

**STM32U5A5 PDM MCU**

| pin  | QSPI      | SPI       | I2C      | MDF/ADF    | USB | UART      | DEBUG | used as |             |             |            |
|------|-----------|-----------|----------|------------|-----|-----------|-------|---------|-------------|-------------|------------|
| PA0  | QSPI1_NCS |           |          |            |     | UART4_TX  |       | INT0    | SDMMC2_CMD  |             | NUCLEO     |
| PA1  | QSPI1_DQS | SPI1_SCK  |          |            |     | UART4_RX  |       |         |             |             |            |
| PA2  | QSPI1_NCS | SPI1_RDY  |          |            |     |           |       | INT1    | QSPI1_NCS   |             |            |
| PA3  | QSPI1_CLK |           |          |            |     |           |       | QSPI    | SAI1_MCLK_A |             | SAI1_CK1   |
| PA4  | QSPI1_NCS | SPI1_NSS  |          |            |     |           |       | QSPI    | SAI1_FS_B   | SPI3_NSS    |            |
| PA5  |           | SPI1_SCK  |          |            |     |           |       | GPIO2   |             |             |            |
| PA6  | QSPI1_IO3 | SPI1_MISO |          |            |     |           |       | QSPI    |             |             |            |
| PA7  | QSPI1_IO2 | SPI1_MOSI |          |            |     |           |       | QSPI    |             |             |            |
| PA8  |           |           |          |            |     |           |       | CODEC   | SAI1_SCK_A  | SAI1_CK2    |            |
| PA9  |           | SPI2_SCK  |          |            |     | USART1_TX |       | CODEC   | SAI1_FS_A   |             | UART_TX    |
| PA10 |           |           |          |            |     | USART1_RX |       | CODEC   | SAI1_SD_A   | SAI1_D1     | UART_RX    |
| PA11 |           |           |          |            | DM  |           |       | USB_HS  |             |             |            |
| PA12 |           |           |          |            | DP  |           |       | USB_HS  |             |             |            |
| PA13 |           |           |          |            |     |           | SWDIO |         |             |             |            |
| PA14 |           |           |          |            |     |           | SWCLK |         |             |             |            |
| PA15 |           | SPI1_NSS  |          |            |     |           |       | CODEC   | SAI2_FS_B   | SPI3_NSS    | SPI1/3_NSS |
| PB0  | QSPI1_IO1 | SPI1_NSS  |          |            |     |           |       | QSPI    |             |             |            |
| PB1  | QSPI1_IO0 |           |          | MDF1_SDIO  |     |           |       | QSPI    |             |             |            |
| PB2  | QSPI1_DQS | SPI1_RDY  |          | MDF1_CKIO  |     |           |       | GPIO3   |             |             |            |
| PB3  |           | SPI1_SCK  |          | ADF1_CCK0  |     |           | SWO   | CODEC   | SDMMC2_D2   | SAI1_SCK_B  |            |
| PB4  |           | SPI1_MISO |          | ADF1_SDIO  |     |           |       | CODEC   | SDMMC2_D3   | SAI1_MCLK_B |            |
| PB5  |           | SPI1_MOSI |          |            |     |           |       | CODEC   |             | SAI1_SD_B   |            |
| PB6  |           |           | I2C4_SCL | MDF1_SDIO5 |     |           |       | IMU     | I2C1_SCL    | SAI1_FS_B   |            |
| PB7  |           |           | I2C4_SDA | MDF1_CKIO5 |     |           |       | IMU     | I2C1_SDA    |             |            |
| PB8  |           |           |          | MDF1_CCK0  |     |           |       | GPIO6   | SDMMC2_D4   | SAI1_MCLK_A | SAI1_CK1   |
|      |           |           |          |            |     |           |       |         |             |             |            |
| PB10 | QSPI1_CLK | SPI2_SCK  |          |            |     |           |       | n.c     |             | SAI1_SCK_A  |            |
|      |           |           |          |            |     |           |       |         |             |             |            |
| PB13 |           | SPI2_SCK  | I2C2_SCL |            |     |           |       | USR_I2C |             | SAI2_SCK_A  | 2K0        |
| PB14 |           | SPI2_MISO | I2C2_SDA | MDF1_SDIO2 |     |           |       | USR_I2C | SDMMC2_D0   | SAI2_MCLK_A | 2K0        |
| PB15 |           | SPI2_MOSI |          | MDF1_CKIO2 |     |           |       | GPIO4   | SDMMC2_D1   | SAI2_SD_A   | GPIO       |

|      |  |           |          |           |  |          |  |        |            |             |           |
|------|--|-----------|----------|-----------|--|----------|--|--------|------------|-------------|-----------|
| PC0  |  |           | I2C3_SCL | MDF1_SD14 |  |          |  | FLASH  |            | SAI2_FS_A   | 2K0       |
| PC1  |  | SPI2_MOSI | I2C3_SDA | MDF1_CK14 |  |          |  | FLASH  | SDMMC2_CK  | SAI1_SD_A   | 2K0       |
| PC2  |  | SPI2_MISO |          | MDF1_CCK1 |  | UART6_RX |  | GPIO0  |            |             | GPIO      |
| PC3  |  | SPI2_MOSI |          |           |  | UART6_TX |  | GPIO1  |            | SAI1_SD_A   | GPIO      |
|      |  |           |          |           |  |          |  |        |            |             |           |
| PC6  |  |           |          | MDF1_CK13 |  |          |  | GPIO5  | SDMMC2_D6  | SAI2_MCLK_A | GPIO      |
| PC7  |  |           |          | MDF1_SDI3 |  |          |  | n.c.   | SDMMC2_D7  | SAI2_MCLK_B |           |
| PC8  |  |           |          |           |  |          |  | SDCARD | SDMMC1_D0  |             | needs 3V3 |
| PC9  |  |           |          |           |  |          |  | SDCARD | SDMMC1_D1  |             |           |
| PC10 |  | SPI3_SCK  |          | ADF1_CCK1 |  |          |  | SDCARD | SDMMC1_D2  | SAI2_SCK_B  |           |
| PC11 |  | SPI3_MISO |          | ADF1_SDIO |  |          |  | SDCARD | SDMMC1_D3  | SAI2_MCLK_B |           |
| PC12 |  | SPI3_MOSI |          |           |  |          |  | SDCARD | SDMMC1_CK  | SAI2_SD_B   |           |
| PC13 |  |           |          |           |  |          |  | LED    |            |             | max. 3mA  |
|      |  |           |          |           |  |          |  |        |            |             |           |
| PD2  |  |           |          |           |  |          |  | SDCARD | SDMMC1_CMD |             | GPIO      |

| signals     |
|-------------|
| IMU INTO    |
|             |
| IMU INT1    |
| QSPI_CLK    |
| QSPI_NCS    |
| SD CD       |
| QSPI_IO3    |
| QSPI_IO2    |
| SAI1_SCK_A  |
| SAI1_FS_A   |
| SAI1_SD_A   |
| DM          |
| DP          |
| SWDIO       |
| SWCLK       |
| SPI1_NSS    |
| QSPI_IO1    |
| QSPI_IO0    |
| CODEC SHDNZ |
| SPI1_SCK    |
| SPI1_MISO   |
| SPI1_MOSI   |
| I2C1_SCL    |
| I2C1_SDA    |
| PDM_CLK     |
|             |
|             |
|             |
| I2C2_SCL    |
| I2C2_SDA    |
| SPDIF OUT   |

|            |
|------------|
| I2C3_SCL   |
| I2C3_SDA   |
| UART_RX    |
| UART_TX    |
|            |
| CODEC INT  |
| PDM_DATA   |
| SDMMC1_D0  |
| SDMMC1_D1  |
| SDMMC1_D2  |
| SDMMC1_D3  |
| SDMMC1_CK  |
| LED        |
|            |
| SDMMC1_CMD |