

Pin Usage on Project System for Teensy 4.1

Baseboard		Color Key	PWM	Digital Audio	Serial	Digital			Analog	I2C	SPI	CAN Bus	Power	Baseboard	
Power	Ground					GND			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		
MUX 1 & 2 Addr (2)	S0	PWM	LRCLK2			3			22 A8	CTX1			PWM		
MUX 1 & 2 Addr (2)	S1	PWM	BCLK2			4			21 A7	RX5	BCLK1				
RA8875 TFT Display	CS	PWM	IN2			5			20 A6	TX5	LRCLK1				
MUX 1 & 2 Addr (2)	S2	PWM	OUT1D			6			19 A5		SCL		PWM	SCL	RA8875 Touch
		PWM	OUT1A	RX2		7			18 A4		SDA		PWM	SDA	RA8875 Touch
		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
		PWM	MQSR	CS		10			15 A1	RX3	SPDIF IN		PWM		
		PWM	CTX1	MOSI		11			14 A0	TX3	SPDIF OUT		PWM		
		PWM	MQSL	MISO		12			13 LED	SCK			PWM		
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				SPI Header CS (8)
ESP32 Serial TX2 (5) J2	TX2	PWM		RX7		28			37	CS			PWM		SPI Header CS (8)
ESP32 Serial RX2 (5) J3	RX2	PWM		TX7		29			36	CS			PWM		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

Teensy 4.1

- (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
- (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