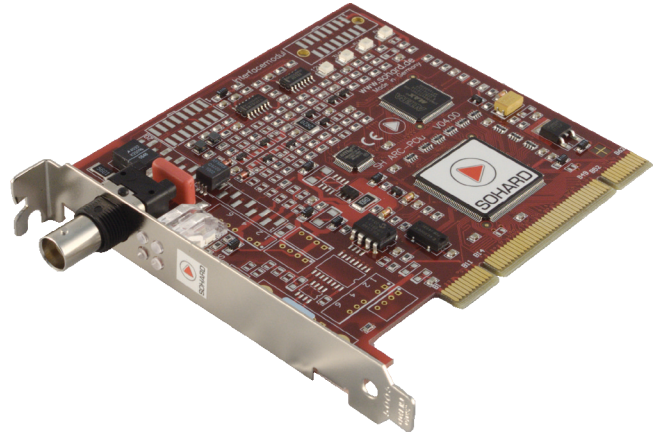# DATASHEET

SOHARD
EMBEDDED SYSTEMS

SH ARC-PCIu

Universal ARCNET PCI card
for 3.3 V and 5 V signal environment

Scope of application

The SH ARC-PCIu ARCNET card series has been developed for use in industrial PCs. The cards are available with coaxial interface, galvanically decoupled RS-485/EIA-485) interface or as compound cards featuring different ARCNET interfaces for connection to ARCNET networks with various signaling methods (sine dipulse, RS485AC and optical) via coaxial, twisted pair or fiber optic cables.

When you update to a PC with PCI interface the card can immediately substitute other SOHARD ARCNET network adapters, if your application is using the SOHARD RAW ARCNET interface and the corresponding driver.

Design & Functionality

The card features the ARCNET controller COM20022 from SMSC which is completely compatible with the COM20020. It supports standardized bit rates up to 10 Mbit/s.
The SH ARC-PCIu is a 32 bit card conforming to PCI v. 2.2. The card is a plug and play device. Configuration of addresses and interrupts is simple. It may be addressed via I/O addresses or via memory.

4 LEDs indicate the following activities:

- Coaxial transceiver active/inactive (back plane mode on/off).
- Activity on ARCNET receiving channel
- Activity on ARCNET sending channel
- PC access to ARCNET controller

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

Key features

32 bit bus
ARCNET controller COM20022
Bit rates 156 kbit/s to 10 Mbit/s
Mapping of the COM20022 registers into the I/O and memory space of the PC
Automatic adaptation to 3.3 V and 5 V signal environment
Usable in legacy systems owing to DOS support
Fast controller access via Advanced-Memory Mode
Coaxial transceiver protected against invalid bit rate and transmission mode
Switchable termination of the RS-485/EIA-485 interface
Compound cards featuring RS485AC, TWP and various optical interfaces are also available

Specification

Compatibility	ANSI/ATA 878.1, PCI 2.2, CE for industrial environment
Power requirements	3.3 V & 5 V from PC, max. 4 W
Temperature range, operation	0°C to + 55°C
Temperature range, storage	– 20°C to + 85°C
Dimensions (w/h/d), in mm	120/107/19 (without connectors and slot bracket)
Weight	max 250 g (incl. Packaging)

Drivers

Universal RAW driver (UARC)	Windows 98/ME/NT/2000/XP/2003 Windows 2008/Vista/7/8/10/11 [1]
Other drivers	Linux [1]

[1] Detailed overview of drivers and supported OS can be found on www.sohard.de

Order Information

Product name	Bit rate	Signal	Socket	Cable type
SH ARC-PCIu-K	2.5 Mbit/s	sine dipulse	BNC	coaxial cable RG-62
SH ARC-PCIu-LWLSMA [1]	156.25 kbit/s – 2.5 Mbit/s	optical	FSMA	multi-mode fibers
SH ARC-PCIu-LWLST [1]	156.25 kbit/s – 2.5 Mbit/s	optical	ST/BFOC	multi-mode fibers
SH ARC-PCIu-LWLTOS [1]	156.25 kbit/s – 2.5 Mbit/s	optical	TODX296/TOSLINK	multi-mode fibers
SH ARC-PCIu-R	156.25 kbit/s – 10 Mbit/s	RS-485/EIA-485	DE-9/D-sub	twisted pair cable
SH ARC-PCIu-RS485AC-BNC [1]	2.5 – 10 Mbit/s	RS485AC	BNC	coaxial cable RG-62
SH ARC-PCIu-RS485AC-RJ45 [1]	2.5 – 10 Mbit/s	RS485AC	RJ45	twisted pair cable
SH ARC-PCIu-TWP [1]	2.5 Mbit/s	sine dipulse	RJ45	twisted pair cable

[1] 2 PC slots are required.
User manual and CD with drivers are included with "SH ARC-PCIu".