ICP DAS

CANopen Series Products

Standalone CANopen Master Module

CE FC

I-87123

| 91.0 | 82.2 | 31.0 | 115.0 |

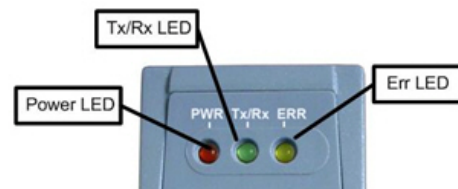Left Side View Front View (mm)
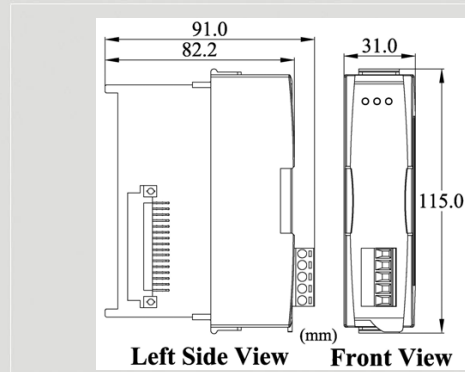
Dimensions

The I-87123 was developed as a standardized embedded network with highly flexible configuration capabilities. It provides standardized communication objects for real-time data (Process Data Objects, PDO), configuration data (Service Data Objects, SDO), network management data (NMT message, and Error Control), and special functions (Time Stamp, Sync message, and Emergency message). Nowadays, CANopen is used in many various application fields, such as medical equipment, off-road vehicles, maritime electronics, public transportation, building automation and etc.

Features

- NMT: Master
- CANopen Version: DS-301 v4.02
- Error Control: Support Guarding and Heartbeat protocol
- Support EMCY receiving
- Provide dynamic PDO functions
- Support SYNC protocol
- Transmission type of PDO is supported
- Support SDO download/upload segment protocol
- 256 records CANopen message reception buffer
- CAN, ERR, and Tx/Rx LED indicator
- Support I-8000/WinPAC/ViewPAC series MCU

Design Flowchart

Configure the I-87123 first

Add the slave to the I-87123 slave control list

Start to control the slave with CANopen protocol

Shutdown I-87123 when it will not be used any more

LED Indicators

Tx/Rx LED

Power LED

Err LED

LED.	Description
PWR	Indicate power status
Tx/Rx	Indicate CAN messages transmission
ERR	Indicate the error status

Pin Assignments

N/A	Pin 1
CAN_H	Pin 2
CAN_SHLD	Pin 3
CAN_L	Pin 4
N/A	Pin 5
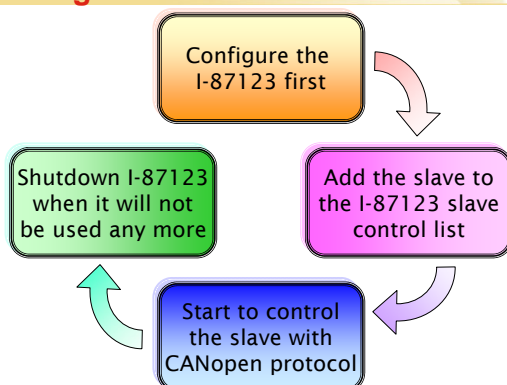
Pin No.	Description
1	No use
2	CAN high bus line
3	CAN Shield
4	CAN low bus line
5	No use

Terminal Resister Switch

Disable

Enable
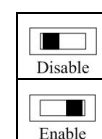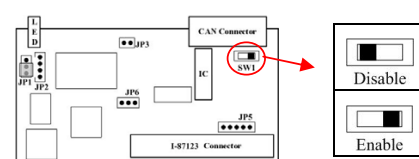
Hardware Specifications

Hardware	
CPU	80186, 80 MHz or compatible
SRAM/Flash/EEPROM	512 KB / 512 KB / 2 KB
CAN Interface	
Controller	NXP SJA1000T with 16 MHz clock
Transceiver	NXP 82C250
Channel number	1
Connector	5-pin screwed terminal block (CAN_GND, CAN_L, CAN_SHLD, CAN_H, N/A)
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	3000 V_{DC} 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
Protocol	CANopen DS-301 ver4.02, DS-401 ver2.1
Bus Interface	
Type	Serial I/O module
LED	
Round LED	PWR LED, RUN LED, ERR LED
Software	
Driver	I-8000, WinPAC, ViewPAC
Library	TC/BC
Power	
Power supply	Unregulated +10 ~ +30 V_{DC}
Mechanism	
Dimensions	31mm x 115mm x 91mm (W x L x H)
Environment	
Operating Temp.	-25 ~ 75 ℃
Storage Temp.	-30 ~ 80 ℃
Humidity	10 ~ 90% RH, non-condensing

Applications
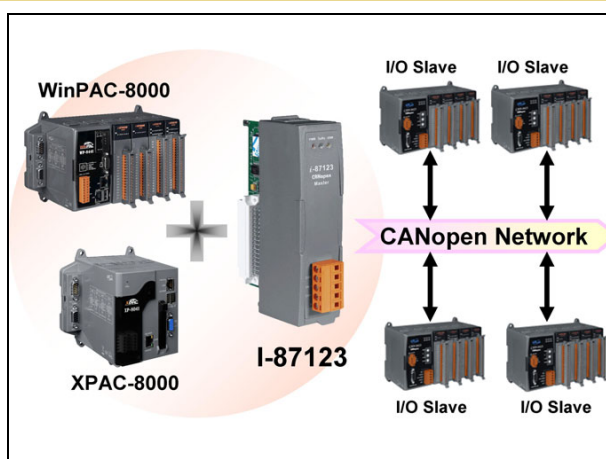
Ordering Information

I-87123	Module with one CANopen CAN port, 80186 80MHz CPU, 512K flash, 512K SRAM, 120Ω terminal resister selected by jumper.