Technical Specifications

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| --- | --- | --- | --- | --- | --- |
| Feature | Specified | Current | Improvement out of scope | Comments | Updated |
| WS2812 Interface | Running on the MCU, neither Library or DMA/Peripheral specified | On MCU, 1 PWM/DMA Stream over one GPIO |  |  |  |
| WS2812 Channels | 4 | 1 |  | 9 in total, some axis have 2 LED Rings |  |
| LED-Ring Animations | Not yet (quantity) | 2  Rainbow-like  Solid Color |  | The solid color is hard coded. |  |
|  |  |  |  |  |  |
| 1-Wire Master | Over 1 pin, running on the MCU (no external IC) | Direct communication over 1 pin, NO MASTER |  | GPIO + Timer without slave addressing |  |
| BS18B20 Slave Channels | 10 | 1 only |  | 1 temperature sensor should be on board |  |
| SPI Devices | Master on the MCU | none | LAN9252 working with QUADSPI | EtherCAT and IMU external boards |  |
| SPI Channels | 2 (standard SPI) | none |  |  |  |
| PCB Prototype |  | In process |  |  |  |
| 1 UART Port available | - | none |  | It might be needed for debugging |  |
| Size | As small as possible | 144pin mcu without LAN9252 in first version |  | Use the 64pins version with LAN9252 for second version |  |
| JTAG Connector | Not specified | Included |  |  |  |
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| BISS-C Device\* | Running on the MCU | - |  | This is out of scope |  |
| Encoder Channels | 2\* | - |  | Pinout should be further investigated |  |

Number of pins



Important Pinout

