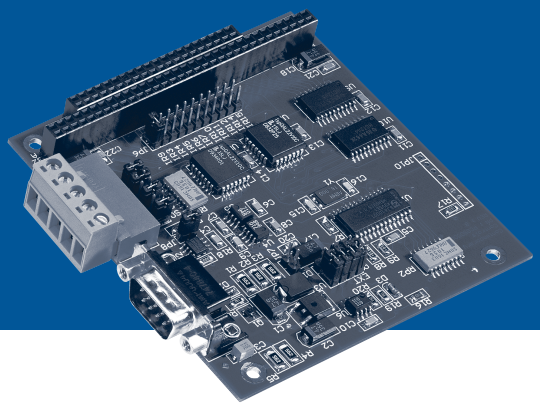
CAN104

Controller Area Network Module for PC/104 Bus Computers



Product Description

The CAN104 is a Controller Area Network (CAN) adapter for PC/104 bus computers. CAN is the data link layer technology used by DeviceNet and Smart Distributed System. The CAN104 supports 8-bit transfers and takes advantage of the additional interrupts on the expanded PC/104 bus.

The CAN104 incorporates the Philips SJA1000 CAN stand-alone controller chip which is widely used in both automotive and industrial environments. Besides being backward compatible with the older 82C200, the SJA1000 has more features than its predecessor. The 82C200 is restricted to BasicCAN (11-bit identifiers) while the SJA1000 operates in either BasicCAN or a new mode called PeliCAN which supports the CAN 2.0B specification (29-bit identifiers). The SJA1000 maintains extended frame passivity while in the BasicCAN mode.

Benefits

- Interfaces CAN to PC/104 computers
- Highly featured Philips SJA1000 controller
- Compatible PCA82C200 mode (defaults to BasicCAN mode)
- Extended receive buffer (64-byte FIFO)
- CAN 2.0B protocol compatibility
- Supports both 11-bit and 29-bit identifiers
- 16 MHz clock frequency
- Programmable CAN output driver configuration
- Sleep mode
- Choice of either open-style screw terminals or DB-9 connectors

Applications

- Machine Monitoring
- Environmental Control
- Test and Measurement
- Process Control
- Remote Data Application

The SJA1000 features a 16 MHz clock, a larger receive buffer and better acceptance filtering — including the ability to extend the acceptance mask to the data field. It has the ability to operate at data rates as great as 1 Mbps.

The CAN104 incorporates the DeviceNet physical layer with an optically isolated transceiver providing reverse voltage and short-circuit protection. Field connectors include the DeviceNet 5-position open style and DB-9 as defined by CAN in Automation (CiA)

The PeliCAN mode includes this list of 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 re-transmission); listen only mode (no acknowledge, no active error flags); hot plugging support (software driven bit rate detection); acceptance filter extension (4-byte code, 4-byte mask); and reception of ‘own’ messages (self reception request).

DeviceNet™ CiA

Specifications

Environmental	
Operating temperature:	0°C to +60°C
Storage temperature:	-40° to +85°C
Data Rates	50 kbps, 100 kbps, 125 kbps, 250 kbps, 500 kbps, 1 Mbps*
Dimensions	3.55" x 3.775" (90 mm x 95 mm)
Connectors	Male DB-9 and 5-position screw terminals are provided for CAN connection
Shipping Weight	1 lb. (0.45 kg)
I/O Mapping - BasicCAN	In BasicCAN mode, the CAN104 can occupy any of the following 32-byte blocks of I/O space
	000 020 040 060 080 0A0 0C0 0E0 100 120 140 160 180 1A0 1C0 1E0
	200 220 240 260 280 2A0 2C0 2E0 300 320 340 360 380 3A0 3C0 3E0
I/O Mapping - PeliCAN	In PeliCAN mode, the CAN104 can occupy any of the following 128-byte blocks of I/O space
	000 080 100 180 200 280 300 380
Interrupt Lines	Supports selection of IRQ2 through IRQ15
Compatibility	CAN 2.0A and CAN 2.0B

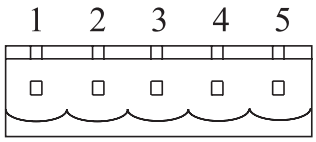
*Not recommended

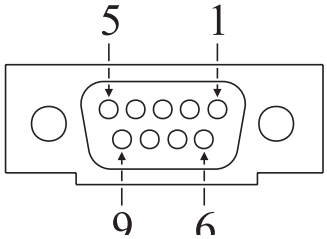
Power Requirements

Model	+5V
CAN104-DN	150 ma

Ordering Information

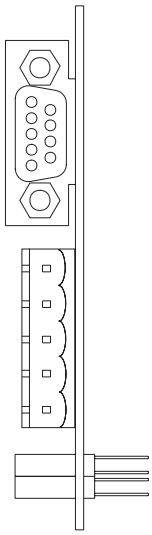
Model	Description
CAN104-DN	CAN PC/104 NIM





Connector Pin Assignments

Screw Terminal	Usage	DB-9
1	V-	3,6
2	CAN_L	2
3	Drain	5
4	CAN_H	7
5	V+	9
—	Not Used	1,4,8



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