SOHARD
EMBEDDED SYSTEMS

SH ARC-PCIe-RS-RJ45

ARCNET PCI Express card

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/EIA-485 interface or as compound cards featuring different ARCNET interfaces for connection to ARCNET networks with various signaling methods (Sine dipulse, RS-485AC 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. 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

Key features

32 bit bus
Using single PCIe lane (PCIe x1)
ARCNET controller COM20022
Bit rates 156 kbit/s to 10 Mbit/s
Switchable termination of the RS-485/EIA-485 interface
Two RJ45 sockets to enable simple stubs to the RS-485 bus
Mapping of the COM20022 registers into the I/O and memory space of the PC
Fast controller access via Advanced-Memory Mode

Specification

Compatibility	ANSI/ATA 878.1, PCI Express Base Spec. 1.0a, CE for industrial environment
Power requirements	3.3 V & 12 V from PC, 4 W max.
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-RS-RJ45	156.25 kbit/s – 10 Mbit/s	RS-485/EIA-485	RJ45	twisted pair cable

User manual and CD with drivers are included with "SH ARC-PCIe-RS-RJ45".