

STM32L152 48pin

Started: December 21st, 2012
 Updated: March 23rd, 2013

PIN No.	Name	Alternate Functions	Used Function	purpose	PC	Barometer	LCD	OTHERS	POWER
1	VLCD			VLCD				VDD	
2	PC13	RTC_AF1/WKUP2							
3	PC14	OSC32_IN	OSC32_IN	OSC32_IN				Xtal	
4	PC15	OSC32_OUT	OSC32_OUT	OSC32_OUT				Xtal	
5	PH0	OSC_IN							
6	PH1	OSC_OUT							
7	NRST	/RESET	NRST						
8	VSSA								
9	VDDA								
10	PA0	WKUP1/USART2_CTS/ ADC_IN0/TIM2_CH1_ETR/ COMP1_INP	WKUP1	WAKUP1				2	
11	PA1	USART2_RTS/ADC_IN1/ TIM2_CH2/LCD_SEG0/ COMP1_INP	ADC1	ADC/Battery Voltage				1	
12	PA2	USART2_TX/ADC_IN2/ TIM2_CH3/TIM9_CH1/ LCD_SEG1/COMP1_INP	ADC2	ADC/VOL				8	
13	PA3	USART2_RX/ADC_IN3/ TIM2_CH4/TIM9_CH2/ LCD_SEG2/COMP1_INP	OUTPUT	Enable Bat Volt				3	
14	PA4	SPI1_NSS/USART2_CK/ ADC_IN4/DAC_OUT1/ COMP1_INP	OUTPUT	Enable VOL				7	
15	PA5	SPI1_SCK/ADC_IN5/ DAC_OUT2/ TIM2_CH1_ETR/COMP1_INP	ADC5	ADC/SOLAR				2	
16	PA6								
17	PA7								
18	PB0		OUTPUT	LCD POWER			5		
19	PB1		OUTPUT	LCD RESET			1		
20	PB2	BOOT1	BOOT1	BOOT1				VDD	
21	PB10	I2C2_SCL/USART3_TX/ TIM2_CH3/LCD_SEG10	I2C2_SCL	I2C2_LCD			2		
22	PB11	I2C2_SDA/USART3_RX/ TIM2_CH4/LCD_SEG11	I2C2_SDA	I2C2_LCD			3		
23	VSS_1						4		
24	VDD_1								
25	PB12	SPI2_NSS/I2C2_SMBA/ USART3_CK/LCD_SEG1 2/ADC_IN18/COMP1_INP /TIM10_CH1	OUTPUT	LED(Red)				5 (330 Ohm)	
26	PB13	SPI2_SCK/USART3_CTS/ LCD_SEG13/ADC_IN19/ COMP1_INP/TIM9_CH1	OUTPUT	LED(Green)				4 (330 Ohm)	
27	PB14	SPI2_MISO/USART3_RT S/LCD_SEG14/ADC_IN20 /COMP1_INP/TIM9_CH2	OUTPUT	BARO Power					
28	PB15	SPI2_MOSI/TIM1_CH3N/ LCD_SEG15/ADC_IN21/ COMP1_INP/TIM11_CH1/ RTC_50_60Hz							
29	PA8	USART1_CK/MCO/ LCD_COM0							
30	PA9	USART1_TX/LCD_COM1	USART1_TX	Communication RS232 TX	5				
31	PA10	USART1_RX/LCD_COM2	USART1_RX	Communication RS232 RX	4				

32	PA11	USART1_CTS/USBDM/ SPI1_MISO	OUTPUT	Solar panel control Charge control				3	
33	PA12	USART1_RTS/USBDP/ SPI1_MOSI	OUTPUT	Solar panel control Reg. Input control				1	
34	PA13	JTMS/ SWDIO	JTAG	JTMS				2(7)	
35	VSS_2				1			2	
36	VDD_2								
37	PA14	JTCK/ SWCLK	JTAG	JTCK				3(9)	
38	PA15	TIM2_CH1_ETR/ SPI1_NSS/LCD_SEG17	JTAG	JTDI				5(5)	
39	PB3	TIM2_CH2/TRACES WO/SPI1_SCK/COMP2_I NMLCD_SEG7	JTAG	JTDO				4(13)	
40	PB4	TIM3_CH1/SPI1_MIS O/COMP2_INP/LCD_SEG8	JTAG	NRST				6(15)	
41	PB5	I2C1_SMBAI/TIM3_CH2/ SPI1_MOSI/COMP2_INP/ LCD_SEG9	COMP2 Input	Voltage monitor (Solar pannel volt)				PA5 (15)	
42	PB6	I2C1_SCL/TIM4_CH1/ USART1_TX/LCD_SEG8	I2C1_SCL	I2C1_BARO		5			
43	PB7	I2C1_SDA/TIM4_CH2/ USART1_RX/PVD_IN	I2C1_SDA	I2C1_BARO		6			
44	BOOT0	-	BOOT0	BOOT				VSS	
45	PB8	TIM4_CH3/I2C1_SCL/ LCD_SEG16/TIM10_CH1		USER SW (Not yet)					
46	PB9	TIM4_CH4/I2C1_SDA/ LCD_COM3/TIM11_CH1		SW0 (Not yet)					
47	VSS_3					7		8(4,5)	
48	VDD_3					2,3			
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JTAG Interface

PIN No.	Device Function name	PIN No.	CPU Function name
1	VDD	36	VDD
2	TMS(JTAG 20pin=7)	34	JTMS
3	TCK(JTAG 20pin=9)	37	JTCK
4	TDO(JTAG 20pin=13)	39	JTDO
5	TDI(JTAG 20pin=5)	38	JTDI
6	sRSTn(JTAG 20pin=15)	40	NRST
7	N.C.	x	x
8	GND (JTAG 20pin=4,5,8 10,12,14,16,18,20)	35	GND

RS232(USB) Interface

PIN No.	Device Function name	PIN No.	CPU Function name
1	GND(BLACK)	35	GND(BLACK)
2	CTS(BRAWN)	x	x
3	+5V VCC(RED)	x	x
4	TXD(ORANGE)	31	PA10(UART1_RX(RED))
5	RXD(YELLOW)	30	PA9(UART1_TX(YELLOW))
6	RTS(GREEN)	x	x

I2C LCD

PIN No.	Device Function name	PIN No.	CPU Function name
1	NRST	19	PB1
2	SCL	21	PB10(I2C2_SCL)
3	SDA	22	PB11(I2C2_SDA)
4	VSS	23	GND
5	VDD	18	PB0

POWER BOARD

PIN No.	Device Function name	PIN No.	CPU Function name
1	Battery Voltage(Y)	11	PA1(ADC_IN1)
2	SOLAR voltage(Y)	15	PA5(ADC_IN5)
3	Enable Bat Volt(B)	13	PA3
4		x	x
5	GND(BLACK)		GND(main power line)
6	VDD(RED)		VDD(main power line)

1	Reg. Input control (Y)	33	PA12
2	GND(B)	35	GND
3	Charge control(W)	32	PA11

1	GND(B)	1	GND
2	SOLAR(R)	2	SOLAR

PANEL BOARD

PIN No.	Device Function name	PIN No.	CPU Function name
1		x	
2	WAKEUP SW	10	PA0
3	GND (B)	23	GND
4	LED(Green)	26	PB13
5	LED(Red)	25	PB12
6	VDD(R)	9	VDD
7	Enable VOL(B)	14	PA4
8	ADC/VOL(O)	12	PA2(ADC_IN2)
9		x	x
10		x	x