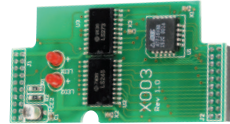
i-7188 *I/O Expansion Boards*

Used with I-7188XA

Prototype Board
X000 (64mm x 32mm)

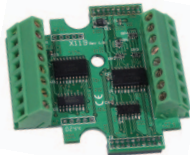### Prototype Board
X001 (64mm x 70mm)
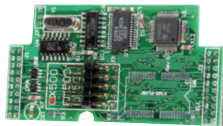
Self-test Board
X003 (64mm x 32mm)

DI/O Board ****Without Case****
X119 (72mm x 57mm)

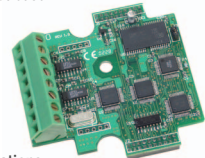**Specifications:**
- 7 Channels : DO
- 7 Channels : DI

RS-232 Board ****Without Case****
X500 (64mm x 32mm)

Specifications:
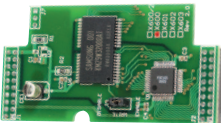- COM: RS-232 port; RI4, CTS4, RTS4, DSR4, TXD4, RXD4, DCD4, DTR4

RS-232 Board
X560 (72mm x 65mm)

Without Case

Specifications:
- COM3 : RS-232 port; RXD3,TXD3,GND
- COM4 : RS-232 port; RXD3,TXD3,GND
- COM5 : RS-232 port; RXD3,TXD3,GND
- 8M bytes NAND Flash:
  Endurance : 1,000,000
- Program/Erase Cycles
- Data Retention : 10 years

Flash Memory Board
X600/X601 (64mm x 32mm)

Specifications:
- X600: 4M bytes NAND; Flash
- X601: 8M bytes NAND; Flash
- Endurance: 1,000,000 Program/Erase Cycles
- Data Retention: 10 years

Battery Backup SRAM Board
X607 (64mm x 32mm)

Specifications:
- SRAM: 128K Bytes

Battery Backup SRAM Board
X608 (64mm x 32mm)

Specifications:
- SRAM: 512K Bytes