2mm_card-edge_connector_adapter

Features

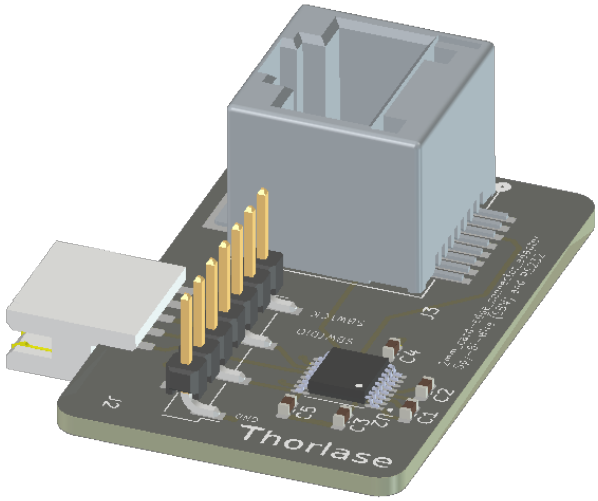
- Compact
- Spy-Bi-Wire (SBW) interface
- RS232 interface

Applications

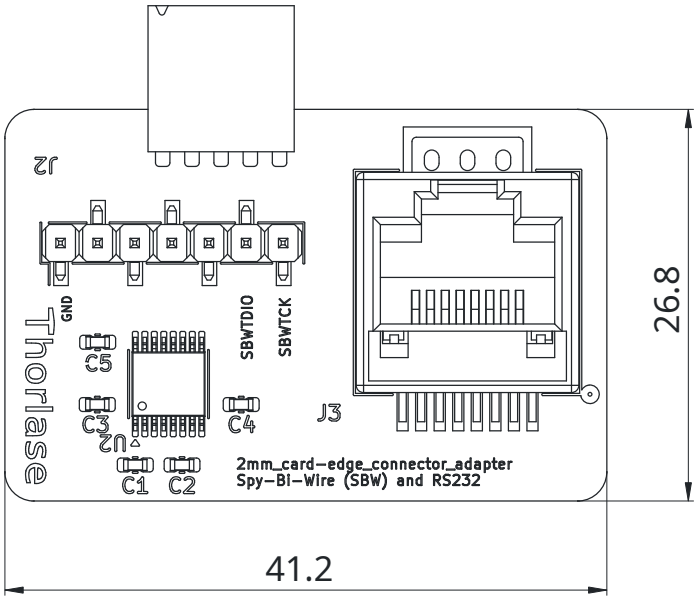
- Serial control
- Programming

Description

The RS232SBW is a card edge adapter for boards with Texas Instruments MSP430 microcontroller. It gives connection to the Spy-Bi-Wire (SBW) interface for programming and to Rx – Tx via MAX3232E RS-232 Line Driver and Receiver. The adapter is intended for the TEC-controller_qbrick Thermoelectric Cooler (TEC) controller or other boards with MSP430. The RS232 connector is a 8p8c RJ45 Jack. That is the smallest standard connector for RS232, and hybrid RJ45 to DB9 (COM) adapters are available.



Drawing (mm)



Connector pinning

J3 Jack Modular Connector 8p8c (RJ45, Ethernet) Vertical Unshielded
Molex 0855135013

pin	Name	Description	Levels min, max
3	RS232_RXD		-25V, +25V
4	GND	Common system GND	0V
5	RS232_TXD		-5.4V, + 5.4V
others		Not connected	

J2 Connector Header Surface Mount 7 position 0.100" (2.54mm),
Harwin Inc. M20-8770742

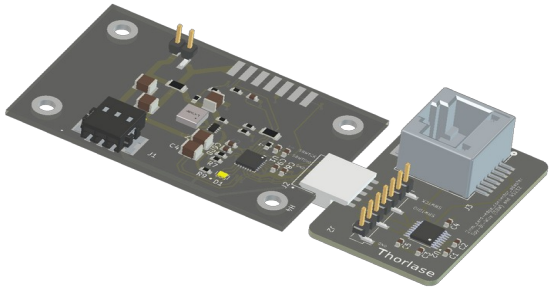
pin	Name	Description	Levels
1	GND	Common GND	0V
2		Not connected	open circuit
3	+3.3V	+3.3V supply	+3.3V
4	RXD	MSP430FR2433 pin 16 P2.5/UCA1RXD/UCA1SOMI_16 UART RX	3.3V logic
5	TXD	MSP430FR2433 pin 17 P2.6/UCA1TXD/UCA1SIMO_17 UART TX	3.3V logic
6	SBWTDIO	MSP430FR2433 pin 1 SBWTDIO Spy-Bi-Wire Interface (SBW) for programming and debugging	3.3V logic
7	SBWTCK	MSP430FR2433 pin 2 SBWTCK Spy-Bi-Wire Interface (SBW) for programming and debugging	3.3V logic

J1 SSL Connector 10 Position Adapter, Bridge Board to Board 0.079" (2.00mm)
KYOCERA AVX 009159010061916

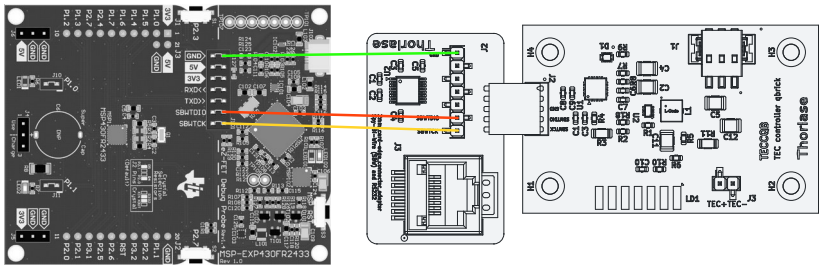
pin	Name	Description	Levels
1	+3.3V		+3.3V
2		Not connected	open circuit
3		Not connected	open circuit
4		Not connected	open circuit
5	GND	Common GND	0V
6	SBWTCK	MSP430FR2433 pin 2 SBWTCK Spy-Bi-Wire Interface (SBW) for programming and debugging	3.3V logic
7	SBWTDIO	MSP430FR2433 pin 1 SBWTDIO Spy-Bi-Wire Interface (SBW) for programming and debugging	3.3V logic
8	GND	Common GND	0V
9	TXD	MSP430FR2433 pin 17 P2.6/UCA1TXD/UCA1SIMO_17 UART TX	3.3V logic
10	RXD	MSP430FR2433 pin 16 P2.5/UCA1RXD/UCA1SOMI_16 UART RX	3.3V logic

Application Information

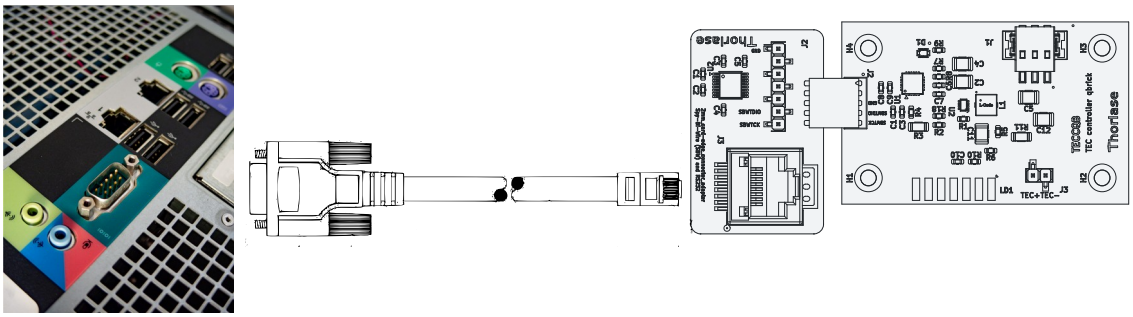
The RS232SBW gives RS232 and SBW connections to boards with Texas Instruments MSP430 microcontroller. The connection is via a compact 10 position board edge connector (J1). It connects to the microcontroller board as shown in the figure.



SBW connection for programming and debugging



RS 232 connection for serial control

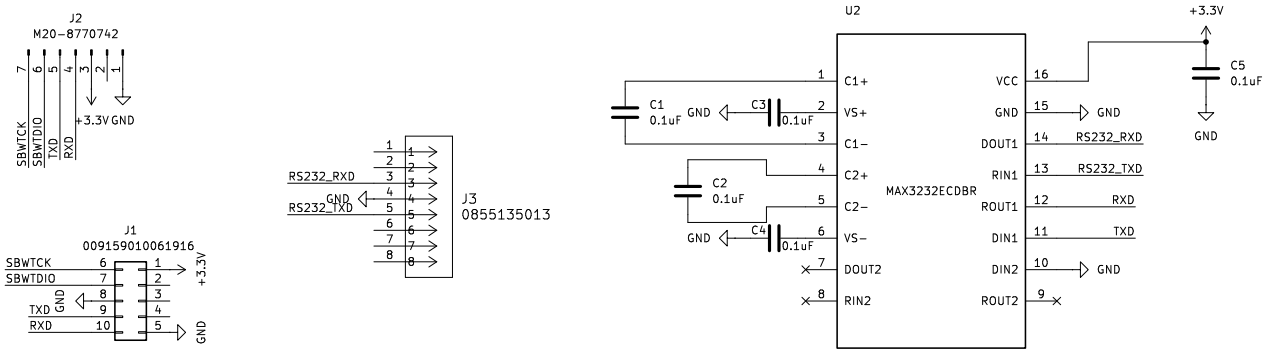


List of accessories

This is a list of accessories that are not included in the kit but are often used together with the kit.

Description	Supplier	Part number
Adapter Connector D-Sub, 9 Pin Female To Modular, Female Jack, 8p8c (RJ45) Gray	Cinch Connectivity Solutions AIM-Cambridge	40-9538F
Modular Cable Plug to Plug 8p8c (RJ45, Ethernet) 5.00' (1.52m) Unshielded	Cinch Connectivity Solutions AIM-Cambridge	73-7790-5
MSP430FR2433 LaunchPad™ Programmer Debugger	Texas Instruments	MSP-EXP430FR2433
7 Position Rectangular Housing Connector Receptacle Black 0.100" (2.54mm)	Harwin Inc.	M20-1060700
Black 22 AWG Jumper Lead Socket to Socket Tin 11.8" (300.0mm)	Würth Elektronik	661161122030

Schematic



Document control

Version	Apply to	Data
Datasheet_2mm_card-edge_connector_adapter	2mm_card-edge_connector_adapter	20261030