

Pin Usage on Project System for Teensy 4.1 with Audio Adapter

Baseboard		Color Key	PWM	Digital Audio	Serial	Digital		Analog	I2C	SPI	CAN Bus	Power	Baseboard		
Power	Ground					GND	Teensy 4.1	VIN					VIN	5V Power	
MIDI IN (1) J8	RX1	PWM	CRX2	CS1	RX1	0		GND						GND	Ground
MIDI OUT (1) J9	TX1	PWM	CTX2	MISO1	TX1	1		3.3V							No Connection
Touchscreen	INT	PWM	OUT2			2		23 A9	CRX1	MCLK1	PWM			MCLK	T4.x Audio Adapter
MUX 1 & 2 Addr (2)	S0	PWM	LRCLK2			3		22 A8	CTX1						
MUX 1 & 2 Addr (2)	S1	PWM	BCLK2			4		21 A7	RX5	BCLK1				BCLK	T4.x Audio Adapter
RA8875 TFT Display	CS	PWM	IN2			5		20 A6	TX5	LRCLK1				LRCLK	T4.x Audio Adapter
MUX 1 & 2 Addr (2)	S2	PWM	OUT1D			6		19 A5		SCL	PWM			SCL	T4.x Audio Adapter/Touch
T4.x Audio Adapter	DIN	PWM	OUT1A	RX2		7		18 A4		SDA	PWM			SDA	T4.x Audio Adapter/Touch
T4.x Audio Adapter	DOUT	PWM	IN1	TX2		8		17 A3	TX4	SDA1				SDA1	MCP23017 I/O expander
RA8875 TFT Display	RESET	PWM	OUT1C			9		16 A2	RX4	SCL1				SCL1	MCP23017 I/O expander
T4.x Audio_SD (3)	SDCS	PWM	MQSR	CS		10		15 A1	RX3	SPDIF IN	PWM			A1	T4.x Audio Adapter Vol (10)
T4.x Audio_SD	MOSI	PWM	CTX1	MOSI		11		14 A0	TX3	SPDIF OUT	PWM				
T4.x Audio_SD	MISO	PWM	MQSL	MISO		12	13 LED	SCK					SCK	T4.x Audio_SD	
No Connection						3.3V	GND						GND	Ground	
MUX 2 I/O (4) J15	24/A10	PWM	SCL2	TX6	A10	24	41 A17						INTA	MCP23017 I/O expander (9) J17	
MUX 1 I/O (4) J14	25/A11	PWM	SDA2	RX6	A11	25	40 A16						INTB	MCP23017 I/O expander (9) J16	
RA8875 TFT Display	MOSI1			MOSI1	A12	26	39 A15	MISO1	OUT1A				MISO1	RS8875 TFT Display	
RA8875 TFT Display	SCK1			SCK1	A13	27	38 A14	CS1	IN1				38	SPI Header CS (8)	
ESP32 Serial TX2 (5) J2	TX2	PWM			RX7	28	37		CS				37	SPI Header CS (8)	
ESP32 Serial RX2 (5) J3	RX2	PWM			TX7	29	36		CS				36	SPI Header CS (8)	
CAN Bus In (6) J4	CRX3		CRX3			30	35		TX8				TX8	RS485 Out (7) J12	
CAN Bus Out (6) J5	CTX3		CTX3			31	34		RX8				RX8	RS485 In (7) J10	
			OUT1B			32	33			MCLK2	PWM		RE/DE	RS485 Dir En (7) J11	

- (1) MIDI uses serial1 on pins 0 and 1. Jumpers J8 and J9 can be removed to repurpose these pins
- (2) Used for MUX addressing. May be repurposed if not using MUX
- (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) Analog MUX 1 and 2 use pins 25 and 24. The MUX enable jumpers J14 and J15 can be removed to repurpose these pins.
- (5) ESP32 comm link uses Serial 7 on pins 28 and 29. Jumpers J2 and J3 can be removed to repurpose these pins
- (6) The CAN3 bus uses pins 30 and 31. Jumpers J4 and J5 can be removed to repurpose these pins
- (7) RS485 bus uses pins 33, 34 and 35. Jumpers J10, J11, J12 can be removed to repurpose these pins
- (8) SPI Chip Selects are run to header, but can be repurposed if not using for SPI
- (9) MCP23017 I/O Expander interrupts comin in on pins 40 and 41. One or both jumpers J16 and J17 can be removed to repurpose these pins
- (10) Volume pot is not installed by default. There is 0.1uF cap on audio adapter that can conflict with some signals if repurposed