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Ideal for real-time control and data-acquisition applications, Molex's fourth-generation SST™ DN4 high-performance DeviceNet* network interface cards (NICs) use an enhanced FPGA design to extend NIC reliability and performance

SST™ DN4 DeviceNet* Network Interface Cards

112005 PC/104 Card
112113 PCU (PCI) Card

The DN4 family of DeviceNet* network interface cards (NICs) was developed to provide industrial OEMs and end-users with a more reliable and cost-effective solution for industrial communication. Ideal for use in real-time control and data-acquisition applications, Molex's NICs are the result of 15 years of DeviceNet product expertise.

They use an enhanced FPGA (Field Programmable Gate Array) design with a lower component count, resulting in an extended product lifecycle and higher reliability. DN4 cards are available in a variety of product formats. Standard PCI (3.3/5 V) and PC/104 bus' are supported. Both single- and dual-channel cards are offered for system flexibility. For more information on SST DN4 DeviceNet Interface Cards, visit: www.molex.com/link/dn4.html.



DN4 DeviceNet PC/104 Card
Series 112005



DN4 DeviceNet PCU Card
Series 1112113

FEATURES AND BENEFITS

- Scans DeviceNet* in 3 to 5 milliseconds for a high-performance card with real-time control
- Provides simultaneous execution of Group 2 Client (Master) and Server (Slave) operations that can implement control schemes where all capabilities may be required (ie robotic control cells)
- Supports poll, strobe, change-of-state (COS) and cyclic input/output messaging providing flexibility for any DeviceNet control scheme
- QuickConnect capability in Client (Master) mode ensures devices may be accessed faster on power-up (in less than 500 milliseconds)
- Used in Controller Area Network (CAN) networks (2A and 2B, up to 1Mb per second), and DeviceNet networks (at 125, 250 or 500 kB per second); multiple network support ensures reduced inventory for OEMs and Distributors
- DN4 cards support multiple PC card bus' (PCI, PC/104) and channels (1, 2 channel) allows for application flexibility
- Common Industrial Protocol (CIP*) Safety Server (Slave) implementation is supported with less effort (time) for an OEM to implement the Molex CIP Safety Stack
- Multi-Slave (Server) versions of the PCI bus card are available (1 channel only); supports control system simulation to reduce design and field commissioning time
- DN4 card design is a form-fit-function replacement for existing DN3 cards providing backwards compatibility with DN3 cards for legacy system connections
- Conformance tested to ODVA standards (Volume 3, v.1.8) to meet industry standard requirements

DeviceNet® CONFORMANCE TESTED

TYPICAL APPLICATIONS



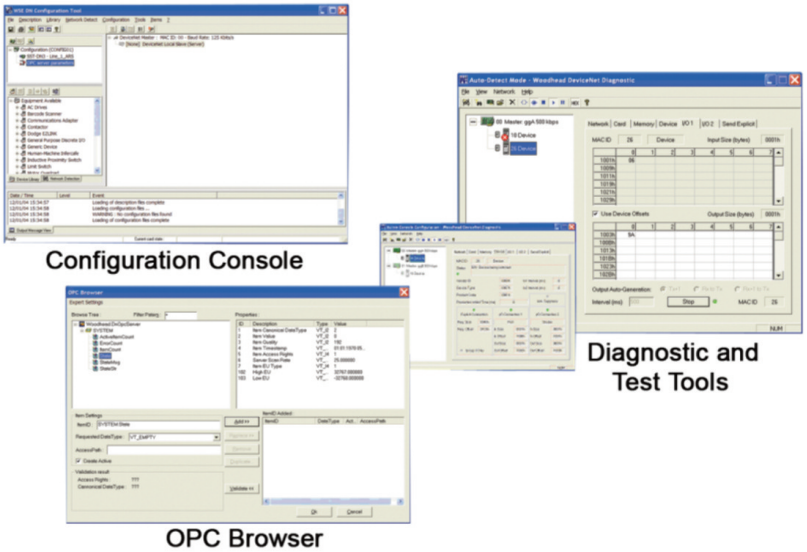
- PC control systems
- HMI/SCADA (Human Machine Interface / Supervisory Control and Data Acquisition) systems
- Robot and other machine control
- Diagnostics

OPERATING SYSTEMS AND DRIVERS SUPPORTED

- Windows XP / Vista / 7 drivers (32 bit)
- The Console; a grouping of software tools including OPC server configuration and diagnostic tools
- Open, documented memory map interface with example C source code and Windows 32-bit DLLs for custom driver development

DEVICENET SOFTWARE TOOLS

Software available for the SST DeviceNet Interface Cards enables fast integration of industrial communication into the customer's application.



Configuration Console

Diagnostic and Test Tools

OPC Browser

*DeviceNet and CIP are trademarks of ODVA

SPECIFICATIONS - NETWORK

	PCU (Universal PCI)	PC/104
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 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	

SST™ DN4 DeviceNet* Network Interface Cards

112005 PC/104 Card
112113 PCU (PCI) Card

SPECIFICATIONS - GENERAL

	PCU (Universal PCI)	PC/104
Bus Interface	32-bit, 33 MHz, PCI universal 3.3/5V interface (compliant signaling with PCI v2.2 and 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	256Kb of shared RAM per channel
Diagnostics	Bi-color LEDs showing card status PCI: health, communication PC/104: power, health, communication	
Dimensions (LxW)	Standard half-height (1 channel) Standard full-height (2 channel)	9.588 by 9.017cm (3.775 by 3.550")
Typical Current Draw	+5V, ± 5 % 0.3 A (1 channel)	+5V, ± 5%, 600 mA 2 channel
Addressing: Memory	256Kbyte window available per channel	256K in a window of 8K, 16K, 32K, 64K, 128K or 256Kbytes on even window boundary between 512K and 1Mb
Addressing: I/O	16 bytes allocated per channel	8 bytes on any even 8-bit boundary from 200h-2F8h or 600h-6F8h
Operating Temperature	0 to +60°C (+32 to +140°F)	0 to +55°C (+32 to +131°F)
Storage Temperature	-40 to +85°C (-40 to +185°F)	
Humidity	5 to 95% non-condensing	
RoHS Compliant	Yes	

ORDERING INFORMATION

SST™ DN4 DeviceNet Network Interface Cards

Order No.	Catalog No.	Component	Channel	Multi-Server (Slave) Version	Bracket Height
112113-0001	SST-DN4-PCU-H	PCU Card	1	N/A	Half
112113-0005	SST-DN4-PCU-2	PCU Card	2	No	Full
112113-0007	SST-DN4-PCU	PCU Card	1	N/A	Full
112113-0009	SST-DNMS4-PCU	PCU Card	1	Yes	Full
112113-0010	SST-DNMS4-PCU-H	PCU Card	1	Yes	Half
112005-0040	SST-DN4-104-1	PC/104 Card	1	No	N/A
112005-0048	SST-DN4-104-2	PC/104 Card	2	No	N/A

Note: All cards may also be purchased in bulk formats (adding "-B" to Catalog Number)
SST DeviceNet Diagnostic Tool software is included with each card.

DeviceNet Software Console Tools

Order No.	Catalog No.	Key
112030-0007	SST-DN3-CNF-U (single license)	USB
112030-0006	SST-DN3-CNF-P (single license)	Parallel Port key
112027-0014	SST-DN3-OPC (single license)	NA

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www.molex.com/link/dn4.html

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