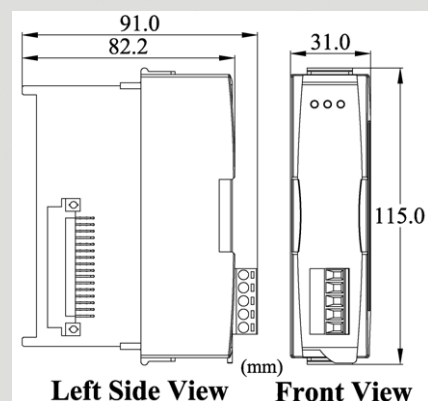




## Programmable CAN Interface Module



**I-87120**



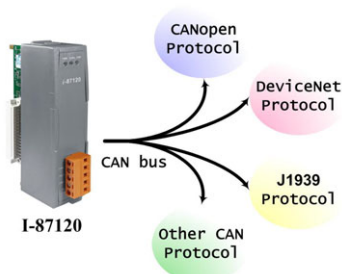
**Dimensions**

The I-87120 is a kind of CAN communication module, and need to be plugged into a host unit, such as I-8000 series MCU, WinCon-8000, LinCon-8000, and WinPAC-8000. I-87120 gives a way to connect these ICPDAS host unit with CAN network. We provide the libraries and several demos of these host devices with EVC++ and VB.Net. And we also provide the library and demos of the firmware for designed the user-defined I-87120. Owing to the features of I-8000 series MCU, WinCon-8000, WinPAC-8000, and LinCon-8000, these host units can be arranged to be a CAN converter, CAN slave device and CAN master device in a CAN network. Please refer to the product web site of I-87120: [http://www.icpdas.com/products/Remote\\_IO/can\\_bus/i-87120.htm](http://www.icpdas.com/products/Remote_IO/can_bus/i-87120.htm)

### Features

- Microprocessor inside with 80186, 80 MHz
- 82C250 CAN transceiver
- SJA1000 CAN controller
- Support both CAN 2.0A and CAN 2.0B
- Built-in jumper to select 120  $\Omega$  terminal resistor
- Max transmission speed up to 1 Mbps for CAN
- Max transmission distance over 1000m
- Support I-8000/WinCon-8000/WinPAC-8000/LinCon-8000

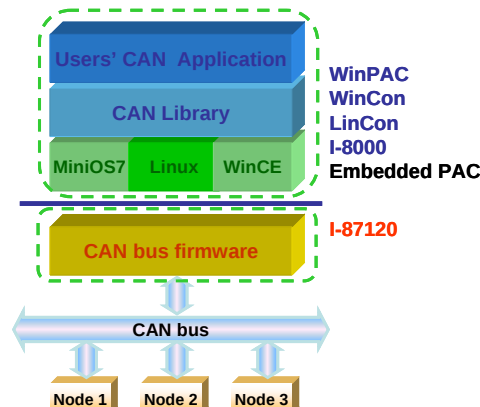
### Firmware Features



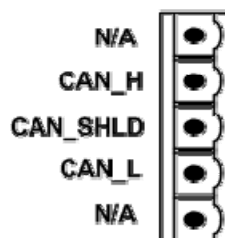
- Initialize function of user-defined
- Interrupt function of user-defined
- Loop function of user-defined
- ASCII command function of user-defined
- Binary code command function of user-defined
- Standard firmware inside

### Host Library

- Support I-8000/WinCon/WinPAC/LinCon.
- Provide C/C++ function libraries to send and receive CAN message
- Provide C++ demo for I-8000 series MCU.
- Provide EVC++ / C#.Net / VB.Net demo for WinCon and WinPAC.
- Provide GCC demo for LinCon.



### Pin Assignments



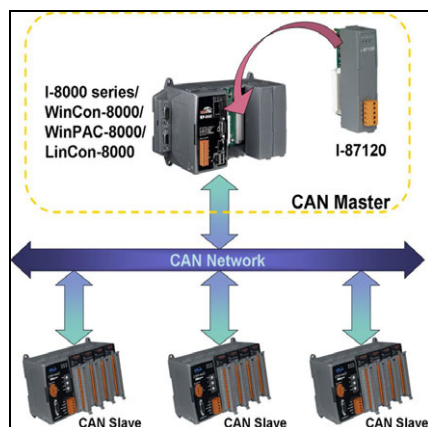
| Pin No. | Description       |
|---------|-------------------|
| 1       | No use            |
| 2       | CAN high bus line |
| 3       | CAN Shield        |
| 4       | CAN low bus line  |
| 5       | No use            |



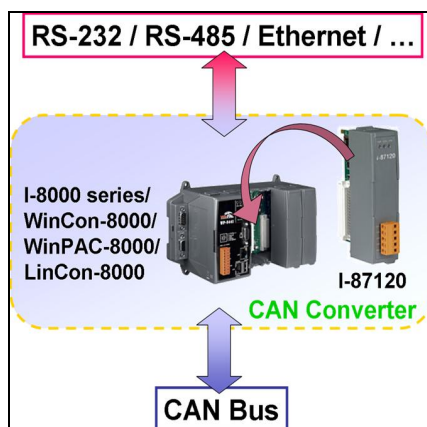
## Hardware Specifications

| Hardware                  |                                                                                  |
|---------------------------|----------------------------------------------------------------------------------|
| CPU                       | 80186, 80 MHz or compatible                                                      |
| SRAM/Flash/EEPROM         | 512 KB / 512 KB / 2 KB                                                           |
| RTC (Real Time Clock)     | Yes                                                                              |
| CAN Interface             |                                                                                  |
| Controller                | NXP SJA1000T with 16 MHz clock                                                   |
| Transceiver               | NXP 82C250                                                                       |
| Channel number            | 1                                                                                |
| Connector                 | 5-pin screwed terminal block (CAN_L, CAN_SHLD, CAN_H, N/A for others)            |
| Baud Rate (bps)           | 10 k, 20 k, 50 k, 125 k, 250 k, 500 k, 800 k, 1 M (allow user-defined baud rate) |
| Transmission Distance (m) | Depend on baud rate (for example, max. 1000 m at 50 kbps )                       |
| Isolation                 | 1000 V <sub>DC</sub> for DC-to-DC, 2500 Vrms for photo-couple                    |
| Terminator Resistor       | Jumper for 120 Ω terminator resistor                                             |
| Specification             | ISO-11898-2, CAN 2.0A and CAN 2.0B                                               |
| LED                       |                                                                                  |
| Round LED                 | Tx/Rx LED, ERR LED                                                               |
| Software                  |                                                                                  |
| Driver                    | I-87120 (for designing user-defined firmware), I-8000, LinCon, WinCon, WinPAC    |
| Library                   | TC/BC, GCC, VB.Net 2003, C#.Net 2003, VB.Net 2005, C#.Net 2005, eVC++ 4.0        |
| Power                     |                                                                                  |
| Power supply              | Unregulated +10 ~ +30 V <sub>DC</sub>                                            |
| Power Consumption         | 2 W                                                                              |
| Mechanism                 |                                                                                  |
| Dimensions                | 31mm x 91mm x 115mm (W x L x H)                                                  |
| Environment               |                                                                                  |
| Operating Temp.           | -25 ~ 75 °C                                                                      |
| Storage Temp.             | -40 ~ 80 °C                                                                      |
| Humidity                  | 5 ~ 95% RH, non-condensing                                                       |

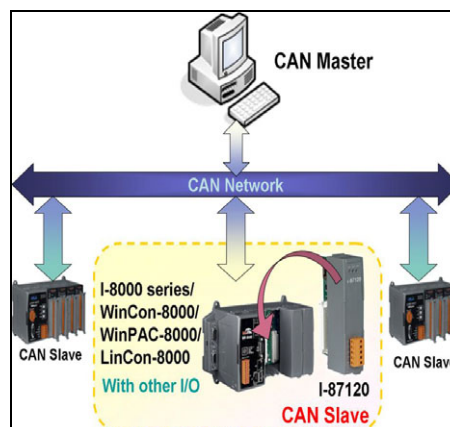
## Applications



I-87120 is as CAN master



I-87120 is as CAN converter



I-87120 is as CAN slave

## Ordering Information

### I-87120

Module with one programmable CAN port, I-8000/WinCon/WinPAC/LinCon CAN library, 80186 80 MHz CPU, 512 KB Flash and SRAM, 120 Ω terminator resistor selected by jumper.