Kite Controller - Pin Selection v1.0 May 2, 2022

STM32F3 Discovery kit with STM32F303VC MCU - User manual

MCU pin			Board function																		
Main function	Alternate function	LQFP100 pin number	VCP	LSM303DLHC or LSM303AGR	L3GD20 or I3G4250D	Push-button	LED	SWD	USB	OSC	Free I/O	ADC	Timer Related	USART2 & USART3 Related	I2C1 and I2C2 Related	Selected	Power supply	CN3	P1	P2
BOOT0	-	94	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19
NRST	-	14	-	-	-	RESET	-	NRST	-	-	-	-	-	-	-	`	-	5	4	-
PA0	TIM2_CH1_ETR, G1_IO1, USART2_CTS, COMP1_OUT, TIM8_BKIN, TM8_ETR	23	-	-	-	USER	-	-	-	-	-	-	-	-	-	`	-	-	12	-
PA1	TIM2_CH2, G1_IO2, USART2_RTS, TIM15_CH1N	24	-	-	-	-	-	-	-	-	-	ADC	possible	-	-	GPIO_IN EXTRA_1	-	-	9	-
PA2	TIM2_CH3, G1_IO3, USART2_TX, COMP2_OUT, TIM15_CH1, AOP1_OUT	25	-	-	-	-	-	-	-	-	-	ADC	possible	possible	-	GPIO_IN CURR_2	-	-	14	-
PA3	TIM2_CH4, G1_IO4, USART2_RX, TIM15_CH2	26	-	-	-	-	-	-	-	-	-	ADC	possible	possible	-	GPIO_IN EXTRA_3	-	-	11	-
PA4	TIM3_CH2, G2_IO1, SPI1_NSS, SPI3_NSS/I2S3_WS, USART2_CK	29	-	-	-	-	-	-	-	-	-	ADC	possible	-	-	-	-	-	16	-
PA5	TIM2_CH1_ETR, G2_IO2, SPI1_SCK	30	-	-	SCL/SP(	-	-	-	-	-	-	ADC	-	-	-	`	-	-	15	-
PA6	TIM16_CH1, TIM3_CH1, G2_IO3, TIM8_BKIN, SPI1_MISO, TIM1_BKIN, AOP2_OUT, COMP1_OUT	31	-	-	SAO/SD	-	-	-	-	-	-	ADC	possible	-	-	`	-	-	18	-
PA7	TIM17_CH1, TIM3_CH2, G2_IO4, TIM8_CH1N, SPI1_MOSI, TIM1_CH1N, COMP2_OUT	32	-	-	SDA/SD	-	-	-	-	-	-	ADC	possible	-	-	`	-	-	17	-
PA8	MCO, I2C2_SMBAL, I2S2_MCK, TIM1_CH1, USART1_CK, COMP3_OUT, TIM4_ETR	67	-	-	-	-	-	-	-	-	Yes	-	-	-	-	GPIO_IN END_A1	-	-	-	45
PA9	G4_IO1, I2C2_SCL, I2S3_MCK, TIM1_CH2, USART1_TX, COMP5_OUT, TIM15_BKIN, TIM2_CH3	68	-	-	-	-	-	-	-	-	-	-	possible	-	possible	GPIO_IN END_A2	-	-	-	44
PA10	TIM17_BKIN, G4_IO2, I2C2_SDA, TIM1_CH3, USART1_RX, COMP6_OUT, TIM2_CH4, TIM8_BKIN	69	-	-	-	-	-	-	-	-	-	-	possible	-	possible	-	-	-	-	43
PA11	TIM1_CH1N, USART1_CTS, COMP1_OUT, CAN_RX, TIM4_CH1, TIM1_CH4_BKIN2, USBDM	70	-	-	-	-	-	-	DM	-	-	-	possible	-	-	`	-	-	-	42
PA12	TIM16_CH1, TIM1_CH2N, USART1_RTS, COMP2_OUT, CAN_TX, TIM4_CH2, TIM1_ETR, USBDP	71	-	-	-	-	-	-	DP	-	-	-	-	-	-	`	-	-	-	41
PA13	JTMS-SWDAT, TIM16_CH1N, G4_IO3, IR-Out, USART3_CTS, TIM4_CH3	72	-	-	-	-	-	SWDIO	-	-	-	-	possible	-	-	`	-	4	-	40
PA14	JTCK-SWCLK, G4_IO4, I2C1_SDA, TIM8_CH2, TIM1_BKIN, USART2_TX	76	-	-	-	-	-	SWCLK	-	-	-	-	-	possible	possible	`	-	2	-	37
PA15	JTDI, TIM2_CH1_ETR, TIM8_CH1, I2C1_SCL, SPI1_NSS, SPI3_NSS/I2S3_WS, USART2_RX, TIM1_BKIN	77	-	-	-	-	-	-	-	-	-	-	-	possible	possible	-	-	-	-	38
PB0	TIM3_CH3, G3_IO2, TIM8_CH2N, TIM1_CH2N	35	-	-	-	-	-	-	-	-	-	ADC	possible	-	-	TIM3_CH3	-	-	22	-
PB1	TIM3_CH4, G3_IO3, TIM8_CH3N, TIM1_CH3N, COMP4_OUT, AOP3_OUT	36	-	-	-	-	-	-	-	-	-	ADC	possible	-	-	-	-	-	21	-
PB2	G3_IO4	37	-	-	-	-	-	-	-	-	Yes	ADC	-	-	-	GPIO_IN EXTRA_5	-	-	24	-
PB3	JTDO/TRACESWO, TIM2_CH2, TIM4_ETR, G5_IO1, TIM8_CH1N, SPI1_SCK, SPI3_SCK/I2S3_CK, USART2_TX, TIM3_ETR	89	-	-	-	-	-	SWO	-	-	-	-	possible	possible	-	`	-	6	-	26

Notes
- Timers: 2, 3, 4, 15 done
- END_A-D (2 per) done
- DC_IN1-2 done
- CURR1-2 done
- STEP_A-D done
- USART2 & USART3 done
- EXTRA1-3, 4-5 done
- DEBUG1-2, 3-4, 5-6 done

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Main function	Alternate function	LQFP100 pin number	VCP	LSM303DLHC or LSM303AGR	L3GD20 or I3G4250D	Push-button	LED	SWD	USB	OSC	Free I/O	ADC	**Timer Related**	**USART2 & USART3 Related**	**I2C1 and I2C2 Related**	**Selected**	Power supply	CN3	P1	P2
PB4	NJTRST, TIM16_CH1, TIM3_CH1, G5_IO2, TIM8_CH2N, SPI1_MISO, SPI3_MISO/I2S3_DI N,USART2_RX, TIM17_BKIN	90	-	-	-	-	-	-	-	-	-	-	possible	possible	-	GPIO_OUT DEBUG_1	-	-	-	23
PB5	TIM16_BKIN, TIM3_CH2, TIM8_CH3N, I2C1_SMBAL, SPI1_MOSI, SPI3_MOSI/I2S3_D OUT, USART2_CK, TIM17_CH1	91	-	-	-	-	-	-	-	-	-	-	possible	-	-	GPIO_OUT DEBUG_2	-	-	-	24
PB6	TIM16_CH1N, TIM4_CH1, G5_IO3, I2C1_SCL, TIM8_CH1, TIM8_ETR_BKIN2, USART1_TX	92	-	SCL	-	-	-	-	-	-	-	-	possible	-	possible	`	-	-	-	21
PB7	TIM17_CH1N, TIM4_CH2, G5_IO4, I2C1_SDA, TIM8_BKIN, USART1_RX, TIM3_CH4	93	-	SDA	-	-	-	-	-	-	-	-	possible	-	possible	`	-	-	-	22
PB8	TIM16_CH1, TIM4_CH3, SYNCH, I2C1_SCL, COMP1_OUT, CAN_RX, TIM8_CH2, TIM1_BKIN	95	-	-	-	-	-	-	-	-	-	-	possible	-	possible	I2C1_SCL	-	-	-	17
PB9	TIM17_CH1, TIM4_CH4, I2C1_SDA, IR-OUT, CAN_TX, TIM8_CH3	96	-	-	-	-	-	-	-	-	-	-	possible	-	possible	I2C1_SDA	-	-	-	18
PB10	TIM2_CH3, SYNCH, USART3_TX	47	-	-	-	-	-	-	-	-	-	-	possible	possible	-	GPIO_OUT DEBUG_4	-	-	34	-
PB11	TIM2_CH4, G6_IO1, USART3_RX, COMP2_OUT	48	-	-	-	-	-	-	-	-	-	-	possible	possible	-	GPIO_OUT DEBUG_3	-	-	33	-
PB12	G6_IO2, I2C2_SMBAL, SPI2_NSS/I2S2_WS, TIM1_BKIN, USART3_CK, AOP4_OUT	51	-	-	-	-	-	-	-	-	-	ADC	-	-	-	STEP_B3	-	-	36	-
PB13	G6_IO3, SPI2_SCK/I2S2_CK, TIM1_CH1N, USART3_CTS	52	-	-	-	-	-	-	-	-	-	ADC	-	-	-	STEP_B4	-	-	35	-
PB14	TIM15_CH1, G6_IO4, SPI2_MISO/I2S2_DI N,TIM1_CH2N, USART3_RTS	53	-	-	-	-	-	-	-	-	-	ADC	-	-	-	STEP_B1	-	-	38	-
PB15	TIM15_CH2, TIM15_CH1N, TIM1_CH3N, SPI2_MOSI/ I2S2_DOUT	54	-	-	-	-	-	-	-	-	-	ADC	-	-	-	STEP_B2	-	-	37	-
PC0	-	15	-	-	-	-	-	-	-	-	-	ADC	-	-	-	STEP_C2	-	-	6	-
PC1	-	16	-	-	-	-	-	-	-	-	-	ADC	-	-	-	STEP_C1	-	-	5	-
PC2	COMP7_OUT	17	-	-	-	-	-	-	-	-	-	ADC	-	-	-	STEP_C4	-	-	8	-
PC3	TIM1_BKIN2	18	-	-	-	-	-	-	-	-	-	ADC	-	-	-	STEP_C3	-	-	7	-
PC4	USART1_TX	33	USART1	-	-	-	-	-	-	-	-	ADC	-	-	-	`	-	-	20	-
PC5	G3_IO1, USART1_RX	34	USART1	-	-	-	-	-	-	-	-	ADC	-	-	-	`	-	-	19	-
PC6	TIM3_CH1, TIM8_CH1, I2S2_MCK, COMP6_OUT	63	-	-	-	-	-	-	-	-	-	-	possible	-	-	GPIO_IN END_D1	-	-	47	-
PC7	TIM3_CH2, TIM8_CH2, I2S3_MCK, COMP5_OUT	64	-	-	-	-	-	-	-	-	-	-	possible	-	-	GPIO_IN END_D2	-	-	48	-
PC8	TIM3_CH3, TIM8_CH3, COMP3_OUT	65	-	-	-	-	-	-	-	-	-	-	possible	-	-	GPIO_IN END_C2	-	-	-	47
PC9	TIM3_CH4, TIM8_CH4_BKIN2, COMP3_OUT	66	-	-	-	-	-	-	-	-	-	-	possible	-	-	GPIO_IN END_C1	-	-	-	46
PC10	TIM8_CH1N, UART4_TX, SPI3_SCK/I2S3_CK, USART3_TX	78	-	-	-	-	-	-	-	-	-	-	-	possible	-	GPIO_IN END_B1	-	-	-	35
PC11	TIM8_CH2N, UART4_RX, SPI3_MISO/I2S3_DI N,USART3_RX	79	-	-	-	-	-	-	-	-	-	-	-	possible	-	GPIO_IN END_B2	-	-	-	36
PC12	TIM8_CH3N, UART5_TX, SPI3_MOSI/ I2S3_DOUT, USART3_CK	80	-	-	-	-	-	-	-	-	-	-	-	-	-	STEP_D3	-	-	-	33
PC13	TIM1_CH1N	7	-	-	-	-	-	-	-	-	-	-	-	-	-	GPIO_OUT DEBUG_6	-	-	-	10

Notes
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Main function	Alternate function	LQFP100 pin number	VCP	LSM303DLHC or LSM303AGR	L3GD20 or I3G4250D	Push-button	LED	SWD	USB	OSC	Free I/O	ADC	**Timer Related**	**USART2 & USART3 Related**	**I2C1 and I2C2 Related**	**Selected**	Power supply	CN3	P1	P2
PC14	OSC32_IN	8	-	-	-	-	-	-	-	OSC32_	-	-	-	-	-	`	-	-	-	7
PC15	OSC32_OUT	9	-	-	-	-	-	-	-	OSC32_	-	-	-	-	-	`	-	-	-	8
PD0	CAN_RX	81	-	-	-	-	-	-	-	-	-	-	-	-	-	STEP_D4	-	-	-	34
PD1	TIM8_CH4_BKIN2, CAN_TX	82	-	-	-	-	-	-	-	-	-	-	-	-	-	STEP_D1	-	-	-	31
PD2	TIM3_ETR, TIM8_BKIN, UART5__RX	83	-	-	-	-	-	-	-	-	-	-	-	-	-	STEP_D2	-	-	-	32
PD3	TIM2_CH1_ETR, USART2_CTS	84	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	29
PD4	TIM2_CH2, USART2_RTS	85	-	-	-	-	-	-	-	-	-	-	possible	-	-	TIM2_CH2	-	-	-	30
PD5	USART2_TX	86	-	-	-	-	-	-	-	-	-	-	-	possible	-	USART2_TX	-	-	-	27
PD6	TIM2_CH4, USART2_RX	87	-	-	-	-	-	-	-	-	-	-	possible	possible	-	USART2_RX	-	-	-	28
PD7	TIM2_CH3, USART2_CK	88	-	-	-	-	-	-	-	-	-	-	possible	-	-		-	-	-	25
PD8	USART3_TX	55	-	-	-	-	-	-	-	-	-	ADC	-	possible	-	USART3_TX	-	-	40	-
PD9	USART3_RX	56	-	-	-	-	-	-	-	-	-	ADC	-	possible	-	USART3_RX	-	-	39	-
PD10	USART3_CK	57	-	-	-	-	-	-	-	-	-	ADC	-	-	-	ADC DC_IN2	-	-	42	-
PD11	USART3_CTS	58	-	-	-	-	-	-	-	-	-	ADC	-	-	-	ADC DC_IN1	-	-	41	-
PD12	TIM4_CH1, G8_IO1, USART3_RTS	59	-	-	-	-	-	-	-	-	-	ADC	possible	-	-	STEP_A2	-	-	44	-
PD13	TIM4_CH2, G8_IO2	60	-	-	-	-	-	-	-	-	-	ADC	possible	-	-	STEP_A1	-	-	43	-
PD14	TIM4_CH3, G8_IO3	61	-	-	-	-	-	-	-	-	-	ADC	possible	-	-	STEP_A4	-	-	46	-
PD15	TIM4_CH4, G8_IO4, SPI2_NSS	62	-	-	-	-	-	-	-	-	-	-	possible	-	-	STEP_A3	-	-	45	-
PE0	TIM4_ETR, TIM16_CH1, USART1_TX	97	-	-	INT1	-	-	-	-	-	-	-	-	-	-	`	-	-	-	15
PE1	TIM17_CH1, USART1_RX	98	-	-	DRDY/IN	-	-	-	-	-	-	-	-	-	-	`	-	-	-	16
PE2	TRACECK, TIM3_CH1, G7_IO1	1	-	DRDY	-	-	-	-	-	-	-	-	possible	-	-	`	-	-	-	13
PE3	TRACED0, TIM3_CH2, G7_IO2	2	-	-	CS_I2C/	-	-	-	-	-	-	-	possible	-	-	`	-	-	-	14
PE4	TRACED1, TIM3_CH3, G7_IO3	3	-	INT1	-	-	-	-	-	-	-	-	possible	-	-	`	-	-	-	11
PE5	TRACED2, TIM3_CH4, G7_IO4	4	-	INT2	-	-	-	-	-	-	-	-	possible	-	-	`	-	-	-	12
PE6	TRACED3	5	-	-	-	-	-	-	-	-	-	-	-	-	-	GPIO_OUT DEBUG_5	-	-	-	9
PE7	TIM1_ETR	38	-	-	-	-	-	-	-	-	-	ADC	-	-	-	GPIO_IN EXTRA_4	-	-	23	-
PE8	TIM1_CH1N	39	-	-	-	-	LD4/BLU	-	-	-	-	ADC	-	-	-	`	-	-	26	-
PE9	TIM1_CH1	40	-	-	-	-	LD3/RED	-	-	-	-	ADC	-	-	-	`	-	-	25	-
PE10	TIM1_CH2N	41	-	-	-	-	LD5/ORA	-	-	-	-	ADC	-	-	-	`	-	-	28	-
PE11	TIM1_CH2	42	-	-	-	-	LD7/GRE	-	-	-	-	ADC	-	-	-	`	-	-	27	-
PE12	TIM1_CH3N	43	-	-	-	-	LD9/BLU	-	-	-	-	ADC	-	-	-	`	-	-	30	-
PE13	TIM1_CH3	44	-	-	-	-	LD10/BL	-	-	-	-	ADC	-	-	-	`	-	-	29	-
PE14	TIM1_CH4_BKIN2	45	-	-	-	-	LD8/ORA	-	-	-	-	ADC	-	-	-	`	-	-	32	-
PE15	TIM1_BKIN, USART3_RX	46	-	-	-	-	LD6/GRE	-	-	-	-	ADC	-	-	-	`	-	-	31	-
PF0	OSC_IN, I2C2_SDA, TIM1_CH3N	12	-	-	-	-	-	-	-	OSC_IN	-	-	-	-	possible	I2C2_SDA	-	-	-	5
PF1	OSC_OUT, I2C2_SCL	13	-	-	-	-	-	-	-	OSC_OU	-	-	-	-	possible	I2C2_SCL	-	-	-	6
PF2	-	19	-	-	-	-	-	-	-	-	-	ADC	-	-	-	GPIO_IN EXTRA_2	-	-	10	-
PF4	COMP1_OUT	27	-	-	-	-	-	-	-	-	-	ADC	-	-	-	GPIO_IN CURR_1	-	-	13	-
PF6	TIM4_CH4, I2C2_SCL, USART3_RTS	73	-	-	-	-	-	-	-	-	-	-	possible	-	possible	TIM4_CH4	-	-	-	39
PF9	TIM15_CH1, SPI2_SCK	10	-	-	-	-	-	-	-	-	-	-	possible	-	-	TIM15_CH1	-	-	-	3
PF10	TIM15_CH2, SPI2_SCK	11	-	-	-	-	-	-	-	-	-	-	possible	-	-	-	-	-	-	4

Notes
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-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5V	-	-	1		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5V	-	-	2		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3V	-	1	-		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3V	-	2	-		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	VDD	-	-	20		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	GND	3	-	-		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	GND	-	49	49		
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	GND	-	50	50		
																7						

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