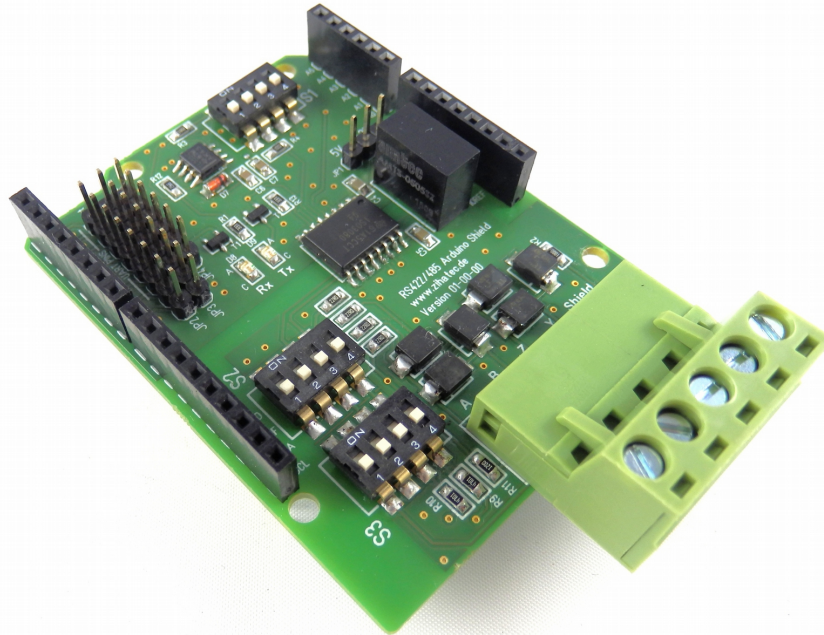


RS422/RS485 Shield



for Arduino



Features:

- RS485 mode (half duplex)
- RS422 mode (full duplex)
- galvanic isolation between Arduino and connected RS485 bus
- Free choice of TX pin between pins 0-5
- Free choice of RX pin between pins 0-5
- Enhanced ESD protection
- adjustable automatic transceiver switching for RS485 mode
- adjustable control of transceiver/receiver via pin 6 or 7
- adjustable Pull-Up, Pull-Down und terminating resistors
- removable block terminal for bus connection
- Indicator LEDs for RX and TX signals
- many options adjustable via DIP switches
- For Arduino UNO and compatible boards

RS422/RS485 Shield



for Arduino

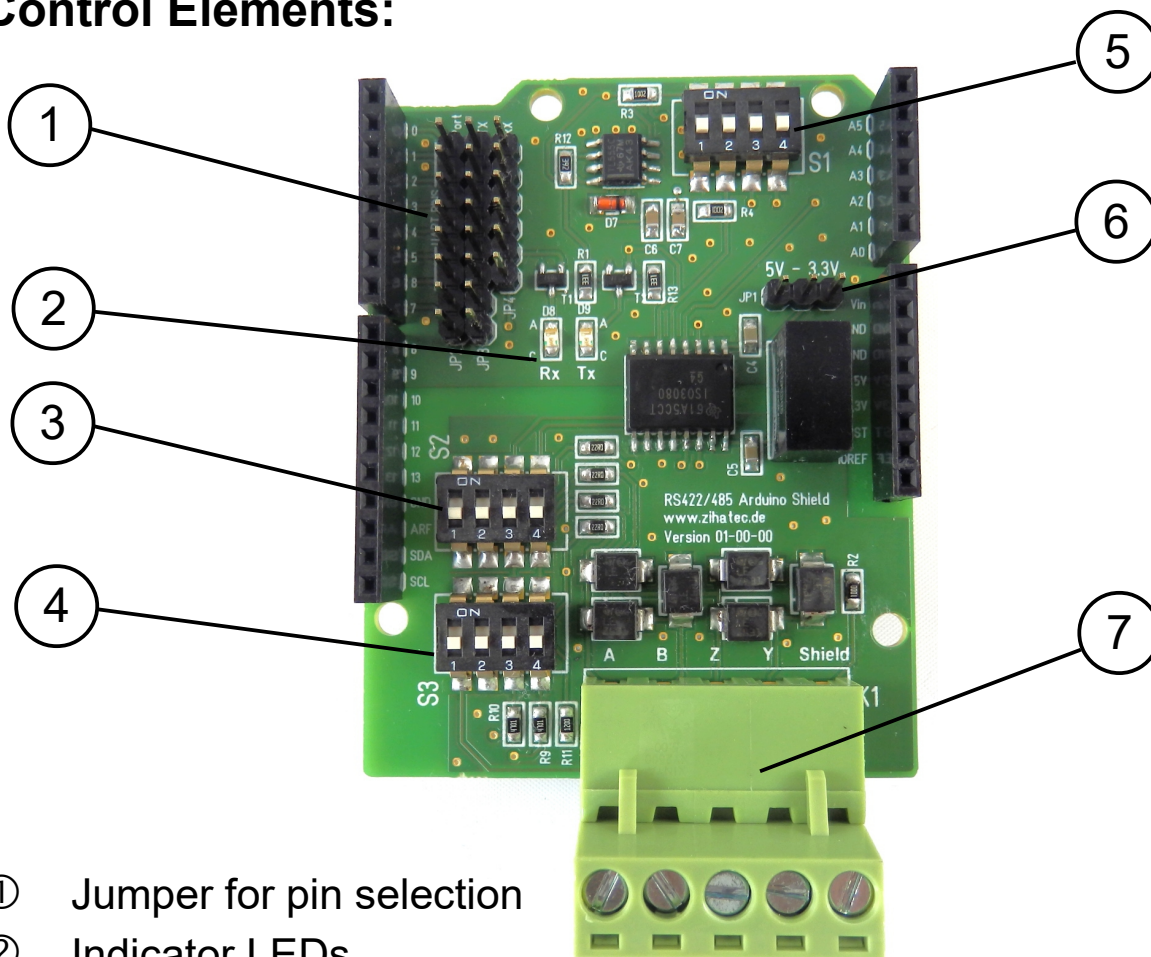
Applications:

- Smart Home
- Building Control
- Industrial Control
- Lighting Control
- Video Surveillance

Protocols:

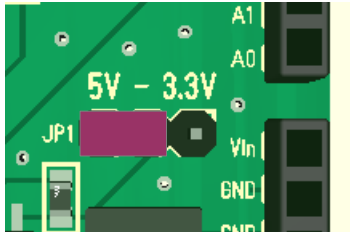
- Modbus
- DMX
- Pelco D
- Profibus
- etc

Control Elements:



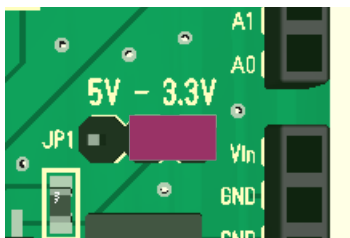
- ① Jumper for pin selection
- ② Indicator LEDs
- ③ DIP Switch S2
- ④ DIP Switch S3
- ⑤ DIP Switch S1
- ⑥ Jumper for voltage selection
- ⑦ Removable Terminal Block

Jumper J1 – voltage settings:



5V Selection

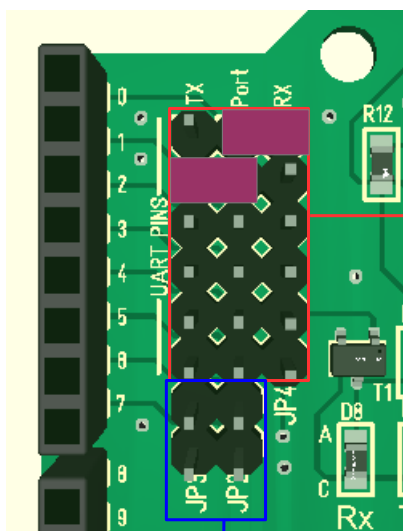
Jumper to left position
(default for Arduino Uno)



3.3V Selection

Jumper to right position
(for example Genuino 101)

Jumper J2 – J4 pin settings:



Connection to Tx & Rx Pin

- Jumper to left position Tx
- Jumper to right position Rx

Default;

- Jumper 1st row right
- Jumper 2nd row left

Tx control Pin

- no jumper: no pin control
- Jumper to 1st row: pin 6
- Jumper to 2nd row: pin 7

Default;

- no jumper

RS422/RS485 Shield



for Arduino

S1 - DIP Switch Configuration – send/receive control:

Channel	Description
1	Receiver always on
2	Transmitter connected to Receiver
3	Automatic DE/RE control
4	DE/RE control via Pin 6 or 7

S2 - DIP Switch Configuration – RS422/485 mode:

Channel	Description
1	Connect Y to terminal K2
2	Connect Z to terminal K2
3	Connect internally Y to A
4	Connect internally Z to B

S3 - DIP Switch Configuration – termination resistors:

Channel	Description
1	4k7 Pull-up Resistor on A
2	4k7 Pull-down Resistor on B
3	Not used
4	Terminating Resistor On

RS422/RS485 Shield



for Arduino

Example RS422 mode:

SW1	
1	ON
2	OFF
3	OFF
4	ON *

SW2	
1	ON
2	ON
3	OFF
4	OFF

SW3	
1	ON
2	OFF
3	OFF
4	OFF

Examples RS485 mode:

Send/receive control via Pin 6 or 7, no terminating resistor

SW1	
1	OFF
2	ON
3	OFF
4	ON *

SW2	
1	OFF
2	OFF
3	ON
4	ON

SW3	
1	OFF
2	OFF
3	OFF
4	OFF

automatic send/receive control, multipoint master

SW1	
1	OFF
2	ON
3	ON
4	OFF

SW2	
1	OFF
2	OFF
3	ON
4	ON

SW3	
1	ON
2	OFF
3	ON
4	ON

* Set Pin 6 or 7 to high level to transmit protocols