

mvBlueLYNX I/O-BOX

Technical datasheet

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Description

The mvBlueLYNX I/O-BOX is a breakout-box for 8 digital inputs and outputs. Further it can be used as a power supply for the mvBlueLYNX. The status of the inputs and outputs is shown by LEDs. Tappet switches simulate the inputs and can be used for testing. Futhermore the mvBlueLYNX I/O-BOX have a serial interface to connect a mouse.

Connecting the mvBlueLYNX I/O-BOX

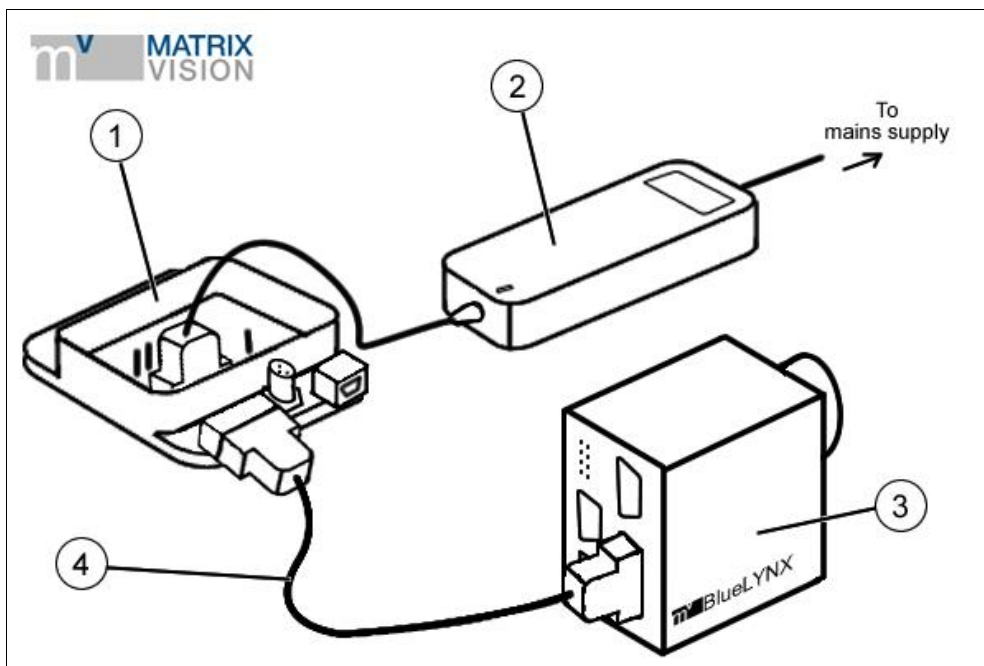


Image 1: Connected mvBlueLYNX I/O-BOX

1. mvBlueLYNX I/O-BOX
2. power supply MV-DC2425 BL
3. mvBlueLYNX
4. cabel KS99-0236 02.0

Following steps are necessary to connect the mvBlueLYNX I/O-BOX:

- Connect the mvBlueLYNX with the mvBlueLYNX I/O-BOX by using the SUB-D HD26 plug (J11) and the cabel KS99-0236 02.0 (in Image 1: 4.)
- The mvBlueLYNX I/O-BOX needs power. For this purpose there are several possibilities:

1. Via board (J1)
2. Via Binder-718-connector (J2)
3. Via SUB-D HD26 (J12 or in Image 1: 2.)
4. Via clamped connection (J37)

To choose one of these possibilities you have to set the power supply input switch (U1). For the feed-in via J1, J2 und J12 the switcher have to be set “up”, via J37 it have to be set “down”.

Note:

J1, J2 and J12 are the same connections and may only be used alternatively.

- Optional a mouse can be connected to the serial interface (J10).

Note:

The serial interface is only for the usage of a PC mouse!

Connecting inputs and outputs

Inputs and outputs can be fed in or extracted from the clamped connections (J13-J20 for inputs, J29-J36 for outputs). Illuminated LEDs show the used inputs and outputs (D1-D8 for the inputs, D9-D16 for the outputs).

Testing the digital inputs and outputs

You can use the LEDs (D1-D8 for inputs, D9-D16 for outputs) for testing the connections. An illuminated LED shows that a connection is used. You can test the digital inputs with the input switches (below the LEDs) separately. Here the switches are set down and the inputs are fed up with 24 V. Depending on the chosen input the LED is illuminated. If the LED of the chosen input switch does not shine, the board can be damaged.

Connectors

J1: power supply connector

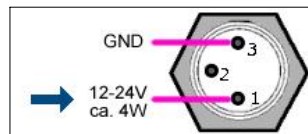


Image 2: Binder-718-connector (three pin / male)

J2:

pin	signal	I/O	comment
1	+Power 1	IN	mvBlueLYNX power supply (12..24V), about 4 Watt + supply of digital outputs
2	Gnd		Ground

J3 and J4: measuring pins for digital inputs (J3) and digital outputs (J4)

pin	J3 digital inputs					J4 digital outputs				
	signal	I/O	clamped connection	SUBD-HD26 (J12)	comment	signal	I/O	clamped connection	SUBD-HD26 (J12)	comment
1	Inputs	IN	J13	Pin 22	digital input 0	Outputs	OUT	J29	Pin 24	digital output 0
2	Inputs	IN	J14	Pin 21	digital input 1	Outputs	OUT	J30	Pin 23	digital output 1
3	Inputs	IN	J15	Pin 20	digital input 2	Outputs	OUT	J31	Pin 16	digital output 2

pin	J3 digital inputs					J4 digital outputs				
4	Inputs	IN	J16	Pin 13	digital input 3	Outputs	OUT	J32	Pin 15	digital output 3
5	Inputs	IN	J17	Pin 12	digital input 4	Outputs	OUT	J33	Pin 14	digital output 4
6	Inputs	IN	J18	Pin 11	digital input 5	Outputs	OUT	J34	Pin 6	digital output 5
7	Inputs	IN	J19	Pin 3	digital input 6	Outputs	OUT	J35	Pin 5	digital output 6
8	Inputs	IN	J20	Pin 2	digital input 7	Outputs	OUT	J36	Pin 4	digital output 7

J9: Ground for measuring pins

J10: SUB-D 9 Asynchronous Serial Interface RS232-2

For connecting a serial mouse.

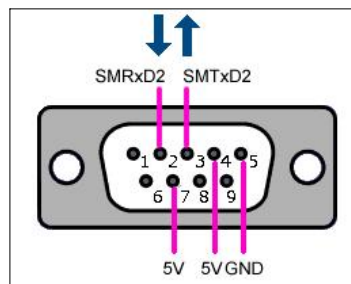


Image 3: RS232-2 (male)

J11: SUB-D HD26 digital input / output bush

For power supply connecting (pin assignment identic to J12).

J12: SUB-D HD26 digital input / output connector

For power supply connecting.

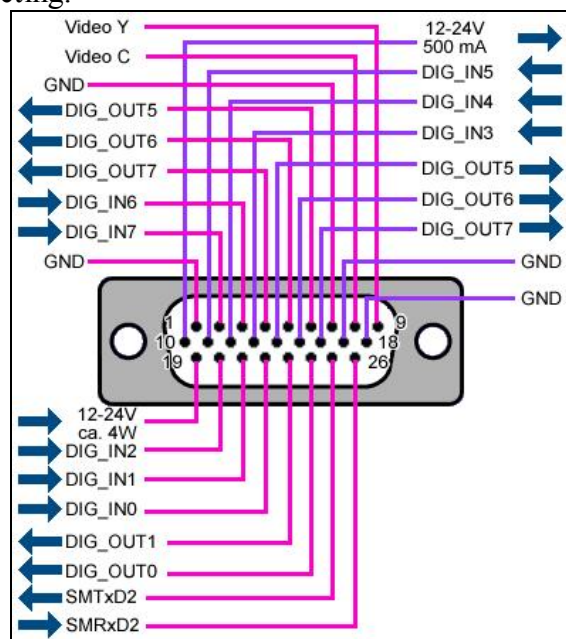


Image 4: SUB-D HD26 (male)

Note:

You cannot use pin 19 as a power output, because there is a diode inside the mvBlueLYNX to prevent current flowing out of this pin.

Clamped connections:

clamped connection	signal	I/O	comment
J13 bis J20	Outputs	OUT	
J21 bis J28 und J38	GND		Ground
J29 bis J36	Inputs	IN	
J37	Power in	IN	optional mvBlueLYNX power supply input (12..24V), about 4 Watt + supply of digital outputs

LEDs:

There are three types of LEDs on the board of the mvBlueLYNX I/O-BOX:

1. Input LEDs – status LEDs for the mvBlueLYNX inputs
2. Output LEDs – status LEDs for the mvBlueLYNX outputs
3. Power supply LED – LED for testing the current. Indicated next to the power supply input switch

Input switches:

switch	input switch U1	input switch U2..U9
up	power from edge connector J1 or J2 or J12	input from clamped connection J13 to J20 or SUB-D HD26 J12
middle	off	off
down	power from SUB-HD26 connector J37	power supply (for testing the LEDs)

Layout diagram

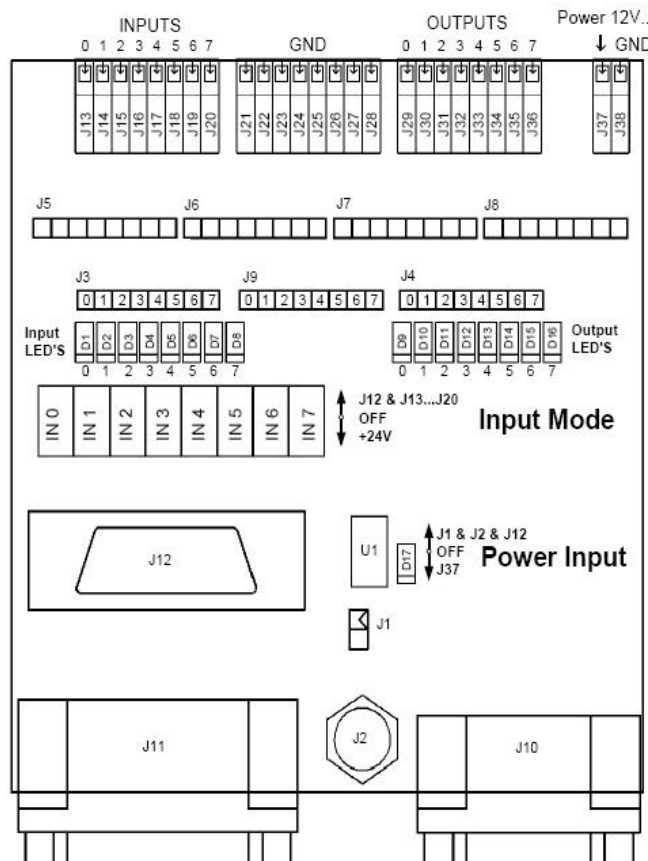


Image 5: layout diagram

Circuit diagram

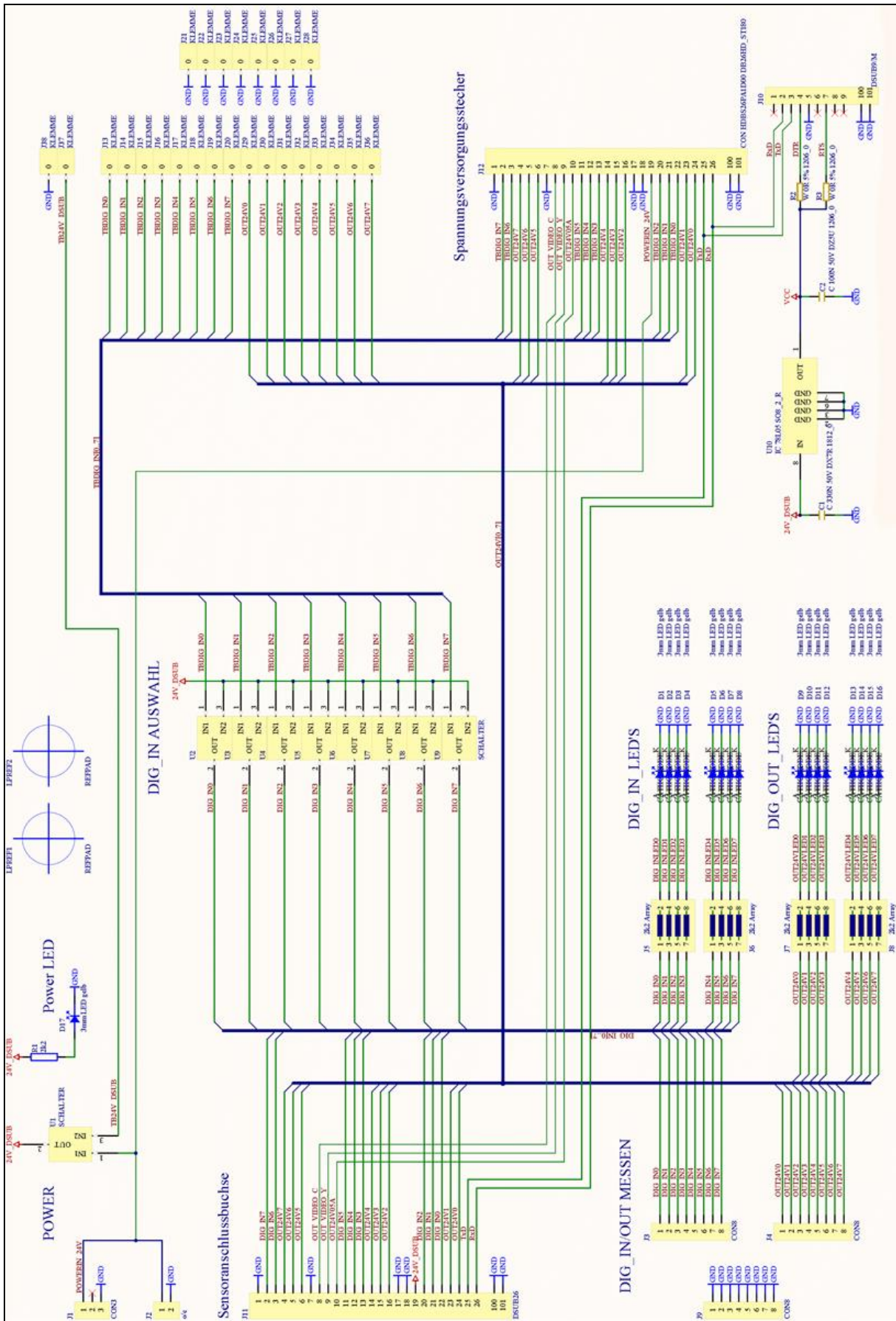


Image 6: circuit diagram