

SH ARC-PCIe

ARCNET PCI Express cards



Scope of application

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

When you update to a PC with PCI Express 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-PCIe is a 32 bit card conforming to PCI Express 1.0a. 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 receive channel
- Activity on ARCNET transmission channel
- PC access to ARCNET module

For technical information on the ARCNET interfaces of SH ARC-PCIe product family, please have a look at our product datasheet "ARCNET Interface Modules".

Key features

Compatible to PCI Express Base Specification Rev. 1.0a
32 bit bus
Using single PCIe lane (PCIe x1)
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 transmission mode
Switchable termination of the RS-485 interface
Compound cards featuring RS485AC, TWP and various optical fiber interfaces are also available

Specification

Compatibility	ANSI/ATA 878.1, PCIe 1.0a, CE for industrial environment
Power requirements	3 V & 12 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 XP/2003/2008/Vista/7 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-PCIe-K	2.5 Mbit/s	sine dipulse	BNC	coaxial cable RG-62
SH ARC-PCIe-LWLSMA	156.25 kbit – 2.5 Mbit/s	optical	FSMA	multi-mode fibers
SH ARC-PCIe-LWLST	156.25 kbit – 2.5 Mbit/s	optical	ST/BFOC	multi-mode fibers
SH ARC-PCIe-LWLTOS	156.25 kbit – 2.5 Mbit/s	optical	TODX296/TOSLINK	multi-mode fibers
SH ARC-PCIe-R	156.25 kbit – 10 Mbit/s	RS-485/EIA-485	DE-9/D-Sub	twisted pair cable
SH ARC-PCIe-RS485AC ¹⁾	2.5–10 Mbit/s	RS-485/EIA-485 ²⁾	RJ45	twisted pair cable
SH ARC-PCIe-TWP ¹⁾	2.5 Mbit/s	sine dipulse	RJ45	twisted pair cable

¹⁾ 2 PC slots are required. ²⁾ RS-485/EIA-485 via signal transformer (AC coupled)
User manual and CD with drivers are included with "SH ARC-PCIe".