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								[reserved]	
PA2	L3GD20 INT2								[reserved]	
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								I²C3 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								JTMS-SWDIO	
PA14	SWCLK								JTCK-SWCLK	
PA15	Touch INT		SPI1_NSS		SPI3_NSS				[reserved]	
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					USB OTG HS ID	
PB13	USB VBUS			SPI2_SCK					USB OTG HS VBUS	
PB14	USB DM			SPI2_MISO					USB OTG HS DM	
PB15	USB DP			SPI2_MOSI					USB OTG HS DP	
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								USB OTG HS PSO	
PC5	USB QC red LED								USB OTG HS OC	
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								I²C3 SDA	
PC10	LCD DB12/R2	R2			SPI3_SCK				LCD R2	
PC11	free				SPI3_MISO				SPI3 MISO	
PC12	free				SPI3_MOSI				SPI3 MOSI	
PC13	free								Power Sense	limited to 3mA

	Discovery	LCD	SPI1	SPI2	SPI3	SPI4	SPI5	SPI6	Use	Notes
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								[reserved]	Tearing effect interrupt
PD12	LCD RDX								[reserved]	
PD13	LCD WRX								[reserved]	
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	
PF12	SDRAM A6								SDRAM A6	
PF13	SDRAM A7								SDRAM A7	
PF14	SDRAM A8								SDRAM A8	
PF15	SDRAM A9								SDRAM A9	

	Discovery	LCD	SPI1	SPI2	SPI3	SPI4	SPI5	SPI6	Use	Notes
PG0	SDRAM A10								SDRAM A10	
PG1	SDRAM A11								SDRAM A11	
PG2	free								Res. Touch Interrupt	
PG3	free								Cap. Touch Interrupt	
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								Cap. Touch Wake	
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								RCC OSC IN	
PH1	OSC_OUT								RCC 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
PJ0										LCD_R1
PJ1										
PJ2										
PJ3										
PJ4										
PJ5										

	Discovery	LCD	SPI1	SPI2	SPI3	SPI4	SPI5	SPI6	Use	Notes
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										