**Unit-test protocol stc1000 with stm8s105c6t6**

|  |  |
| --- | --- |
| Test-date: |  |
| PCB hardware version: | Frontpanel v03 |
| Endresult Test | OK / NOK |

Use this test protocol to test all microcontroller connections before mounting other components. Use a PCB microscope and a multimeter to test all connections.

**CON1**: 1 2 3 4

1 2

3 4

5 6

7 8

**CON3**

**DIS**: 12 11 10 9 8 7 6 5 4 3 2 1

**HDR**: 1 2 3 4 5 6 7 8 9 10 11 12 13

**Figure 1: PCB Layout, topview**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Number** | **μC pin** | **Connected with:** | **Name** | **Check?** |
| 1 | 01: NRST | CON1 pin 3 | NRST |  |
| 2 | 02: PA1 | HDR pin 2 | HEAT |  |
| 3 | 03: PA2 | HDR pin 3 | COOL |  |
| 4  5 | 04: VSSIO\_1 05: VSS | HDR pin 6 | GND |  |
| 6 | 06: VCAP | C5 right | - |  |
| 7  8 | 07: VDD 08: VDDIO\_1 | CON1 pin 2 | VCC |  |
| 9 | 09: PA3 | R12 right | - |  |
| 10 | 10: PA4 | HDR pin 1 | BUZZER |  |
| 11 | 11:PA5 | R14 bottom | D433\_3V3 |  |
| 12 | 12:PA6 | - (NC) | - |  |

**Table 1: μC bottom-left pins**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Number** | **μC pin** | **Connected with:** | **Name** | **Check?** |
| 1 | 13: VDD | CON1 pin 2 | VCC |  |
| 2 | 14: VSS | HDR pin 6 | GND |  |
| 3 | 15: PB7 | R11 bottom | LED3 |  |
| 4 | 16: PB6 | R10 bottom | LED2 |  |
| 5 | 17: PB5 | R9 bottom | LED1 |  |
| 6  9  10  11  12 | 18: PB4  21: PB1  22: PB0  23: PE7  24: PE6 | - (NC) | - |  |
| 7 | 19: PB3 | HDR pin 8 | NTC1 |  |
| 8 | 20: PB2 | HDR pin 9 | NTC2 |  |

**Table 2: μC bottom-right pins**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Number** | **μC pin** | **Connected with:** | **Name** | **Check?** |
| 1 | 25: PE5 | CON3 pin 4 | SPI\_NSS |  |
| 2 | 26: PC1 | DIS pin 1 | CC1 |  |
| 3 | 27: PC2 | DIS pin 2 | CC2 |  |
| 4 | 28: PC3 | DIS pin 3 | CC3 |  |
| 5 | 29: PC4 | DIS pin 4 | CC4 |  |
| 6 | 30: PC5 | CON3 pin 5 | SPI\_SCK |  |
| 7 | 31: VSSIO\_2 | HDR pin 6 | GND |  |
| 8 | 32: VDDIO\_2 | CON1 pin 2 | VCC |  |
| 9 | 33: PC6 | CON3 pin 6 | SPI\_MOSI |  |
| 10 | 34: PC7 | CON3 pin 7 | SPI\_MISO |  |
| 11 | 35: PG0 | DIS pin 7 | F\_DOWN |  |
| 12 | 36: PG1 | DIS pin 8 | E\_UP |  |

**Table 3: μC top-right pins**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Number** | **μC pin** | **Connected with:** | **Name** | **Check?** |
| 1 | 25: PE3 | CON3 pin 3 | CE |  |
| 2 | 26: PE2 | HDR pin 12 | I2C\_SDA |  |
| 3 | 27: PE1 | HDR pin 11 | I2C\_SCL |  |
| 4 | 28: PE0 | DIS pin 10 | C |  |
| 5 | 29: PD0 | DIS pin 11 | B |  |
| 6 | 30: PD1 | CON1 pin 4 | SWIM |  |
| 7 | 31: PD2 | DIS pin 12 | A |  |
| 8 | 32: PD3 | DIS pin 5 | DP\_S |  |
| 9 | 33: PD4 | DIS pin 6 | G\_PWR |  |
| 10 | 34: PD5 | HDR pin 13 | TX |  |
| 11 | 35: PD6 | HDR pin 4 | RX |  |
| 12 | 36: PD7 | DIS pin 9 | D |  |

**Table 4: μC top-left pins**