

STELLA-1.2 remote sensing module build procedure — updated 20241220

Line	Description	Function	MC pin	Front/ Rear	Location 1	Location 2	color/ note	done	Notes
1	print thermal spacer								
2	cut traces	bus traces		Rear	30 AB, BC, CD	29 AB, BC, CD	cut traces with a sharp knife, remove segment		test continuity
3	cut traces	analog traces		Rear	30 Hi, IJ	29 Hi, IJ	cut traces with a sharp knife, remove segment		test continuity
4	magnet coupler 4 pos	4 pin, pin face		Front	A30, B30,C30, D30	[x]	use alignment fixture		
5	magnet coupler 3 pos	3 pin, pin face		Front	H30, i30, J30	[x]	use alignment fixture		
6	header pins	6 pins		Front	G1-G6				
7	header pins	6 pins		Front	C1-C6				
8	header pins	6 pins		Front	G11, D11				Remove 4 middle pins with pliers
9	header pins	6 pins		Front	G26, D26				Remove 4 middle pins with pliers
10	install capacitor	0.1uF capacitor (not polarized)		Front	i5,i6				Leave enough length to lay it flat
11	install resistor	10kΩ resistor (not polarized)		Front	E28	F28			
12	install resistor	20kΩ resistor (not polarized)		Front	E27	J28			
13	bus coupler wires	I2C_SCL		Front	J8	SCL (-) above J8	i2c Serial Clock		Make sure wires lay single beneath headers, test with chip breakouts to see if they lay flat
14	bus coupler wires	I2C_SDA		Front	J7	SDA (+) above J7	i2c Serial Data		
16	boost	5V power		Front	J29, J30	J5	5V		
17	bus coupler wires	GND		Front	B29, B30	GND (-) below A29	GND		
18	Analog inputs	Analog input 0	A0	Front	i29, i30	i28	Analog input 0		
19	Analog inputs	Analog input 0	A0	Front	J2	B28	Analog input 0		
20	bus coupler wires	3V		Front	A29, A30	3V (+) below A30	+3.3V		
21	bus coupler wires	I2C_SCL		Front	C29, C30	SCL (-) above J30	i2c Serial Clock		
22	bus coupler wires	I2C_SDA		Front	E30	SDA (+) above J30	i2c Serial Data		
23	bus coupler wires	GND		Front	A27	GND (-) below A27	GND		
24	bus coupler wires	GND		Front	A5	GND (-) below A5	GND		
25	bus coupler wires	GND		Front	A8	GND (-) below A8	GND		
34	bus coupler wires	GND		Front	A11	GND (-) below A11	GND		install on triad sensor itself, test connectivity, if good skip line 34
26	bus coupler wires	3V		Front	A6	3V (+) below A6	+3.3V		
27	bus coupler wires	3V		Front	A7	3V (+) below A7	+3.3V		
28	bus coupler wires	I2C_SCL		Front	E4	SCL (-) above J2	i2c Serial Clock		
29	bus coupler wires	I2C_SDA		Front	E3	SDA (+) above J1	i2c Serial Data		
30	install triad	put triad on header pins		Front	G11, D11	G26, D26	Triad sensors		Triad sensor should have one sensor side towards magnetic couplers
31	Thermal	thermal		Front	E7, E8, F7, F8		use printed spacer		Use spacer, thermal tab facing towards magnetic couplers
15	bus coupler wires	GND		Front	J6	GND (-) below A9	GND		Leave slack for thermal sensor
32	Install Ultrasonic Rangefinder	put rangefinder on header pins		Front	G1-G6				install sensor towards J
33	Install Humidity Sensor	put humidity sensor on header pins		Front	C1-C6				instal sensor towards A
34	bus coupler wires	GND		Front	GND on triad	GND (-) below A13	GND		install on triad sensor itself
35	bus coupler wires	3V		Front	3v3 on triad	3V (+) below A9	+3.3V		install on triad sensor itself
36	bus coupler wires	I2C_SCL		Front	SCL on triad	SCL (-) above J10	i2c Serial Clock		install on triad sensor itself
37	bus coupler wires	I2C_SDA		Front	SDA on triad	SDA (+) above J9	i2c Serial Data		install on triad sensor itself