DeviceNet Series Products

ICP DAS

CE FC

1 Port Programmable DeviceNet Master Interface

I-87124

Dimensions

91.0
82.2
31.0
115.0
(mm)
Left Side View   Front View
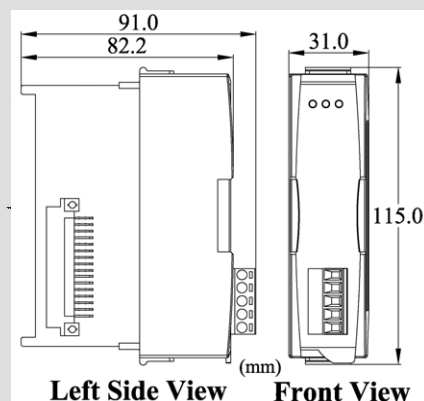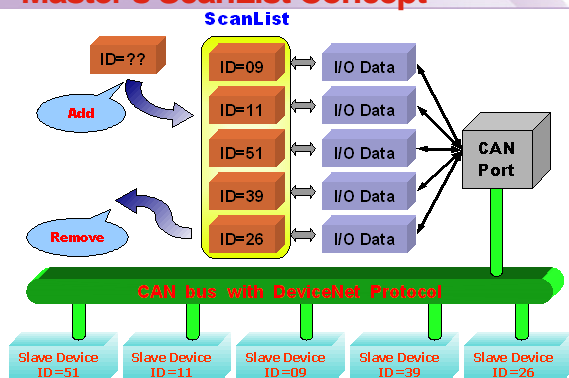
The I-87124 can represent an economic solution of DeviceNet application and be a DeviceNet master device on the DeviceNet network. I-87124 supports Group 2 and UCMM functions to communication with slave devices. It can be installed in ViewPAC or WP-8000 series PAC. It is popularly applied in the industrial automation, building automation, vehicle, and embedded control network. There is a complete DeviceNet protocol firmware in the I-87124. The users can easily access the slave device via I-87124 in the ViewPAC and WP-8000 and need not to deal with the complex DeviceNet protocol. The uses can use as easy as "Read/Write" functions to access slave I/O data.
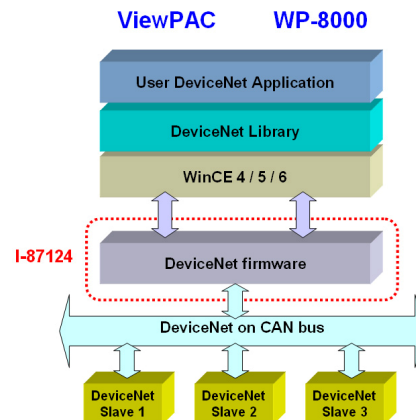
Features

- DeviceNet Version: Volume I & II, Release 2.0
- Programmable master MAC ID and baud rate
- Baud Rate: 125k, 250k, 500k bps
- Support Group 2 and UCMM connection
- I/O operating modes: Poll, Bit-Strobe, Change of State / Cyclic
- I/O Length: max 512 input bytes and 512 output bytes for each slave
- Slave Node : 63 nodes max
- Support auto-search slave device function.
- Support on-line adding and removing devices
- Support auto-detect Group 2 and UCMM device
- Auto-reconnect when the connection is broken
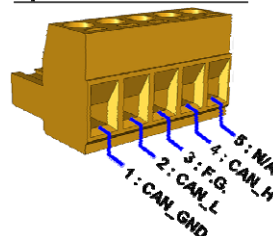- Status LED: RUN, MS, NS

Master's ScanList Concept

ScanList

ID=??
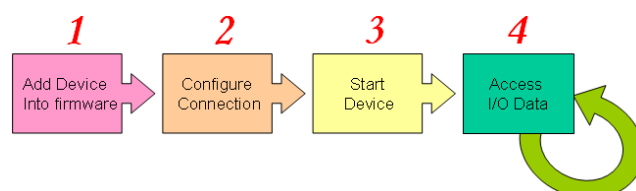Add
Remove

ID=09   I/O Data
ID=11   I/O Data
ID=51   I/O Data
ID=39   I/O Data
ID=26   I/O Data

CAN Port

CAN bus with DeviceNet Protocol

Slave Device ID=51 Slave Device ID=11 Slave Device ID=09 Slave Device ID=39 Slave Device ID=26

I-87124 Architecture

ViewPAC   WP-8000

User DeviceNet Application
DeviceNet Library
WinCE 4 / 5 / 6

I-87124   DeviceNet firmware

DeviceNet on CAN bus

DeviceNet Slave 1   DeviceNet Slave 2   DeviceNet Slave 3

Pin Assignments

5-pin screw terminal block

5 : N/A
4 : CAN_H
3 : F.G.
2 : CAN_L
1 : CAN_GND

Establish Connection Flowchart

1 Add Device Into firmware
2 Configure Connection
3 Start Device
4 Access I/O Data

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Hardware Specifications

Hardware	
CPU	80186, 80 MHz or compatible
SRAM/Flash/EEPROM	512 KB / 512 KB / 16 KB
Watchdog	CPU built-in
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)	125 k, 250 k, 500 k
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	Switch for 120 Ω terminator resistor
Specification	ISO-11898-2, CAN 2.0A and CAN 2.0B
Protocol	DeviceNet Volumn I ver2.0, Volumn II ver2.0
LED	
Round LED	NS LED, RUN LED, MS LED
Software	
Driver	Windows CE
Library	VB.Net 2005, C#.Net 2005, eVC++ 4.0
Power	
Power Consumption	2 W
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

Application
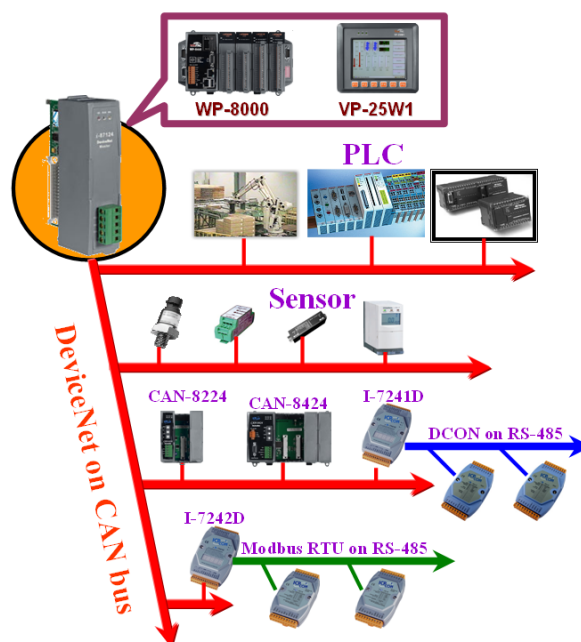
Ordering Information

I-87124	1 Port Programmable DeviceNet Master Interface