

iC-TW9 MOSKITO EVAL TW9D

EVALUATION BOARD DESCRIPTION

preliminary



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ORDERING INFORMATION

| Type | Order Designation | Description Options |
|------------------|----------------------|--|
| Evaluation Board | iC-TW9 EVAL TW91D | iC-TW9 MOSKITO Evaluation Board ready to operate, accessible through GUI via PC adapter |
| Software | iC-TW9 GUI | GUI software for Windows PC stores setup to file, communication to iC-TW9 please see www.ichaus.com for download information |
| PC Adapter | iC-MB3 iCSY MB3U-I2C | PC-USB Adapter with SPI pigtail |

BOARD TW91D

(size 100 mm x 80 mm)

TERMINAL DESCRIPTION

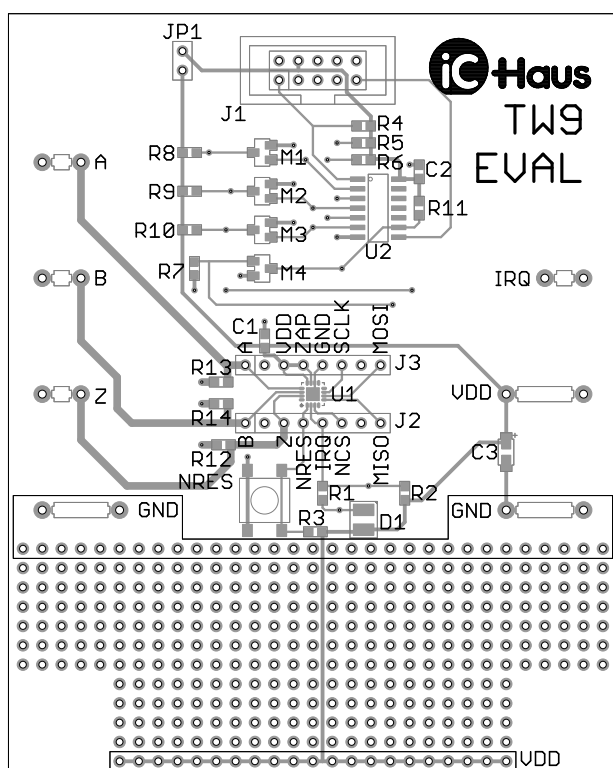


Figure 1: Component side

| | |
|-----|--|
| VDD | +1.8 to +5 V Supply Voltage |
| GND | 0 V Ground |
| A | Incremental Input A |
| B | Incremental Input B |
| Z | Incremental Input Z |
| GND | 0 V Ground |
| IRQ | Interface Interrupt Request Input |
| J1 | Device SPI SPI Select Interface SPI Data Output Interface SPI Data Input Interface SPI Clock |

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RELATED DOCUMENTS

- iC-TW9 MOSKITO Info Sheet - Specification
 - iC-TW9 MOSKITO Data Sheet - Specification
 - iC-TW9 GUI - GUI software for Windows PC
- <http://www.ichaus.de/product.php?prod=iC-TW9>

- iC-MB3 iCSY MB3U-I2C - PC-USB ADAPTER with SPI pigtail
- <http://www.ichaus.de/product.php?prod=MB3A/MB3U>

CONNECTOR AND TERMINAL PINOUT

10-pin Adapter Connector J1 - male (SPI iC-TW9 Slave to MB3U-I2C Master)

| PIN | Name | Function |
|-----|----------|---------------------|
| 1 | SCL | Serial Clock Line |
| 2 | GND | 0 V Ground |
| 3 | Reserved | - |
| 4 | +5V | +5 V Supply Voltage |
| 5 | Reserved | - |
| 6 | Reserved | - |
| 7 | MOSI | Serial Data Line |
| 8 | Reserved | - |
| 9 | MISO | Serial Data Line |
| 10 | GND | 0 V Ground |

JUMPER DESCRIPTION

JP1: 5 V Adapter Power Supply

2-pin jumper terminal male

| PIN | Name | Function |
|-----|-----------------------|-------------------------------|
| - | No 5 V Adapter Supply | No direct +5 V Adapter Supply |
| X | 5V Adapter Supply | +5V Direct |

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CIRCUIT DESCRIPTION

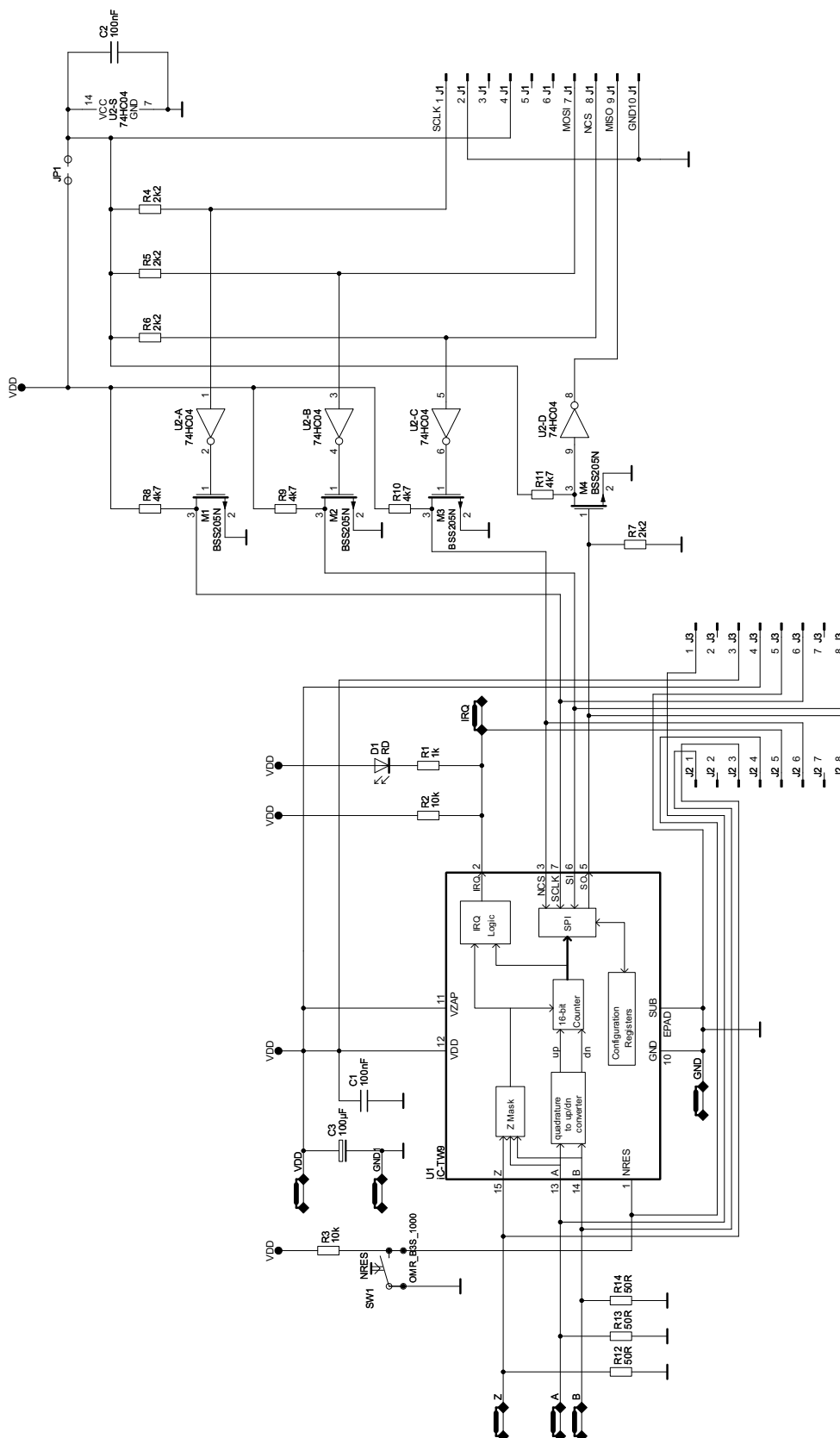


Figure 2: Circuit diagram including optional components

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ASSEMBLY PART LIST

| Device | Value (typical) | Comment |
|--------------------|--------------------------|------------------------------------|
| C1, C2 | 100nF | CSMD0603 |
| C3 | 100uF | ESMD_SIZE_A |
| D1 | LS-T670 LED RED | LED_PLCC2 |
| J1 | WSL_10_MALE | SPI interface connector |
| J3, J4 | MK0110G | Connection to DIL28 iC-TW9 adapter |
| JP1 | W2X1 | 2-pin jumper terminal |
| M1, M2, M3, M4 | BSS205N SOT23 | Transistor |
| R1 | 1k | Resistor |
| R2, R3 | 10k | Resistor |
| R4, R5, R6, R7 | 2k2 | Resistor |
| R8, R9, R10, R11 | 4k7 | Resistor |
| R12, R13, R14 | 50R | Resistor |
| SW1 | OMR_B3S_1000 | Reset Switch |
| U1 | iC-TW9 QFN16 3mm X 3mm | ABZ counter |
| U2 | 74HC04 SO14 3.9mm 1.27mm | Level shifter |
| GND, VB | LBS02 | Supply connector |
| A,B, Z, IRQ | S1-F | Pin |
| RF1, RF2, RF3, RF4 | Rubber foot | |

Setup ("TW91D connected via USB Adapter - MB3U-I2C")

The board features one 10-pin connectors for serial SPI communication. The PC-USB Adapter iC-MB3 iC-SY MB3U-I2C enables the evaluation board to be connected to a common Windows PC via SPI interface. iC-TW9 software can be used to access the board from a Windows PC directly to the access the iC-TW9 MOSKITO device (see section "APPLICATION SOFTWARE" for more details).

Note : Please install the latest USB driver before you attach the PC Adapter to the PC.

REVISION HISTORY

| Rev | Notes | Pages affected |
|-----|-----------------|----------------|
| A1 | Initial version | |

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