

### Features

- PC/104-compatible Control Area Network (CAN) card
- Two NXP SJA-1000 CAN controllers
- Transfer rates to 1 Megabits per second
- Compliant with CAN specifications 2.0A (11-bit ID) and 2.0B (29-bit ID)
- Jumper selectable termination resistors
- Jumper selectable IRQ and I/O base address
- Software drivers available for Linux and Windows®
- -40° to +85°C operating temperature
- +5V only operation
- Small size: 3.6 x 3.8 inches (90 x 96mm)
- Isolated version is also available
- Custom configurations for OEMs
- RoHS compliant

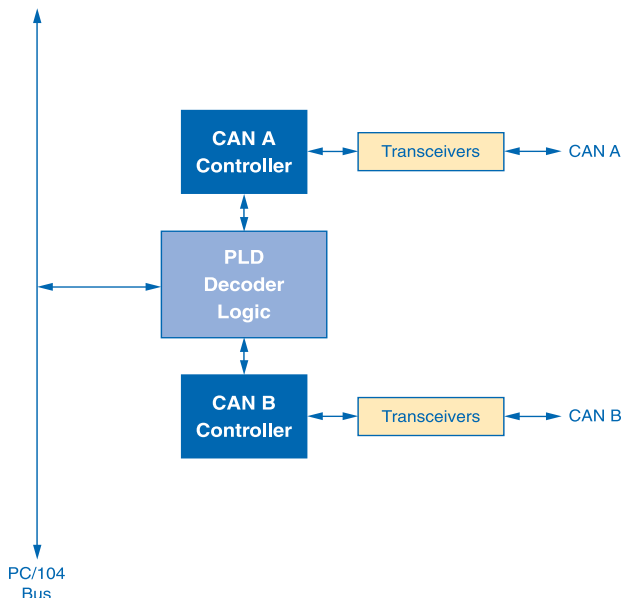


### Product Description

WinSystems' PCM-CAN-2 is a PC/104-compliant, Controller Area Network (CAN) peripheral module. This board uses two NXP SJA-1000 CAN controller ICs with advanced features for use in automotive and industrial applications. This board is also available in a single channel version, called the PCM-CAN-1.

CAN is a serial, asynchronous, multi-master communication protocol for connecting electronic control modules, sensors and actuators in automotive and industrial applications. The signal is encoded in a non-return-to-zero (NRZ) pattern and is sensed by all nodes. The CAN bus physical interface is similar to RS-485 two-wire, half-duplex communications.

On CAN bus systems, signal integrity is achieved by matching the impedance of the transmission line and thereby minimizing reflections. A jumper selectable, onboard 120 ohm resistor is provided for this purpose.



PCM-CAN-2 Block Diagram

## PCM-CAN-2: Dual Channel CAN PC/104 Module

**I/O Connectors** - Each CAN channel has its signal and power wired to two 10-pin 0.100 inch right angle headers, which allow endpoint or daisy chain connection. The optional WinSystems' cable, CBL-123-G-1-1.0, extends and converts it to a 9-pin D-sub type male connector to connect to the control area network.

**PC/104 Interface** - The PCM-CAN-2 is I/O mapped and each CAN controller occupies either 32 or 128 adjacent I/O registers depending on CAN 2.0A (BasicCAN) or CAN 2.0B (PeliCAN) mode selection. The base address and mode is jumper selectable. When two CAN controllers are present, they share a single user configurable interrupt, which is also jumper selectable for IRQ 3-7, 9-12, 14, or 15.

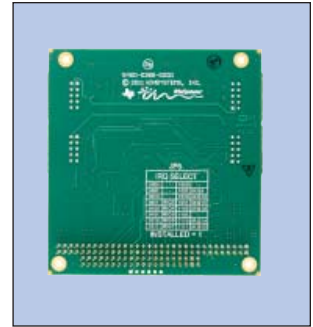
**Software** - The PCM-CAN-2 supports Linux, Windows XPe, and WES7. Drivers are available on our website.

**Isolated Configuration** - WinSystems offers a version of this board populated with high-speed isolated couplers and transformer isolated power supplies called the PCM-CAN-2-ISO. Each CAN channel can supply isolated 5VDC power to the respective interface or take isolated 5-12VDC power from the interface. Each channel has an independent on-board isolated +5VDC power supply and jumper connections for providing power to or receiving power from the CAN interface connectors. Each channel can provide up to 150mA of 5VDC power to the CAN interface or alternately accept power in the range of 5-12VDC from the interface. The power supply has overvoltage, overcurrent, and short circuit protection.



Isolated Configuration: PCM-CAN-2-ISO

**Custom Configurations** - WinSystems offers additional custom configurations for OEMs. Please contact an Applications Engineer to discuss your specific requirements.



Front and Back Picture of PCM-CAN-2

### Technical Specifications

#### Electrical

CAN Controllers Two NXP SJA-1000  
CAN Data Rate 1 Mbps

#### Power

Vcc  $\pm 5\%$  @ 500mA

#### Connectors

PC/104 16-bit stackthrough (feed through only)  
CAN 10-pin right angle 0.100" headers

#### Environmental

Operational from  $-40^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$   
RoHS compliant

#### Mechanical

Dimensions 3.6 x 3.8 inches (90 x 96mm)  
Weight 2.3 oz. (64 gm)  
PC board 0.078 inches, four layer FR4

### Ordering Information

(See website for complete ordering information and accessories.)

PCM-CAN-2	PC/104 dual channel non-isolated CAN card
PCM-CAN-1	PC/104 single channel non-isolated CAN card
PCM-CAN-2-ISO	PC/104 dual channel isolated CAN card
PCM-CAN-1-ISO	PC/104 single channel isolated CAN card

#### Accessories

CBL-123-G-1-1.0 10-pin header to 9-pin male D-sub cable

WinSystems reserves the right to make changes to products and/or documentation without further notification.

Product names of other companies may be trademarks of their respective companies.

