

Table 1

| | Discovery | LCD | SPI1 | SPI2 | SPI3 | SPI4 | SPI5 | SPI6 | Use | Notes |
|-------|-----------------------|-------|-----------|-----------|-----------|------|------|------|-----------------|--|
| BOOT0 | | | | | | | | | | |
| NRST | Button 2 | | | | | | | | Button 2 | |
| PA0 | Button 1 | | | | | | | | Button 1 | |
| PA1 | L3GD20 INT1 | | | | | | | | | |
| PA2 | L3GD20 INT2 | | | | | | | | | |
| PA3 | LCD DB3/B5 | B5 | | | | | | | LCD B5 | |
| PA4 | LCD VSYNC | VSYNC | SPI1_NSS | | SPI3_NSS | | | | LCD VSYNC | |
| PA5 | free | | SPI1_SCK | | | | | | SPI1 SCK | |
| PA6 | LCD DB6/G2 | G2 | SPI1_MISO | | | | | | LCD G2 | |
| PA7 | ACP_RST | | SPI1_MOSI | | | | | | SPI1 MOSI | |
| PA8 | ACP SCL/ Touch SCL | | | | | | | | | |
| PA9 | USART1 TX | | | | | | | | USART1 TX | |
| PA10 | USART1 RX | | | | | | | | USART1 RX | |
| PA11 | LCD DB14/R4 | R4 | | | | | | | LCD R4 | |
| PA12 | LCD DB15/R5 | R5 | | | | | | | LCD R5 | |
| PA13 | SWDIO | | | | | | | | | |
| PA14 | SWCLK | | | | | | | | | |
| PA15 | Touch INT | | SPI1_NSS | | SPI3_NSS | | | | | |
| PB0 | LCD DB13/R3 | R3 | | | | | | | LCD R3 | |
| PB1 | LCD DB16/R6 | R6 | | | | | | | LCD R6 | |
| PB2 | BOOT1 | | | | | | | | | |
| PB3 | System SWO | | SPI1_SCK | | SPI3_SCK | | | | SPI3 SCK | |
| PB4 | free | | SPI1_MISO | | SPI3_MISO | | | | SPI1 MISO | |
| PB5 | SDRAM SDCKE1 | | SPI1_MOSI | | SPI3_MOSI | | | | SDRAM SDCKE1 | |
| PB6 | SDRAM SDNE1 | | | | | | | | SDRAM SDNE1 | |
| PB7 | free | | | | | | | | SPI A CS | SPI group A slave select |
| PB8 | LCD DB4/B6 | B6 | | | | | | | LCD B6 | |
| PB9 | LCD DB5/B7 | B7 | | SPI2_NSS | | | | | LCD B7 | |
| PB10 | LCD DB6/G4 | G4 | | SPI2_SCK | | | | | LCD G4 | |
| PB11 | LCD DB9/G5 | G5 | | | | | | | LCD G5 | |
| PB12 | USB ID | | | SPI2_NSS | | | | | | |
| PB13 | USB VBUS | | | SPI2_SCK | | | | | | |
| PB14 | USB DM | | | SPI2_MISO | | | | | | |
| PB15 | USB DP | | | SPI2_MOSI | | | | | | |
| PC0 | SDRAM SDNWE | | | | | | | | SDRAM SDNWE | |
| PC1 | L3GD20 CS | | | | | | | | HIGH | Hold high to disable SPI on L3GD20 MEMS. |
| PC2 | LCD CSX | | | SPI2_MISO | | | | | HIGH | Hold high to disable SPI on LCD. |
| PC3 | free | | | SPI2_MOSI | | | | | SPI C CS | SPI group C slave select |
| PC4 | USB PSO | | | | | | | | | |
| PC5 | USB QC red LED | | | | | | | | | |
| PC6 | LCD HSYNC | HSYNC | | | | | | | LCD HSYNC | |
| PC7 | LCD DB10/ G6 | G6 | | | | | | | LCD G6 | |
| PC8 | free | | | | | | | | SPI D CS | SPI group D slave select |
| PC9 | ACP SDA Touch SDA | | | | | | | | | |
| PC10 | LCD DB12/R2 | R2 | | | SPI3_SCK | | | | LCD R2 | |
| PC11 | free | | | | SPI3_MISO | | | | SPI3 MISO | |

| | Discovery | LCD | SPI1 | SPI2 | SPI3 | SPI4 | SPI5 | SPI6 | Use | Notes |
|------|------------------------------------|--------|------|-----------|-----------|-----------|-----------|------|-----------------|--------------------------|
| PC12 | free | | | | SPI3_MOSI | | | | SPI3 MOSI | |
| PC13 | free | | | | | | | | | limited to 3mA |
| PC14 | OSC32_IN | | | | | | | | | limited to 3mA |
| PC15 | OSC32_OUT | | | | | | | | | limited to 3mA |
| PD0 | SDRAM D2 | | | | | | | | SDRAM D2 | |
| PD1 | SDRAM D3 | | | | | | | | SDRAM D3 | |
| PD2 | IM0/free | | | | | | | | | disconnected by default |
| PD3 | LCD DB11/G7 | G7 | | SPI2_SCK | | | | | LCD G7 | |
| PD4 | IM1/free | | | | | | | | | disconnected by default |
| PD5 | IM2/free | | | | | | | | | disconnected by default |
| PD6 | LCD DB0/B2 | B2 | | SPI3_MOSI | | | | | LCD B2 | |
| PD7 | IM3/free | | | | | | | | | disconnected by default |
| PD8 | SDRAM D13 | | | | | | | | SDRAM D13 | |
| PD9 | SDRAM D14 | | | | | | | | SDRAM D14 | |
| PD10 | SDRAM D15 | | | | | | | | SDRAM D15 | |
| PD11 | LCD TE | | | | | | | | | Tearing effect interrupt |
| PD12 | LCD RDX | | | | | | | | | |
| PD13 | LCD WRX | | | | | | | | | |
| PD14 | SDRAM D0 | | | | | | | | SDRAM D0 | |
| PD15 | SDRAM D1 | | | | | | | | SDRAM D1 | |
| PE0 | SDRAM NBL0 | | | | | | | | SDRAM NBL0 | |
| PE1 | SDRAM NBL1 | | | | | | | | SDRAM NBL1 | |
| PE2 | free | | | | | SPI4_SCK | | | SPI4 SCK | |
| PE3 | free | | | | | | | | SPI B CS | SPI group B slave select |
| PE4 | LCD B0/free | ON/OFF | | | | SPI4_NSS | | | LCD On/Off | |
| PE5 | LCD G0/free | | | | | SPI4_MISO | | | SPI4 MISO | |
| PE6 | LCD G1/free | | | | | SPI4_MOSI | | | SPI4 MOSI | |
| PE7 | SDRAM D4 | | | | | | | | SDRAM D4 | |
| PE8 | SDRAM D5 | | | | | | | | SDRAM D5 | |
| PE9 | SDRAM D6 | | | | | | | | SDRAM D6 | |
| PE10 | SDRAM D7 | | | | | | | | SDRAM D7 | |
| PE11 | SDRAM D8 | | | | | SPI4_NSS | | | SDRAM D8 | |
| PE12 | SDRAM D9 | | | | | SPI4_SCK | | | SDRAM D9 | |
| PE13 | SDRAM D10 | | | | | SPI4_MISO | | | SDRAM D10 | |
| PE14 | SDRAM D11 | | | | | SPI4_MOSI | | | SDRAM D11 | |
| PE15 | SDRAM D12 | | | | | | | | SDRAM D12 | |
| PF0 | SDRAM A0 | | | | | | | | SDRAM A0 | |
| PF1 | SDRAM A1 | | | | | | | | SDRAM A1 | |
| PF2 | SDRAM A2 | | | | | | | | SDRAM A2 | |
| PF3 | SDRAM A3 | | | | | | | | SDRAM A3 | |
| PF4 | SDRAM A4 | | | | | | | | SDRAM A4 | |
| PF5 | SDRAM A5 | | | | | | | | SDRAM A5 | |
| PF6 | free | PWM | | | | | SPI5_NSS | | LCD PWM | |
| PF7 | LCD DCX/ LCD SCL/ L3GD20 SCK | | | | | | SPI5_SCK | | SPI5 SCK | |
| PF8 | L3GD20 MISO | | | | | | SPI5_MISO | | SPI5 MISO | |
| PF9 | L3GD20 MOSI | | | | | | SPI5_MOSI | | SPI5 MOSI | |
| PF10 | LCD ENABLE/DE | DE | | | | | | | LCD DE | DE = data enable |
| PF11 | SDRAM SDNRAS | | | | | | SPI5_MOSI | | SDRAM SDNRAS | |

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|------|--------------|-----|------|-----------|------|------|-----------|-----------|--------------|----------------|
| PF12 | SDRAM A6 | | | | | | | | SDRAM A6 | |
| PF13 | SDRAM A7 | | | | | | | | SDRAM A7 | |
| PF14 | SDRAM A8 | | | | | | | | SDRAM A8 | |
| PF15 | SDRAM A9 | | | | | | | | SDRAM A9 | |
| PG0 | SDRAM A10 | | | | | | | | SDRAM A10 | |
| PG1 | SDRAM A11 | | | | | | | | SDRAM A11 | |
| PG2 | free | | | | | | | | | |
| PG3 | free | | | | | | | | | |
| PG4 | SDRAM BA0 | | | | | | | | SDRAM BA0 | |
| PG5 | SDRAM BA1 | | | | | | | | SDRAM BA1 | |
| PG6 | LCD DB17/R7 | R7 | | | | | | | LCD R7 | |
| PG7 | LCD DOTCLK | CLK | | | | | | | LCD CLK | |
| PG8 | SDRAM SDCLK | | | | | | | SPI6_NSS | SDRAM SDCLK | |
| PG9 | free | | | | | | | | | |
| PG10 | LCD DB7/G3 | G3 | | | | | | | LCD G3 | |
| PG11 | LCD DB1/B3 | B3 | | | | | | | LCD B3 | |
| PG12 | LCD DB2/B4 | B4 | | | | | | SPI6_MISO | LCD B4 | |
| PG13 | LED Green | | | | | | | SPI6_SCK | LED Green | |
| PG14 | LED Red | | | | | | | SPI6_MOSI | LED Red | |
| PG15 | SDRAM SDNCAS | | | | | | | | SDRAM SDNCAS | |
| PH0 | OSC_IN | | | | | | | | | |
| PH1 | OSC_OUT | | | | | | | | | |
| PH2 | | | | | | | | | | LCD_R0 |
| PH3 | | | | | | | | | | LCD_R1 |
| PH4 | | | | | | | | | | |
| PH5 | | | | | | | SPI5_NSS | | | |
| PH6 | | | | | | | SPI5_SCK | | | |
| PH7 | | | | | | | SPI5_MISO | | | |
| PH8 | | | | | | | | | | |
| PH9 | | | | | | | | | | |
| PH10 | | | | | | | | | | |
| PH11 | | | | | | | | | | |
| PH12 | | | | | | | | | | |
| PH13 | | | | | | | | | | |
| PH14 | | | | | | | | | | |
| PH15 | | | | | | | | | | |
| PI0 | | | | SPI2_NSS | | | | | | |
| PI1 | | | | SPI2_SCK | | | | | | |
| PI2 | | | | SPI2_MISO | | | | | | |
| PI3 | | | | SPI2_MOSI | | | | | | |
| PI4 | | | | | | | | | | |
| PI5 | | | | | | | | | | |
| PI6 | | | | | | | | | | |
| PI7 | | | | | | | | | | |
| PI8 | | | | | | | | | | limited to 3mA |
| PI9 | | | | | | | | | | |
| PI10 | | | | | | | | | | |
| PI11 | | | | | | | | | | |
| PI12 | | | | | | | | | | |
| PI13 | | | | | | | | | | |
| PI14 | | | | | | | | | | |
| PI15 | | | | | | | | | | LCD_R0 |

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|------|-----------|-----|------|------|------|------|------|------|-----|--------|
| PJ0 | | | | | | | | | | LCD_R1 |
| PJ1 | | | | | | | | | | |
| PJ2 | | | | | | | | | | |
| PJ3 | | | | | | | | | | |
| PJ4 | | | | | | | | | | |
| PJ5 | | | | | | | | | | |
| PJ6 | | | | | | | | | | |
| PJ7 | | | | | | | | | | LCD_G0 |
| PJ8 | | | | | | | | | | LCD_G1 |
| PJ9 | | | | | | | | | | |
| PJ10 | | | | | | | | | | |
| PJ11 | | | | | | | | | | |
| PJ12 | | | | | | | | | | LCD_B0 |
| PJ13 | | | | | | | | | | LCD_B1 |
| PJ14 | | | | | | | | | | |
| PJ15 | | | | | | | | | | |
| PK0 | | | | | | | | | | |
| PK1 | | | | | | | | | | |
| PK2 | | | | | | | | | | |
| PK3 | | | | | | | | | | |
| PK4 | | | | | | | | | | |
| PK5 | | | | | | | | | | |
| PK6 | | | | | | | | | | |
| PK7 | | | | | | | | | | |