CAN Module for PCI Compatible Computers

- **CAN 2.0B protocol compatibility**
- **Supports both 11-bit and 29-bit identifiers**
- **Interfaces with both CANopen and DeviceNet layers**
- **5 V or 3.3 V bus operation**
- **Data rates up to 1 Mbps**
- **Drivers are available for Windows® 98/ME/2000/XP**
- **16 MHz clock frequency**
- **CE Mark**
- **RoHS**

- **Interfaces CAN with PCI bus**
- **Uses the Philips SJA1000 controller chip**
- **Compatible PCA82C200 mode**
- **64-byte FIFO receive buffer**

PRODUCT OVERVIEW

Controller Area Network (CAN) is applied as an embedded communication system for intelligent devices in factories, medical equipment and even as an internal bus. So transmitting high-speed CAN data into a desktop PC is sometimes necessary for programmers, project engineers and diagnostic technicians.

The CANPCI adapter, both cost-effective and versatile, is designed for either 5 V or 3.3 V bus operation for PCI compatible computers. The CANPCI adapter supports 8-bit transfers and takes advantage of the high-speed PCI bus for high data transfer speed.

This design is based on the ever-popular Philips SJA1000 CAN stand-alone controller chip, which is employed in both automotive and industrial applications. The SJA1000 affords more benefits than its predecessor, the 82C200. It can operate in the BasicCAN mode — or PeliCAN mode, which supports the CAN 2.0B specification with 29-bit identifiers.

The SJA1000 operates from a 16 MHz clock and features a larger receive buffer and better acceptance-filtering. Data rates are possible up to 1 Mbps.

The PeliCAN mode is equipped with various features: error counters with read/write access; programmable error warning limit; last error code register; error interrupt for each CAN-bus error; arbitration lost interrupt with detailed bit position; single-shot transmission (no retransmission); listen-only mode (no acknowledge, no active error flags); acceptance-filter extension (4-byte mask); and reception of "own" messages (self-reception request).

The CANPCI is available in two models: the **CANPCI-DN** incorporates the DeviceNet physical layer, whereas the **CANPCI-CO** provides a CANopen physical layer.

Optically-isolated transceivers offer reverse-voltage and short-circuit protection for both the **CANPCI-DN** (implementing the DeviceNet 5-position, open-style connector) and the **CANPCI-CO** (implementing the CANopen DB-9 connector).

CONTEMPORARY CONTROLS

Specifications

Environmental	
Operating temperature	0°C to +60°C
Storage temperature	–40°C to +85°C
Humidity	10% to 95%, non-condensing

Power requirements	
	100 mA @ 5 V or 150 mA @ 3.3 V

Functionality	
Data rate	Up to 1 Mbps
Dimensions	4.72" x 2.52" (120 mm x 64 mm)
Connectors	DB-9 male connector is provided with the CANPCI-CO and 5-position, open-style male connector with screw terminals is provided with the CANPCI-DN
Shipping weight	1 lb. (0.45 kg)
I/O mapping	SJA1000 occupies 128 bytes

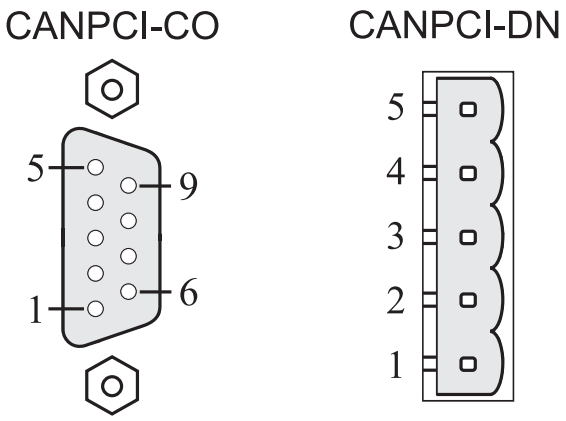
Compliance	
CANopen	CiA DRP 303-1
DeviceNet	Release 2.0
PCI	PCI r2.2 compliant

Regulatory Compliance	
	CE Mark; CFR 47, Part 15 Class A

Electromagnetic Compatibility

Standard	Test Method	Description	Test Levels
EN 55024	EN 61000-4-2	Electrostatic Discharge	6 kV Contact
EN 55024	EN 61000-4-3	Radiated Immunity	10 V/m, 80 MHz to 1 GHz
EN 55024	EN 61000-4-4	Fast Transient Burst	1 kV Clamp & 2 kV Direct
EN 55024	EN 61000-4-5	Voltage Surge	1 kV L-L & 2 kV L-Earth
EN 55024	EN 61000-4-6	Conducted Immunity	10 Volts (rms)
EN 55024	EN 61000-4-11	Voltage Dips & Interruptions	1 Line Cycle, 1 to 5 s @ 100% dip
EN 55022	CISPR 22	Radiated Emissions	Class A
EN 55022	CISPR 22	Conducted Emissions	Class B
CFR 47, Part 15	ANSI C63.4	Radiated Emissions	Class A

Connector Diagrams



Connector Pin Assignments

Function	CANPCI-CO	CANPCI-DN
V–	3, 6	1
CAN_L	2	2
Drain	5	3
CAN_H	7	4
V+	9	5
Not Used	1, 4, 8	—

Ordering Information

Model	Description
CANPCI-CO	CANPCI CANopen Module
CANPCI-DN	CANPCI DeviceNet Module

CONTEMPORARY CONTROLS
www.ccontrols.com

Contemporary Control Systems, Inc.
2431 Curtiss Street
Downers Grove, Illinois 60515 USA

Telephone (630) 963-7070
Fax (630) 963-0109