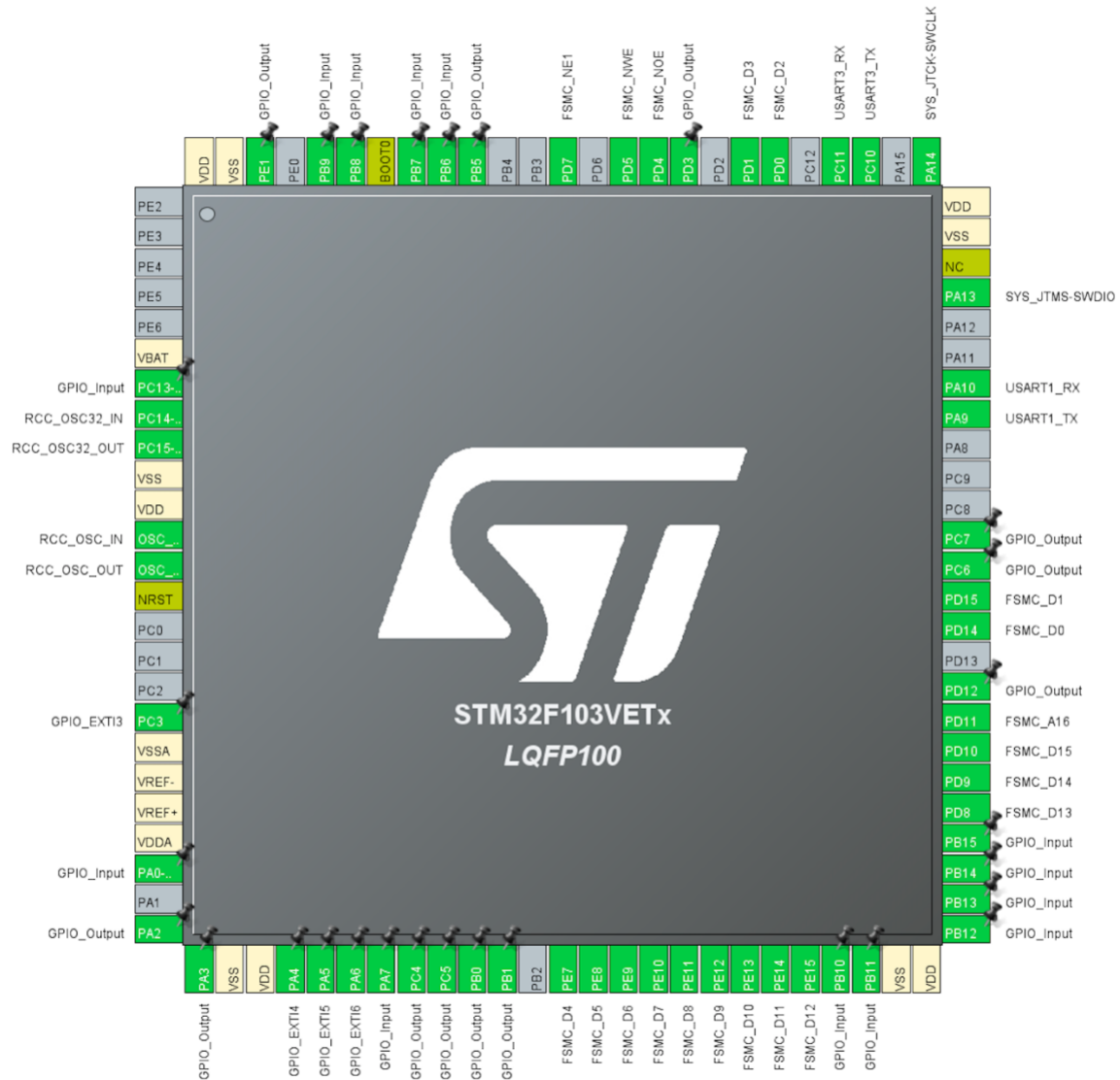


UST Wanderer

Slave Board Documentation



| Function | Device | Port and Pin | CubeMX Config |
|----------|---------------|--------------|---------------|
| Encoder | Left Encoder | PA4 | GPIO_EXTI4 |
| | | PA7 | GPIO_Input |
| | Right Encoder | PA5 | GPIO_EXTI5 |
| | | PB6 | GPIO_Input |
| | Back Encoder | PA6 | GPIO_EXTI6 |
| | | PB7 | GPIO_Input |

** For all GPIO_Input, the pin is configured with No pull-up and No pull-down resistors.*

| Function | Device | Port and Pin | CubeMX Config |
|----------|-----------|--------------|---------------|
| LED | LED Red | PB5 | GPIO_Input |
| | LED Green | PB0 | GPIO_Input |
| | LED Blue | PA1 | GPIO_Input |

** For all GPIO_Input, the pin is configured with No pull-up and No pull-down resistors.*

| Function | Device | Port and Pin | CubeMX Config |
|----------|-----------|--------------|---------------|
| UART | Bluetooth | PA10 | USART1_RX |
| | | PA9 | USART1_TX |
| | UART | PC11 | USART3_RX |
| | | PC10 | USART3_TX |

** All UART's are configured with Baud Rate = 115200 Bits/s.*

| Function | Device | Port and Pin | CubeMX Config |
|----------|--------|--------------|---------------|
| Button | KEY2 | PC13 | GPIO_Input |

** For all GPIO_Input, the pin is configured with No pull-up and No pull-down resistors.*

| Function | Device | Port and Pin | CubeMX Config |
|----------|--------------------|--------------|--------------------------------------|
| Camera | Camera data bus 8 | PB8 | GPIO_Input |
| | Camera data bus 9 | PB9 | GPIO_Input |
| | Camera data bus 10 | PB10 | GPIO_Input |
| | Camera data bus 11 | PB11 | GPIO_Input |
| | Camera data bus 12 | PB12 | GPIO_Input |
| | Camera data bus 13 | PB13 | GPIO_Input |
| | Camera data bus 14 | PB14 | GPIO_Input |
| | Camera data bus 15 | PB15 | GPIO_Input |
| | Camera control SCL | PC6 | GPIO_Output (Open Drain) |
| | Camera control SDA | PC7 | GPIO_Output (Open Drain) |
| | Camera control HS | PC2 | - (Did not use) |
| | Camera control VS | PC3 | GPIO_EXTI3 (Falling edge trigger) |
| | Camera FIFO XCLK | PA8 | - (Did not use) |
| | Camera FIFO RCLK | PC5 | GPIO_Output |
| | Camera FIFO RRST | PA2 | GPIO_Output |
| | Camera FIFO WRST | PC4 | GPIO_Output |
| | Camera FIFO WEN | PD3 | GPIO_Output |
| | Camera FIFO OEN | PA3 | GPIO_Output |
| | 5V | VCC | - |
| | Ground | GND | - |

** For all GPIO_Input, the pin is configured with No pull-up and No pull-down resistors.*

** For all GPIO_Output without specification, the pin is configured with Output Push Pull and without pull-up and pull-down resistors.*

| Device | Port and Pin | CubeMX Config |
|--------|--------------|---------------|
| LCD | PD0 | FSMC_D2 |
| | PD1 | FSMC_D3 |
| | PD4 | FSMC_NOE |
| | PD5 | FSMC_NWE |
| | PD7 | FSMC_NE1 |
| | PD8 | FSMC_D13 |
| | PD9 | FSMC_D14 |
| | PD10 | FSMC_D15 |
| | PD11 | FSMC_A16 |
| | PD14 | FSMC_D0 |
| | PD15 | FSMC_D1 |
| | PE7 | FSMC_D4 |
| | PE8 | FSMC_D5 |
| | PE9 | FSMC_D6 |
| | PE10 | FSMC_D7 |
| | PE11 | FSMC_D8 |
| | PE12 | FSMC_D9 |
| | PE13 | FSMC_D10 |
| | PE14 | FSMC_D11 |
| | PE15 | FSMC_D12 |
| | PD12 | GPIO_Output |
| | PE1 | GPIO_Output |

** For all GPIO_Output without specification, the pin is configured with Output Push Pull and without pull-up and pull-down resistors.*