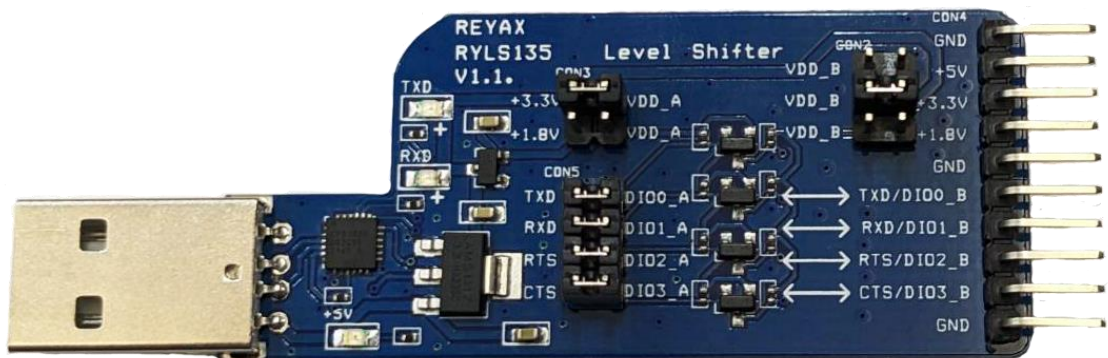


# RYLS135

USB to 1.8V/3.3V/5V UART bridge with 4-Bit Bidirectional Voltage Level Shifter

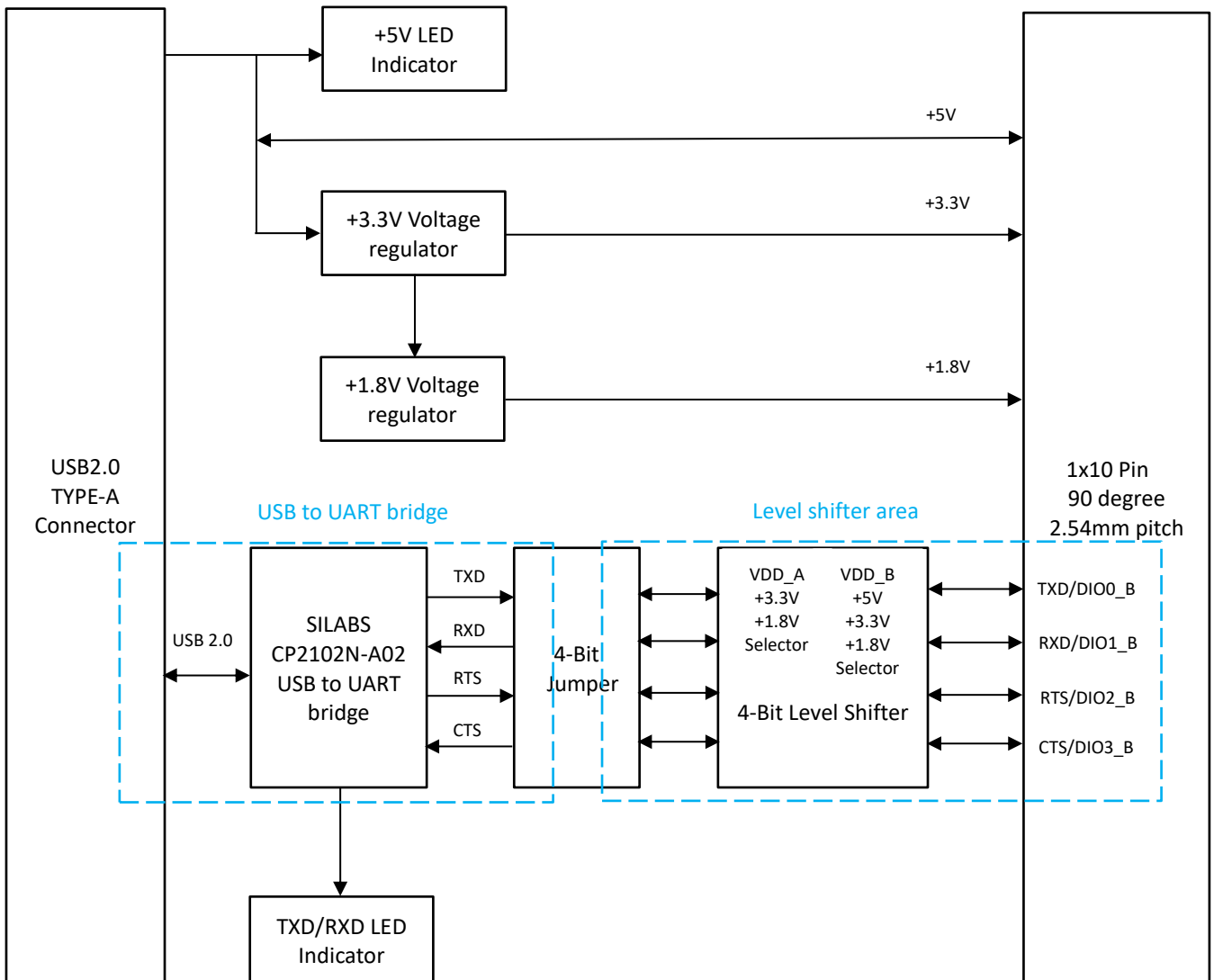
Datasheet



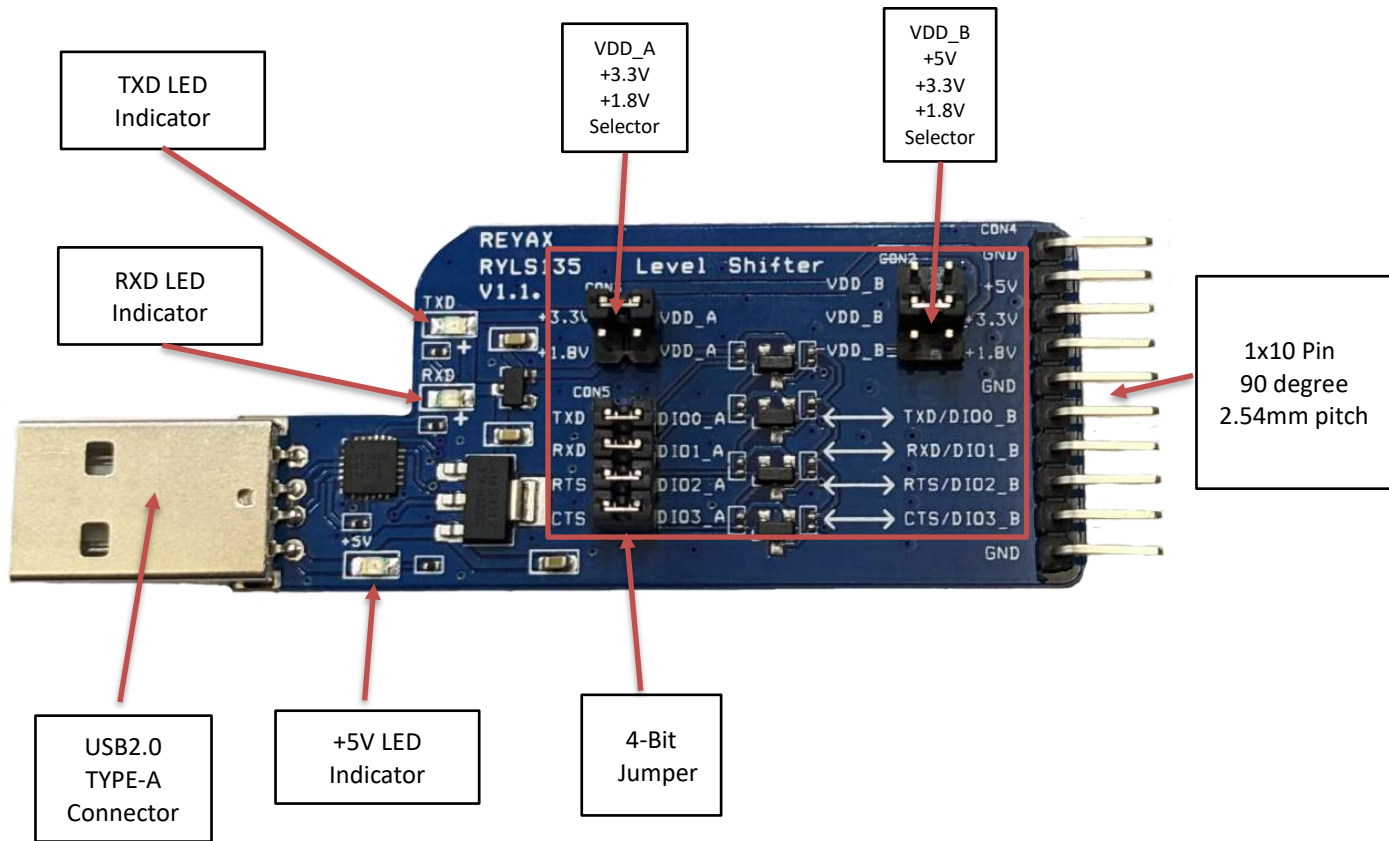
# PRODUCT DESCRIPTION

The RYLS135 includes a SILABS CP2102N-A02 USB 2.0 full-speed USB to UART transceiver and 4-Bit 1.8V/3.3V/5V Voltage Level Shifter. It can convert 1.8V/3.3V/5V voltages and is very convenient for various testing purposes.

# BLOCK DIAGRAM



## PIN FUNCTION DESCRIPTION

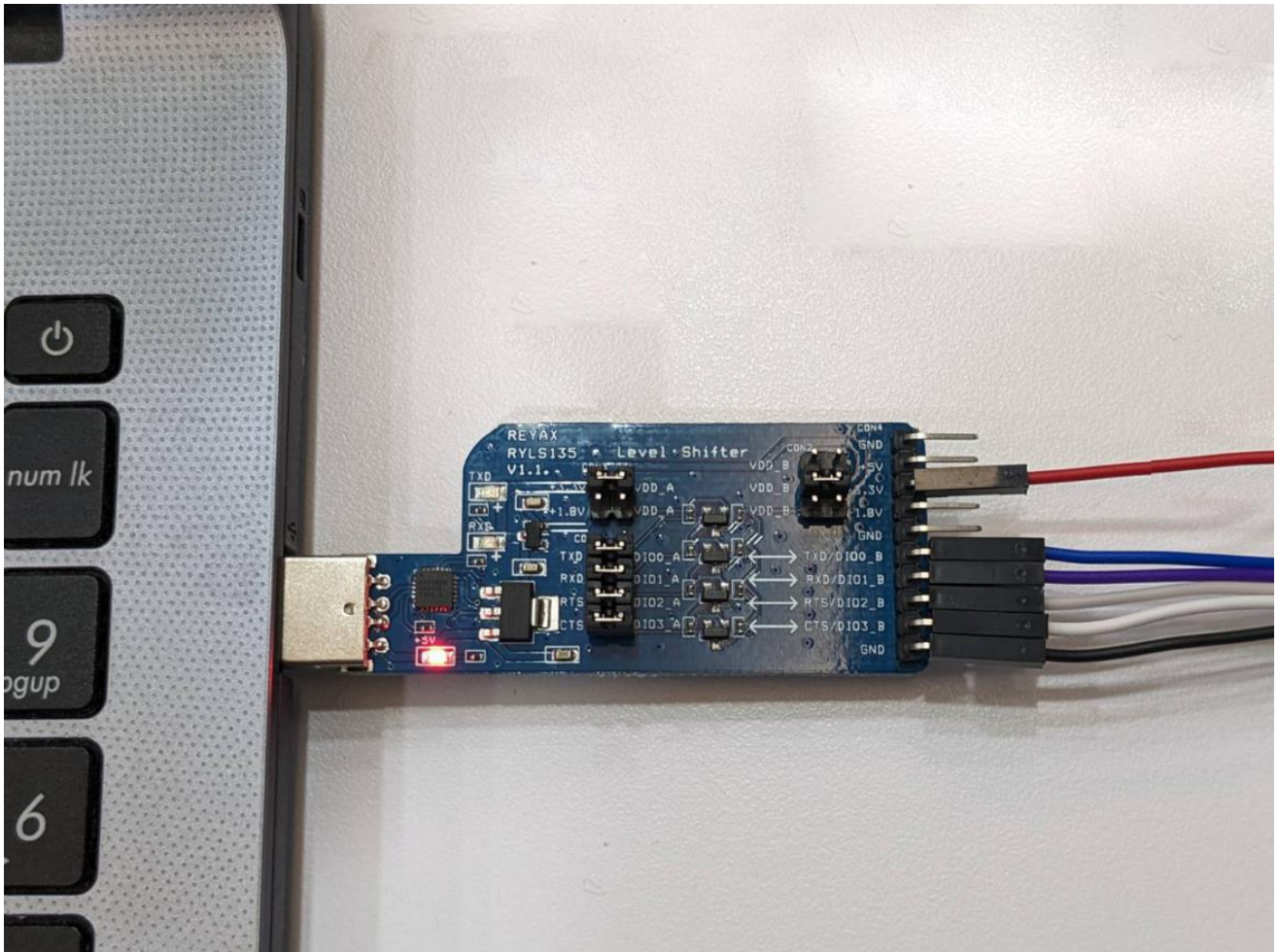


## 1X10 PIN DESCRIPTION

Pin	Name	Input/Output	Description
1	GND		Power Ground
2	+5V	Power	Power Input/Output
3	+3.3V	Power	+3.3V Power Output
4	+1.8V	Power	+1.8V Power Output
5	GND		Power Ground
6	TXD/DIO0_B	I/O	UART Data Output / GPIO
7	RXD/DIO1_B	I/O	UART Data Input / GPIO
8	RTS/DIO2_B	I/O	UART Ready To Send control output / GPIO
9	CTS/DIO3_B	I/O	UART Clear To Send control input / GPIO
10	GND		Power Ground

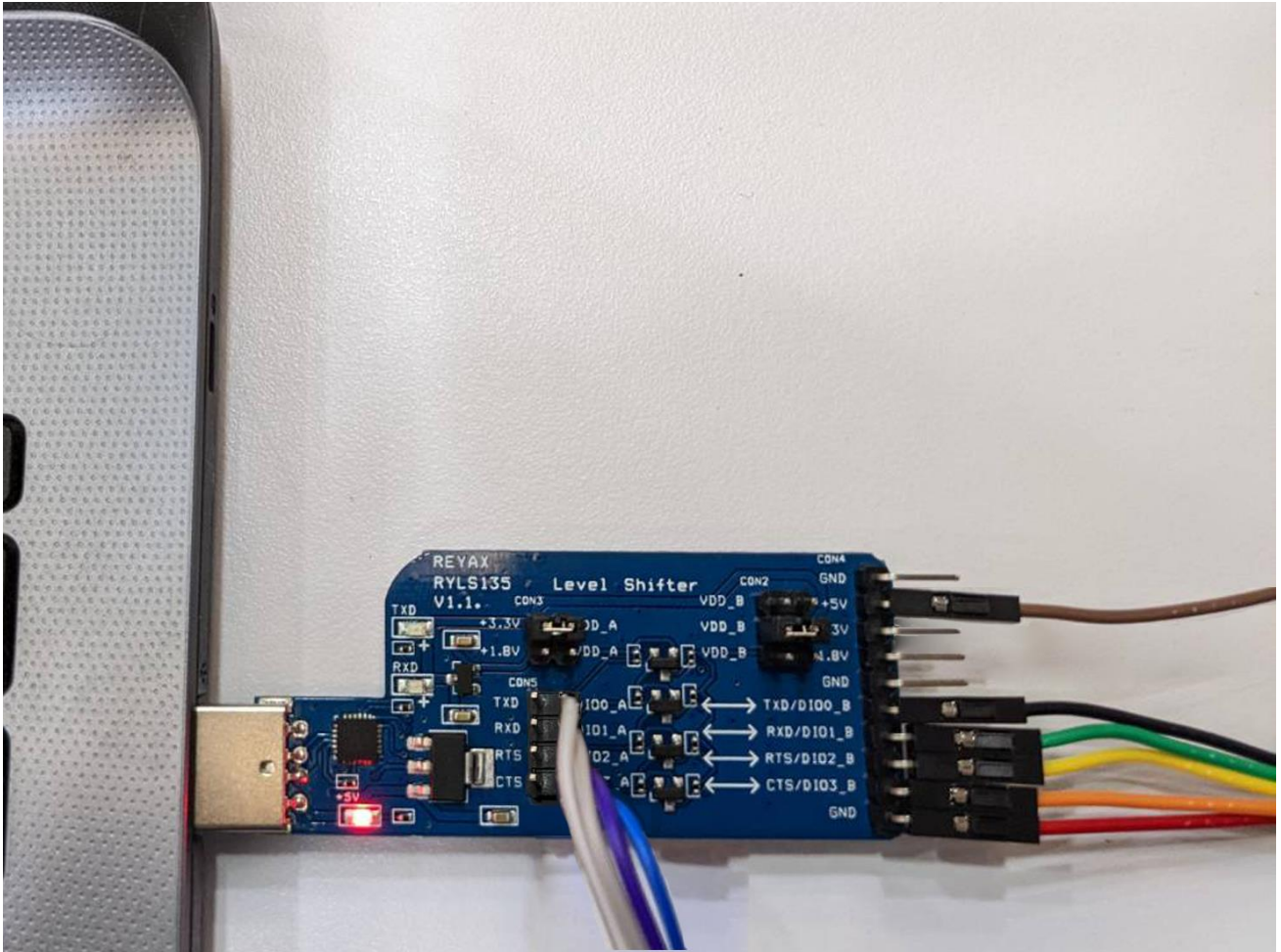
## CONNECTION DIAGRAM

[1]When using RYLS135 as a USB to 3.3V UART interface function, you can place the VDD\_B Jumper at the +3.3V position according to the jumper setting as below picture.



[2]When using RYLS135 as a bidirectional voltage level shifter, You can place the VDD\_A and VDD\_B jumper at the voltage position you want. For example: the below picture is to convert DIO0~3\_A 3.3V voltage level into DIO0~3\_B 5V voltage level.

**Note:VCC\_A must be less than or equal to VCC\_B.**



## SPECIFICATION

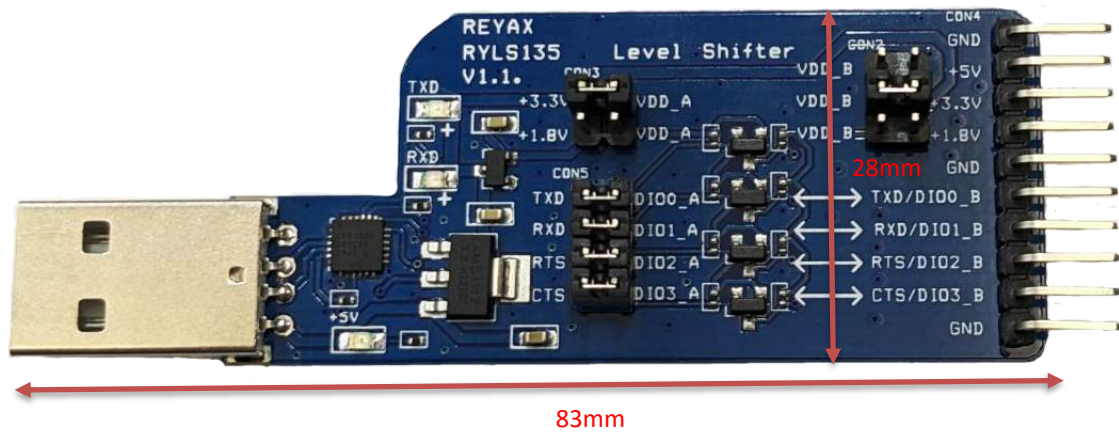
Item	Min.	Typical	Max.	Unit	Condition
USB / +5V Power Supply	4.5	5	5.5	V	VDD_USB
USB / +5V Output current		500		mA	
+3.3V Power output voltage	3.1	3.3	3.5	V	
+3.3V Power output current		500		mA	
+1.8V Power output voltage	1.7	1.8	1.9	V	
+1.8V Power output current		100		mA	
USB to UART Baud rate	300	115200	3M	bps	
Level shifter switching on/off delay time			20	ns	
Weight		15		g	
Operating Temperature	-40	25	+85	°C	

## Download and Install SILABS CP2102N VCP Drivers

Downloads for Windows, Macintosh, Linux and Android below.

<https://www.silabs.com/developers/usb-to-uart-bridge-vcp-drivers?tab=downloads>

## DIMENSIONS



**REYAX**  
TECHNOLOGY CORPORATION, LTD

Website: <http://www.reyax.com>