

Pin Usage on Prototyping System for Teensy 4.1 with Audio Adapter

Baseboard		Color Key	PWM	Digital Audio	Serial	Digital	Teensy	Analog	I2C	SPI	CAN Bus	Power	Baseboard	
Power	Ground					GND		VIN					VIN	5V Power
ESP32 Serial TX2 (1) J6	TX2	PWM	CRX2	CS1	RX1	0		GND					GND	Ground
ESP32 Serial RX2 (1) J5	RX2	PWM	CTX2	MISO1	TX1	1		3.3V					Not Connected	
XPT2046 TS (2) J4	T_IRQ	PWM	OUT2			2		23 A9		CRX1	MCLK1	PWM	MCLK	T4.x Audio Adapter
		PWM	LRCLK2			3		22 A8		CTX1		PWM		
		PWM	BCLK2			4		21 A7		RX5	BCLK1		BCLK	T4.x Audio Adapter
		PWM	IN2			5		20 A6		TX5	LRCLK1		LRCLK	T4.x Audio Adapter
T4.x Audio Adapter (6) MEMCS	MEMCS	PWM	OUT1D			6		19 A5			SCL	PWM	SCL	T4.x Audio Adapter
T4.x Audio Adapter	DIN	PWM	OUT1A	RX2		7		18 A4			SDA	PWM	SDA	T4.x Audio Adapter
T4.x Audio Adapter	DOUT	PWM	IN1	TX2		8		17 A3		TX4	SDA1			
		PWM	OUT1C			9		16 A2		RX4	SCL1			
T4.x Audio_SD (3) SDCS	SDCS	PWM	MQSR	CS		10		15 A1		RX3	SPDIF IN	PWM	A1	T4.x Audio Adapter Vol (7)
T4.x Audio_SD/TS/TFT	MOSI	PWM	CTX1	MOSI		11		14 A0		TX3	SPDIF OUT	PWM		
T4.x Audio_SD/TS/TFT	MISO	PWM	MQSL	MISO		12		13 LED		SCK		PWM	SCK	T4.x Audio_SD/TS/TFT
Not Connected						3.3V		GND					GND	Ground
		PWM	SCL2	TX6	A10	24		41 A17					TS_CS	XPT2046 Touchscreen CS
		PWM	SDA2	RX6	A11	25		40 A16					TFT_CS	ILI9341 TFT Display CS
				MOSI1	A12	26		39 A15		MISO1	OUT1A			
				SCK1	A13	27		38 A14		CS1	IN1			
		PWM				28		37		CS		PWM		
		PWM				29		36		CS		PWM		
CAN Bus In (4) J8	CRX3		CRX3			30		35		TX8			TX8	RS485 Out
CAN Bus Out	CTX3		CTX3			31		34		RX8			RX8	RS485 In (5) J7
			OUT1B			32		33			MCLK2	PWM	In/OUT	RS485 direction select

- (1) ESP32 link uses Serial 1 on pins 0 and 1. J5 and J6 can be removed to repurpose these pins
- (2) T_IRQ from the XPT2046 Touch Display comes in on pin 2. Jumper can be removed to repurpose this pin
- (3) If no SD card is installed in Audio Adapter or SD card slot on Teensy 4.1 is used, pin 10 is available for other use
- (4) The CAN3 bus uses pins 30 and 31. Since receiver is always active, J8 can be removed to repurpose these pins
- (5) Pins 33-35 are used for the RS485 interface. Since receiver is always active, J7 can be removed to repurpose these pins.
- (6) This chip is not installed by default, so pin can be repurposed
- (7) Volume pot is not installed by default. There is 0.1uF cap on audio adapter that can conflict with some signals if repurposed