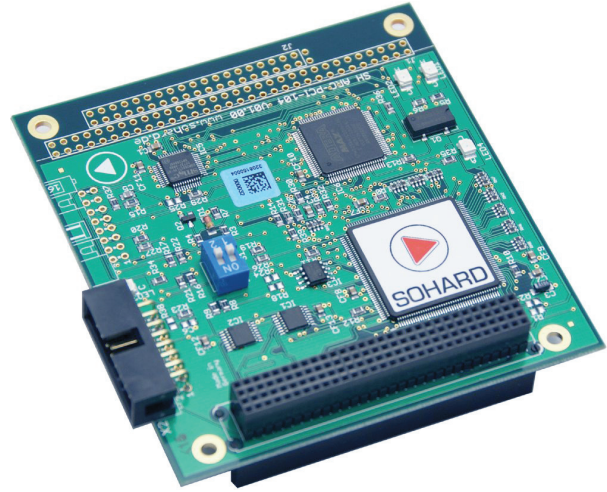# DATASHEET

SH ARC-PCI104

ARCNET card for PCI-104

Application & Functionality

The SH ARC-PCI104 is an ARCNET card for use in PC/104-Plus or PCI-104 systems.

Unlike the SH ARC-PC104 it is connected to the host via the PCI bus. Featuring a 32 bit address bus (instead of 16 bit) it allows for higher transfer rates. Due to the form factor it can immediately replace the SH ARC-PC104 in PC/104-Plus systems. When the SOHARD RAW ARCNET driver is used, not even the software has to be changed.

The card is suited for the 3.3 V and 5 V signal environment on the PCI bus. It features a 32-Bit data bus and thus, enables high transfer rates. A boxed header allows to connect SOHARD ARCNET interface modules for the connection to ARCNET networks with various signaling methods (sine dipulse, RS-485/EIA-485, RS485AC and optical) via coaxial, twisted pair or fiber optic cables.

As the SH ARC-PCI104 covers an elevated temperature range it is well suited for usage in devices lacking forced cooling as e.g. the Siemens SIMATIC Microbox 427B.

Design & Functionality

The card features the following components:

ARCNET controller
The ARCNET controller is COM20022 from SMSC. It supports bit rates up to 10 Mbit/s as well as additional settings.

PCI/104 Interface
The card allows for the use of interrupts from 2 to 15. It occupies only 8 I/O addresses with a adjustable base address (compatible to SH ARC-ISA, formerly SH FARC E3).

Field bus connections
All interface modules (please order separately) are connected to the PC/104 card by means of a ribbon cable.

Key features

32 bit bus
Automatic adaptation to 3.3 V and 5 V signal environment
ARCNET controller COM20022
Bit rates 156 kbit/s to 10 Mbit/s
Connector for 1 external ARCNET Interface module connected by ribbon cable (see also product data sheet 'Interface modules')
Mapping of the COM20022 registers into the I/O and Memory space of the PC
Fast controller access via Advanced-Memory Mode
Coaxial transceiver protected against invalid bit rate and mode
LEDs indicating power integrity, host access and coaxial enable
Elevated temperature range

Specification

Compatibility	ANSI/ATA 878.1, PCI 2.2, PCI-104 Specification Version 1.0, CE for industrial environment
Power requirements	5 V from PC, 4 W max.
Temperature range, operation	0°C to + 70°C
Temperature range, storage	– 20°C to + 85°C
Dimensions (w/h/d), in mm	90/96/11 (without connectors) according to PCI-104 specification
Weight	max 250 g incl. packaging

A security logic protects the dipulse transceiver of the interface module from being destroyed during operation by low data rates or by usage of backplane mode.

For technical information on the SOHARD ARCNET interface modules usable with the card, please have a look at our product datasheet "ARCNET Interface Modules".

Order Information

Product name	Description
SH ARC-PCI104	PCI-104 ARCNET card with one port for an interface module type „PC104" [1]

[1] Interface module must be ordered separately.
User manual und CD with drivers are included with "SH ARC-PCI104".

Interface module for SH ARC-PCI104

Product name	Bit rate	Signal	Socket	Cable type
SH KOAX-PC104	2.5 Mbit/s	sine dipulse	BNC	coaxial cable RG-62
SH LWLSMA-PC104	156.25 kbit/s – 2.5 Mbit/s	optical	FSMA	multi-mode fibers
SH LWLST-PC104	156.25 kbit/s – 2.5 Mbit/s	optical	ST/BFOC	multi-mode fibers
SH LWLTOS-PC104	156.25 kbit/s – 2.5 Mbit/s	optical	TODX296/TOSLINK	multi-mode fibers
SH RS485-PC104	156.25 kbit/s – 10 Mbit/s	RS-485/EIA-485	DE-9/D-sub	twisted pair cable
SH RS485AC-BNC-PC104	2.5 – 10 Mbit/s	RS485AC	BNC	coaxial cable RG-62
SH RS485AC-RJ45-PC104	2.5 – 10 Mbit/s	RS485AC	RJ45	twisted pair cable
SH TWP-PC104	2.5 Mbit/s	sine dipulse	RJ45	twisted pair cable

Please feel free to contact as for customized interface modules.