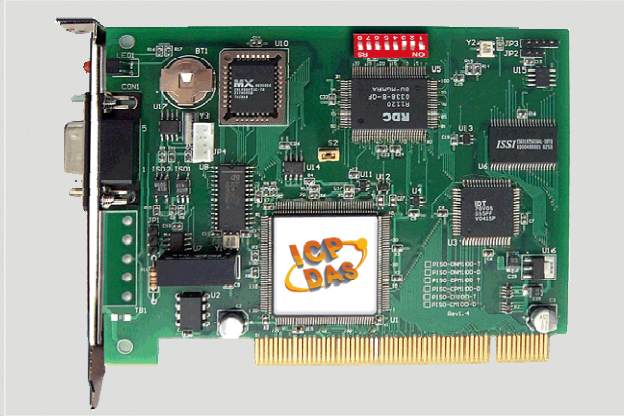# DeviceNet Series Products

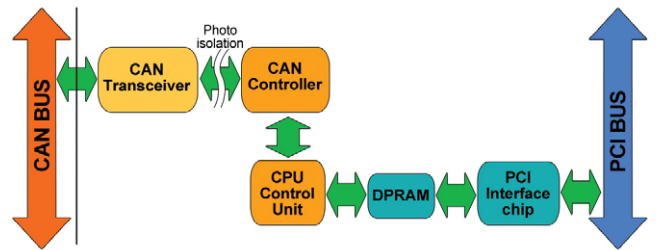## 1 Port Intelligent DeviceNet Multi-Slave Board

CE FC

PISO-DNS100-D

PISO-DNS100-T

The PISO-DNS100 has completed DeviceNet slave function according to DeviceNet Group 2 only server. With the built-in 80186 80M Hz CPU, this card can be applied in high transmission applications. The amazing function is that 10 slave nodes are implemented inside the PISO-DNS100. It supports up to 512 bytes of input & 512 bytes output data. DeviceNet Baud rate of 125-500 kbits/s & MACID can be set via utility setting. The PCI card also has an optically isolated DeviceNet interface.
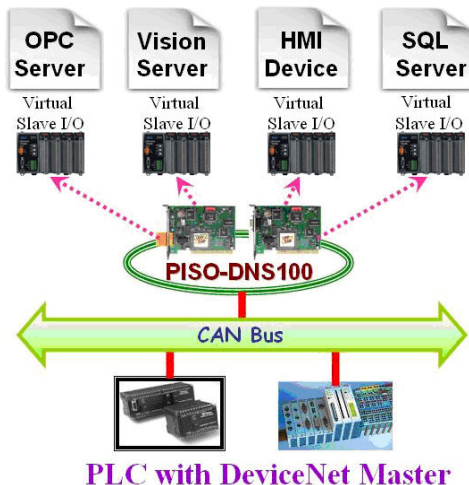
Features

- DeviceNet Version: Volume I & II, Release 2.0
- Programmable Slave MAC ID and Baud Rate.
- Baud Rate: 125K, 250K, 500K
- Support Group 2 only Server
- I/O Operating Modes: Poll, Bit-Strobe, Change of State / Cyclic
- I/O Length: 512 Bytes max (Input/Output) per slave
- Slave Node : 10(max) nodes inside the board
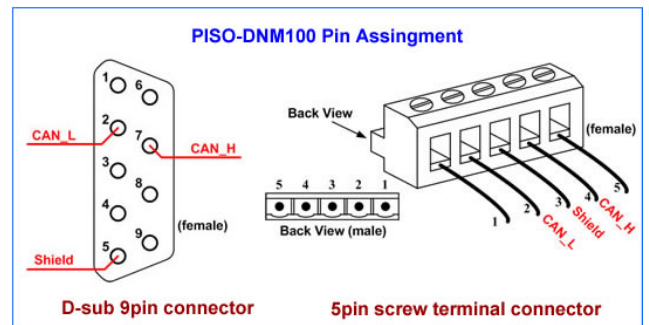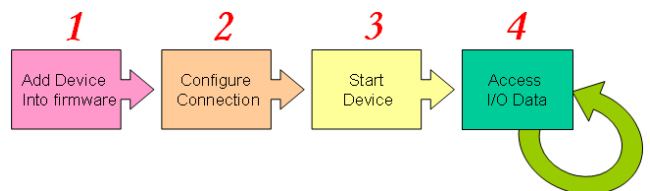- Not Support UCMM.
- LED : Status , ERR

Virtual Slave Concept

| OPC Server | Vision Server | HMI Device | SQL Server |

Virtual Slave I/O — Virtual Slave I/O — Virtual Slave I/O — Virtual Slave I/O

PISO-DNS100

CAN Bus

PLC with DeviceNet Master

Block Diagram

CAN BUS — CAN Transceiver — Photo isolation — CAN Controller — CPU Control Unit — DPRAM — PCI Interface chip — PCI BUS

Pin Assignments

PISO-DNM100 Pin Assingment

CAN_L, CAN_H, Shield — D-sub 9pin connector (female)

Back View — CAN_H, CAN_L, Shield — 5pin screw terminal connector — Back View (male) (female)

DeviceNet Connection Flowchart

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

Hardware Specifications

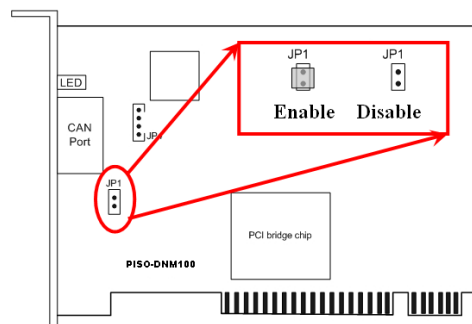| Item	PISO-DNS100
Bus Type	33MHz 32bit 5V PCI bus(V2.1) plug and play mechanism
CPU	80186, 80MHz
On Board Memory	512K bytes SRAM, 512K bytes FLASH ROM
EEPROM	2K bytes
NVRAM	32K bytes
Watch Dog Timer	Built-in Dual-Watchdog protection
CAN bus interface	ISO/IS 11898-2, Sub D9 connector or 5-pin screw terminal connector
CAN Controller	Phillips SJA1000T CAN Controller
CAN Transceiver	Phillips 82C250 CAN Transceiver
CAN Frequency	16 MHz CAN controller frequency
CAN Protocol	CAN 2.0A/2.0B
Isolated	2500Vrms on CAN side
Terminal Resister	120Ω terminal resister selected by jumper
DPRAM	PCI interface with DPRAM memory mapping
LED	2 Indicator LED (Status,ERR)
Power Consumption	+ 5V@300 mA
Operating Temp.	0℃ to 60℃
Storage Temp.	-20℃ to 8℃
Humidity	Humidity: 0~90% non-condensing
Dimensions	Short PC plug-in card, Dimensions: 130mm X 110mm (W x H)

LED indicators

LED	Status	Description
Green LED	Off	The firmware is not running
	Twinkle	The DeviceNet firmware is waiting for configuration.
	On	This indicates that the DeviceNet firmware is running. The PISO-DNM100 is communicating with the slave devices.
Red LED	Off	there is no error on the bus and about the MAC ID
	twinkle	This indicates that there are errors on the bus which maybe the situations as shown bellow: (a) The CAN connector doesn't connect to the slave devices. (b) The power of the slave devices is off. (c) The MAC ID collision between master and slave devices is occurring.

Application
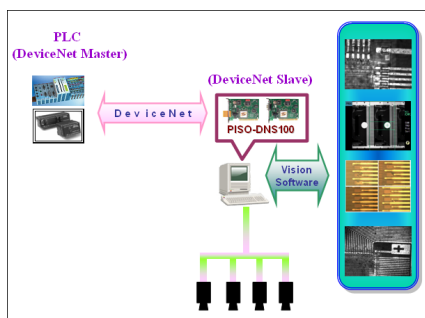
Terminal Resistor

Ordering Information

PISO-DNS100-D	1 Port Intelligent DeviceNet Multi-Slave Board with 9-pin D-sub connector
PISO-DNS100-T	1 Port Intelligent DeviceNet Multi-Slave Board with 5-pin Screw Terminal Connector