DATASHEET

SOHARD
EMBEDDED SYSTEMS

SH ARC-MiniPCIe

ARCNET PCI Express Mini Cards

Scope of application

The SH ARC-MiniPCIe has been developed for us in Industrial PCs featuring a PCI Express Mini Card interface. The card will be connected to a customer-specific ARCNET interface module that we will design according to your requirements as to form and signalling method (Sine dipulse, RS485, RS-485AC and optical) via coaxial, twisted pair or fiber optic cables.

Our existing ARCNET interface modules may also be built into your PC and be controlled by the SH ARC-MiniPCIe.

When you change to a PC with a PCI Express Mini Card interface the card can immediately substitute other SOHARD ARCNET network adapters, if your application uses the SOHARD ARCNET RAW driver.

Design & Functionality

The SH ARC-MiniPCIe features SMSC/Microchip's ARCNET Controller COM20022 which support bit rates up to 10Mbit/s.

The card has a 32 Bit data and address bus and may be accessed to either via I/O or memory. It conforms to the PCI Express Specification 1.0a and the PCI Express Mini Card Electromechanical Specification 1.1

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
Using single PCIe lane (PCIe x1)
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
Fast controller access via Advanced-Memory Mode
High Impedance Transceivers protected against invalid bit rate and transmission mode
Costumer-specific ARCNET interface module will be connected via a 14 pin connector

Specification

Compatibility	ANSI/ATA 878.1, PCI Express Base Spec. 1.0a, PCI Express Mini Card Electromechanical Specification 1.1,CE for industrial environment
Power requirements	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	30/50/5 (without connectors)
Weight	100 g max. (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-MiniPCIe-K	2.5 Mbit/s	sine dipulse	BNC	coaxial cable RG-62
SH ARC-MiniPCIe-LWLSMA	156.25 kbit/s – 2.5 Mbit/s	optical	FSMA	multi-mode fibers
SH ARC-MiniPCIe-LWLST	156.25 kbit/s – 2.5 Mbit/s	optical	ST/BFOC	multi-mode fibers
SH ARC-MiniPCIe-LWLTOS	156.25 kbit/s – 2.5 Mbit/s	optical	TODX296/TOSLINK	multi-mode fibers
SH ARC-MiniPCIe-R	156.25 kbit/s – 10 Mbit/s	RS-485/EIA-485	DE-9/D-sub	twisted pair cable
SH ARC-MiniPCIe-RS485AC-BNC	2.5 – 10 Mbit/s	RS485AC	BNC	coaxial cable RG-62
SH ARC-MiniPCIe-RS485AC-RJ45	2.5 – 10 Mbit/s	RS485AC	RJ45	twisted pair cable
SH ARC-MiniPCIe-TWP	2.5 Mbit/s	sine dipulse	RJ45	twisted pair cable
SH ARC-MiniPCIe-X [1]	156.25 kbit/s – 10 Mbit/s	Various	Various	Various

1) Please contact SOHARD to communicate your requirements for a customer-specific ARCNET interface module (transmission physics, connectors, geometry, etc.)
User manual and CD with drivers are included.