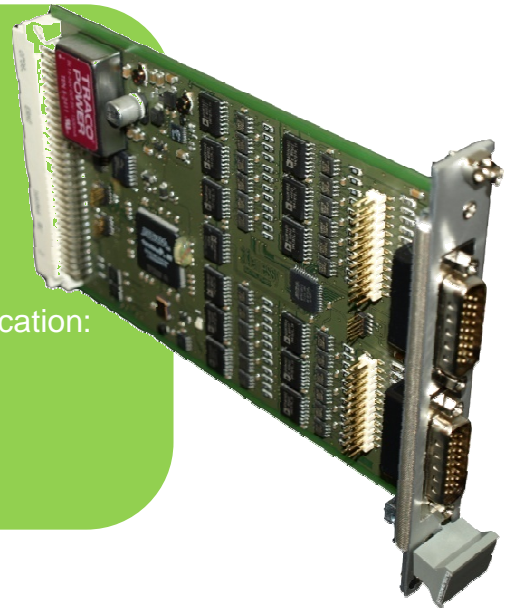


SyCTRL RS422-485

SyCTRL RS485 board

- 24 RS485/422 transceiver channels
- In line resistor adaptation
- Optional integrated termination resistance
- Customizable for various communication protocol or application:
 - UART
 - ML & DS-16
 - Pulse generation
 - user request



Overview

The RS485 board is a 24 x RS422 / 485 bi-directional channel board designed for RS422 / RS485 balanced differential serial link. The line resistance and the termination resistance are hardware configured depending on the need.

With its embedded Altera Cyclone III FPGA and its transceivers, the RS485 board is able to perform Memory Load (ML), DS-16, pulse generation and synchronization signals up to 5 MHz per channel.

The RS485 board is mounted in any rear slot of any Chassis.

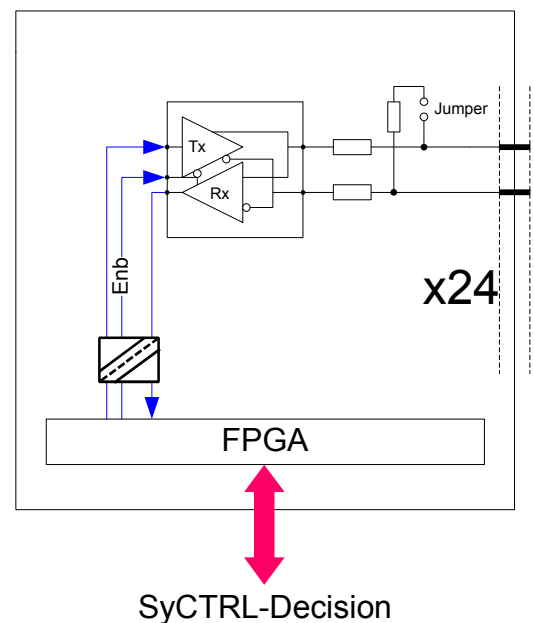
It is managed by a standard Decision board and can be mixed with any SyCTRL rear mounted slave board (analog IO, LCL, RS485, HPC, ...).

Downtime optimization

The RS485 board embeds its own parameters, minimizing its downtime to the board replacement in case of failure.

Integrated Built-In self test

The RS485 board embeds its own built-in self test which gives a clear status of the transceivers (RX /TX).



SyCTRL RS422-485

Transceiver characteristics

Number of channel	24
Circuit type	SP485EN
Signal transfer	DC coupled
Zero reference	Differential
Output voltage without resistor	5 V
Line matching resistor	56 Ω (adaptable)
Line termination resistor	120 Ω (adaptable)
Diff. Input high level	> 0.15V
Diff. Input low level	< - 0.15V
Fault voltage emission	- 0.3V to 5.5V
Fault voltage tolerance	\pm 15V
Communication rate	5 MHz

Embedded design

Embedded FPGA	Cyclone III EP3C16
	15408 logic elements
	516k Bit of RAM
	4 PLLs

Communication protocol

Example of already implemented protocol or application:

- UART protocol
- ML & DS-16 (SPI) protocol
- Pulse generation (1 PPS, synchronization, ...)

User defined protocol Please contact us.

Power characteristics

Power consumption	2 W
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Environmental

Operating environment

Temperature	10 to 40 $^{\circ}$ C
Humidity	40 to 90% noncondensing
Pressure	800 to 1050 mbar

Storage environment

Temperature	-10 $^{\circ}$ C to 60 $^{\circ}$ C
Humidity	up to 90% noncondensing
Pressure	800 to 1050 mbar

Mechanical

Size

sc290	3HU x 4HP x 220mm (*)
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Weight

sc290	180 g
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Connector

sc290	2x D-Sub 26 male
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(*) 1 HU = 44.45 mm, 1 HP = 5.08 mm

