PHOENIX 485 PCI EXPRESS ARCNET CARD

INFORMATION

The Phoenix 485 Peripheral Component Interconnect Express (PCIe) ARCNET card implements several specialised functions. These functions include two ARCNET channels with RS485 electrical interfaces, two synchronisation signal interfaces (SYNC), eight configurable Transistor-Transistor Logic (TTL) Digital Inputs/Outputs (DIO), sixteen SYNC timer interrupts and one free-running counter.

These functions are connected to the host computer via a PCIe interface and are made available to the driver software through a memory mapped Base Address Register (BAR) of the PCIe.

FEATURES

- Interfaces ARCNET with PCI Express capable computers
- Variable data rates up to 10 Mbps utilising the various EIA-485 transceiver options
- PCIE 2.0 with bus-mastering and DMA
- Low latency interrupts
- 2x COM2002i 10 Mbps ARCNET channels
- Internal and external sync capability
- TTL digital I/O for debugging
- High resolution free running counter for timestamping

APPLICATIONS

- Development and integration of complex systems featuring several subsystems.
- Subsystems can be simulated by separate INtime applications containing operational logic with PCIe ARCNET cards to implement communications.
- Detailed subsystem telemetry applications.

SPECIFICATIONS

PCIe	Phoenix PCIe ARCNET cards implement the PCIe 2.0 standard with bus-mastering and direct-memory access (DMA) capabilities. Message signalled interrupts (MSI) are used for low latency interrupt capability and to eliminate hardware restrictions that are typically encountered with legacy hardware interrupt request lines.
ARCNET	ARCNET functionality is implemented using two physical COM2002i 10 Mbps ARCNET (ANSI 878.1) integrated circuits which are managed by firmware. This design ensures fully configurable ARCNET channels and adds useful features such as accessing received data via DMA.
Sync	SYNC functions are used to generate or consume synchronisation signals. Generated signals are fully configurable, and consumed signal are fully monitored. Either of the onboard SYNC signals can also be setup to slave to the other with a programmable time delay, resulting in deterministic inter-operation between the channels.
Timer	SYNC timers are configured to generate an interrupt based on either of the SYNC channels. A programmable delay allows for staggered interrupts to achieve deterministic process scheduling.
DIO	Eight TTL DIO are configurable as either inputs or outputs to extend the capabilities of the hardware.

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Free Running Counter	A 32-bit free-running counter with 1 microsecond resolution is made available as an independent time source and event timestamping within the firmware.
Interrupts	Each SYNC timer and ARCNET channel implements an MSI. A timestamp corresponding to each MSI is also recorded for exact event tracking.
Mechanical	
Dimensions	165mm x 95mm
Weight	0.115 kg
Environmental	
Operating Temperature	0 °C to +60 °C
Storage Temperature	-40 °C to +85 °C
Relative Humidity	10-95% non-condensing
Protection	IP30
Warranty Terms	
Period	12 months

ORDERING INFORMATION

Part Number	Details	Configuration
PCIE1-00000/1	Phoenix 485 ARCNET Card	Supplied with Phoenix 485 Firmware SW Programmers Manual.

Product images are for illustrative purposes only and may differ from the actual product.

Specifications are subject to change without notice.

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