SST™ DN4 DeviceNet*
Network Interface Cards

molex ®

Delivering high reliability and performance with CIP Safety integration, combined client/server SST™ DN4 DeviceNet* PCIe NICs enable real-time control in data-acquisition applications

Features and Benefits

Scans DeviceNet* signals in 3 to 5 milliseconds	Enables real-time control
Combined Group 2 Client (Master) and Server (Slave) operations in one Network Interface Card (NIC)	Provides simultaneous execution of master and slave operations. Allows implementation of control schemes where multiple functions may be required (ie robotic control cells)
Common Industrial Protocol (CIP*) Safety Server (Slave) integration	Reduces the effort and time required to implement Molex CIP Safety Software Stacks. Enables compatibility for future applications and safety requirements
Field-Programmable Gate Array (FPGA) design	Boosts performance and reliability. Lowers component counts. Results in an extended product lifecycle
Poll, strobe, change-of-state (COS) and cyclic input/output messaging	Broadens application flexibility for DeviceNet control schemes
Quick-connect capability in Client (Master) mode	Accesses devices in less than 500 milliseconds on activation
Supports multiple networks and PC card buses: Controller Area Network (CAN) (2A and 2B, up to 1Mbps per second); DeviceNet networks (at 125, 250 or 500 kBps); (PCIe, PCI, PC/104) and channels (1, 2 channel)	Expands application and system flexibility. Ensures reduced inventory for OEMs and distributors
Multi-server (slave) versions of the PCI bus card are available (1 channel only)	Supports control system simulation. Reduces design and field commission time
Form-fit-function replacement for existing DN3 cards	Provides backwards compatibility with DN3 cards for legacy system connections
Tested to ODVA standards (Volume 3, v.1.8)	Meets industry standard requirements

DN4 DeviceNet PCIe Card
Series 112113

PCI Bus

DN4 PCU Card

DeviceNet

Input/Output Blocks
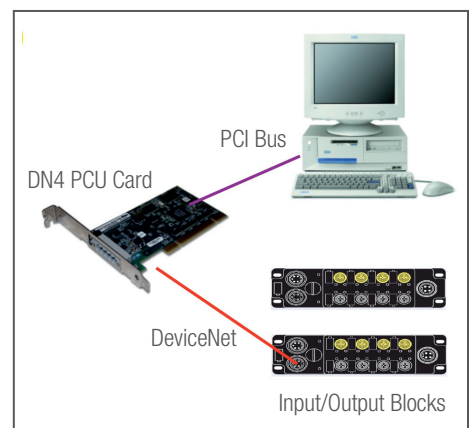
PC Control Example

Semiconductor Wafer Assembly

Applications

Industrial Automation: Automotive Applications

    PC Control Systems

    HMI/SCADA Systems

    Robot and Other Machine Control

    Diagnostics

Industrial Automation: Semiconductor Applications

    PC Control Systems

    HMI/SCADA Systems

    Diagnostics

Material Handling

    PC Control Systems

    HMI/SCADA Systems

    Robot and Other Machine Control

    Diagnostics

Other Markets

    Pulp and Paper

    Food and Beverage

    Mining and Metal

Automotive Robot Controller

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Specifications

General

	PCIe (PCI Express) NIC	PCU (Universal PCI) NIC	PC/104 NIC
Bus Interface	PCI Express x1 (Times 1)	32-bit, 33 MHz, PCI universal 3.3/5V interface (compliant signaling with PCI v2.2 & v2.3)	16-bit PC/104 interface (compliant with PC/104, v2.3 & v2.4)
Processor	64 MHz NIOS Processor		
Memory	128 bytes for PCI configuration	128 bytes for PCI configuration	256 KB of shared RAM per channel
Diagnostics	Bi-color LEDs showing card status PCI: health, communication PC/104 only: power, health, communication		
Dimensions	119.00 by 68.00 by 18.00mm (LxWxH)	Standard half-height (1 channel) Standard full-height (2 channel)	95.90 by 90.20mm (LxW)
Typical Current Draw	+3.3V, ± 12 % 0.3 A (1 channel)	+5V, ± 5 % 0.3 A (1 channel) 600 mA (2 channel)	+5V, ± 5 % 0.3 A (1 channel) 600 mA (2 channel)
Addressing: Memory	256 kB window available per channel	256 kB window available per channel	256kB in a window of 8, 16, 32, 64, 128 or 256kB on even window boundary between 512kB and 1MB
Addressing: I/O	16 bytes allocated per channel	16 bytes allocated per channel	8 bytes on any even 8-bit boundary from 200h-2F8h or 600h-6F8h
Operating Temperature	0 to +60ºC	0 to +60ºC	0 to +55ºC
Storage Temperature	-40 to +85ºC		
Humidity	5 to 95% non-condensing		
RoHS Compliant	Yes		
Protocol	DeviceNet™ Master – Group 2 Client, Group 2 only Client DeviceNet Slave – Group 2 Server Compliant with DeviceNet Specification 1.8 CAN 2.0 B Isolated Controller Area Network (CAN) physical layer on each channel (where applicable)		
Cable	Shielded twisted pair, compatible with target network		
Connector	DeviceNet compliant 5-pin CAN connector		
External Power	11-24V DC, 50 mA typical		
Isolation	500V		
Data Rate	Up to 1 Mbaud for CAN 125K, 250K and 500K baud for DeviceNet		

Ordering Information

DeviceNet Network Interface Cards

Order No.	Catalog No.	Component	Channel	Multi-Server (Slave) Version	Bracket Height
112005-0040	SST-DN4-104-1	PC/104 Card	1	No	N/A
112005-0048	SST-DN4-104-2		2		
112113-0001	SST-DN4-PCU-H	PCU Card	1		Half
112113-0005	SST-DN4-PCU-2		2		
112113-0007	SST-DN4-PCU		1		Full
112113-0009	SST-DN4MS-PCU			Yes	
112113-0010	SST-DN4MS-PCU-H				Half
112113-0011	SST-DN4-PCIE	PCIe Card	1	No	Full
112113-0012	SST-DN4-PCIE-H				Half
112113-0013	SST-DN4MS-PCIE			Yes	Full
112113-0014	SST-DN4MS-PCIE-H				Half

DeviceNet Network Interface Cards

Order No.	Catalog No.	Key
112030-0007	SST-DN3-CNF-U (single license	USB
112027-0014	SST-DN3-OPC (single license	N/A

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www.molex.com/link/bradnics.html