

Product Overview

The RapidM Synchronous Serial Card (RCSC-PCle) is a PC-based interface card designed to support the NATO defence communications protocols STANAG 5066 and STANAG 4691 requiring synchronous serial communication interfaces. The RCSC-PCle is a dual port data communication equipment (DCE) device based on the PCI Express (PCIe) expansion bus standard.

The RCSC-PCle provides high-speed asynchronous and synchronous serial communication interfaces. Two RS-232 serial ports capable of data rates up to 384 kbps for synchronous and 460.8 kbps for asynchronous. The card is based on Altera FPGA technology for maximum reliability in data intensive applications. The RCSC-PCle software driver and utilities make installation and operation easy using Microsoft Windows or Linux operating systems.

External DCE Interfaces (Dual DA15 Male)

- EIA 530 Synchronous/Asynchronous
- Electrical: RS 232
- Data rate
 - 50 bps to 384k bps (Sync)
 - 75 bps to 460k8 bps (Async)
- Asynchronous settings:
 - Data bits: 5,6,7 or 8 bits
 - Parity: Odd, Even, Mark, Space or None
 - Stop bits: 1 or 2
 - Flow Control: None, RTS/CTS
- Synchronous settings:
 - Clock source: Internal / External
 - Polarity: Normal / Inverted

PCI Express X1 Compliant

Synchronous card (MD1 size) is provided with a full size or Low profile bracket for space constrained PCs.

Security

RMSC-PCle Synchronous PCIe card can be used with standard serial Cryptos.

DLL Functionality

- Management functions
- Port configuration functions
- Interface (Read/Write) functions

The DLL allows the user application to set and get configuration information from the RCSC-PCle. Allow the application to set and get management information from the Synchronous Card and to clear file buffers.

Read and Write data to/and the card.

Interface DLL

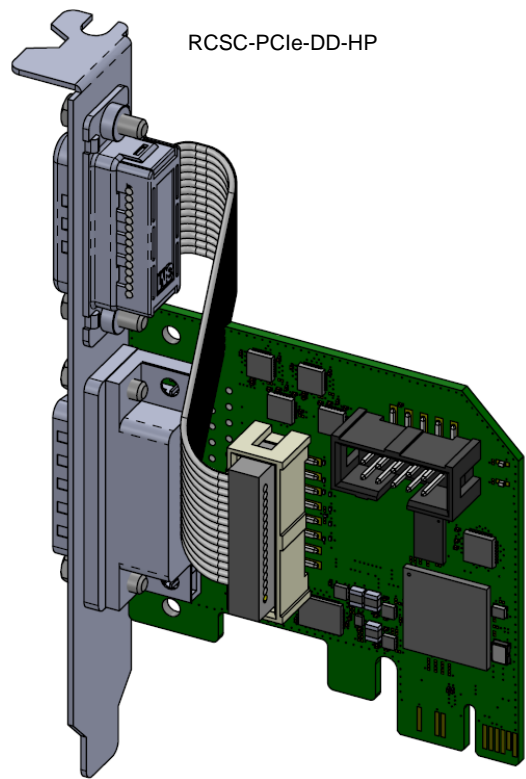
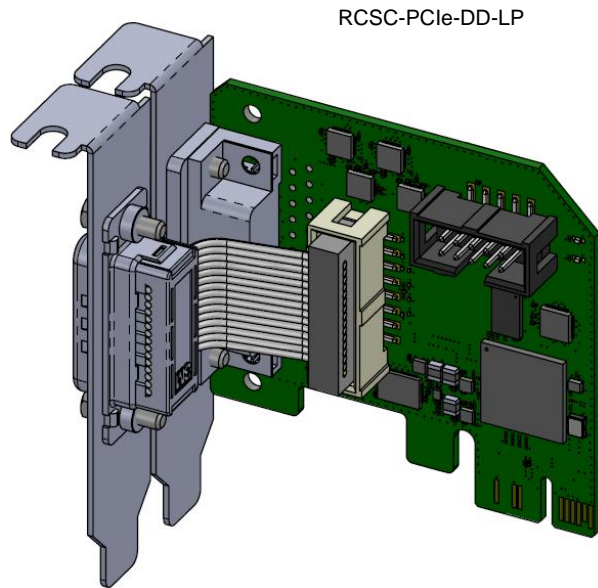
- DLL API provided
- Manage and configure serial card

The Synchronous PCIe Serial Card is shipped with Windows 7 or Linux compliant setup application that installs the Serial Card Driver and interface DLL on the user system.

A Windows 7 or Linux RHED6 application can interface with the synchronous card via the API exposed by the interface DLL.

Fig 1: RCSC-PCIe Hardware Configurations

- LEFT: Dual DCE, Low Profile (DD-LP)
- RIGHT: Dual DCE, High Profile (DD-HP)



STANDARD	CHARACTERISTICS
DATA INTERFACE (DUAL DCE)	RS-232 unbalanced, EIA 530A compliant (DA15 connector) Half & Full Duplex operation, sync, standard async and high-speed mode supported: <ul style="list-style-type: none"> • Synchronous: Data Rate: 50 to 385 kbps, Clock: Internal / Ext., Data polarity: norm / inv. • Asynchronous: 75 to 460800 bps, Full Duplex, 5/6/7/8 bit data, 1, 2 stop bits, Flow ctrl: CTS/RTS or None, Data polarity: norm / inv.
PCI EXPRESS	PCI Express X1 compliant
DRIVER & DLL	Windows 7 compliant driver Linux RHED6 installation procedure Application API provided
PINOUTS	1-GROUND, 2-TXD, 3-RXD, 4-RTS, 5-CTS, 6-DSR, 7-DCD 8-GROUND, 9-TXCLKOUT, 10-TXCLKIN, 11-RXCLKIN, 12-DTR, 13-DTR, 14-RI, 15-No Connect (N/C)
CABLING	Standard Common of the Shelf Cable
CARD SIZE	"MD1" size : 67.23 x 57.70 mm
BRACKET	The synchronous card can be fitted with either full size bracket or low profile bracket. When the low profile bracket is used, the second data port will occupy an additional slot.
ELECTRICAL	Current Consumption: +3.3VDC, 200 mA Power Consumption: 1 W
ENVIRONMENTAL	Storage Temperature: -20°C to 85°C Operating Temperature: 0°C to 40°C Operating Humidity: 5 to 95% non-condensing
CERTIFICATION	IEC 60960-1:2005 + A1:2009 + A2:2013/SANS 60950-1:2014

ORDERING INFORMATION	STOCK NUMBER	DESCRIPTION
RCSC-PCIe (Dual Data, Low Profile)	RMX-AC-SCD2-L02	RCSC: PCIe SYNC Card, DATA X2 LP V02
RCSC-PCIe (Dual Data, High Profile)	RMX-AC-SCD2-H02	RCSC: PCIe SYNC Card, DATA X2 HP V02

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