

ESP_CS	8	PB14	S4.2	TC5[0]	TCC4[0]	TCC0[2]		DAT8
ESP_GPI00	6	PB15	S4.3	TC5[1]	TCC4[1]	TCC0[3]		DAT9
ESP_BUSY	5	PB16	S5.0	TC6[0]	TCC0[0]	TCC0[4]	SDCD	SCK0
ESP_RESET	7	PB17	S5.1	TC6[1]	TCC3[1]	TCC0[5]	SDWP	MCK0
ESP_RTS	51	PA15	S2.3 S4.3	TC3[1]	TCC2[1]	TCC1[3]		
ESP_TX	1	PB12	S4.0	TC4[0]	TCC3[0]	TCC0[0]	SDCD	SCK1
ESP_RX	0	PB13	S4.1	TC4[1]	TCC3[1]	TCC0[1]	SDWP	MCK1
MOSI	29	PA12	S2.0 S4.1	TC2[0]	TCC0[6]	TCC1[2]	SDCD	DEN1
SCK	30	PA13	S2.1 S4.0	TC2[1]	TCC0[7]	TCC1[3]	SDWP	DEN2
MISO	31	PA14	S2.2 S4.2	TC3[0]	TCC2[0]	TCC1[2]		CLK

LCD_DATA0	34	PA16	0	S1.0	S3.1	TC2[0]	TCC1[0]	TCC0[4]	DATA0
LCD_DATA1	35	PA17	1	S1.1	S3.0	TC2[1]	TCC1[1]	TCC0[5]	DATA1
LCD_DATA2	36	PA18	2	S1.2	S3.2	TC3[0]	TCC1[2]	TCC0[6]	DATA2
LCD_DATA3	37	PA19	3	S1.3	S3.3	TC3[1]	TCC1[3]	TCC0[7]	DATA3
LCD_DATA4	38	PA20	4	S5.2	S3.2	TC7[0]	TCC1[4]	TCC0[8]	SDCMD FS0 DATA4
LCD_DATA5	39	PA21	5	S5.3	S3.3	TC7[1]	TCC1[5]	TCC0[1]	SDCK SD0 DATA5
LCD_DATA6	40	PA22	6	S3.0	S5.1	TC4[0]	TCC1[6]	TCC0[2]	SDI DATA6
LCD_DATA7	41	PA23	7	S3.1	S5.0	TC4[1]	TCC1[7]	TCC0[3]	SOF 1KHZ FS1 DATA7

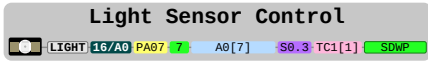
Pin	MCU Pin	MCU Pin Name	MCU Pin Value	Signal
TFT RESET	24/A8	PA00	0	S1.0-TC2[0]
TFT RD	9	PB04	4	A1[6]
TFT RS	10	PB05	5	A1[7]
TFT CS	11	PB06	6	A1[8]
TFT TE	12	PB07	7	A1[9]
TFT WR	26	PB09	9	A0[3]/A1[1]
TFT BACKLIGHT	25/A9	PB31	15	S7.1-S5.0-TC0[1]

Signal lines: S1.0-TC2[0], S4.1-TC4[1], S7.1-S5.0-TC0[1], TCC4[1]-TCC0[7]

TOUCH_YD	18/A2	PB00	0	A0[12]	S5.2	TC7[0]
TOUCH_XL	19/A3	PB01	1	A0[13]	S5.3	TC7[1]
TOUCH_YU	20/A4	PA06	6	A0[6]	S0.2	TC1[0]
TOUCH_XR	21/A5	PB08	8	A0[2]/A1[0]	S4.0	TC4[0]

SDCD

Pin	Function	GPIO	Alternate Function	Alternate Function	Alternate Function	Alternate Function	Alternate Function	Alternate Function	Alternate Function	Alternate Function
32	SD CS	PB30	S7.0	S5.1	TC0[0]	TCC4[0]	TCC0[6]	SWDO		
33	SD CARD DETECT	PA01	1	S1.1	TC2[1]					
29	MOSI	PA12	S2.0	S4.1	TC2[0]	TCC0[6]	TCC1[2]	SDCD	DEN1	
30	SCK	PA13	S2.1	S4.0	TC2[1]	TCC0[7]	TCC1[3]	SDWP	DEN2	
31	MISO	PA14	S2.2	S4.2	TC3[0]	TCC2[0]	TCC1[2]		CLK	



The Microchip (nee Atmel) SAMD51 is an ARM Cortex-M4F running at 120 MHz with 192 or 256kB on-chip SRAM, up to 1MB Flash memory and built in USB. All GPIO is 3.3V in/out max unless otherwise stated. SERCOMs can be used as UART (TX on SERCOM pad 0, RX on any pad), I2C (SDA on pad 0, SCL on pad 1), or SPI (SCK on pad 1, MOSI on pad 0 or 3, MISO on any pad remaining)