Bill Of Materials for ESP Smartmeter Logger

Design Title ESP Smartmeter Logger

Author FW Document Number 0.1 Revision 1.0

Assembly Variant STANDARD **Board** Mainboard

Design Created Sonntag, 12. Juni 2022 **Design Last Modified** Donnerstag, 16. März 2023

Total Parts In Design 92

1 CC 1 CC 2 CC 4 CC 2 CC 3 CC 1 CC	21 22 23 24,C6 25,C8,C18,C20 27,C9 210,C12 211,C13,C19 215 216 221	Value 0.22uF 0.1uF 22uF 1nF 0.1uF 4.7uF 4.7pF 10uF 0.1uF	PCB Package 0603_CAP 0603_CAP 1210_CAP 0402_CAP 0402_CAP 0603_CAP 0402_CAP 0805_CAP 0603_CAP 0603_CAP NULL	Unit Cost €0,025 €0,025 €0,025 €0,025 €0,025 €0,025 €0,025 €0,025
1 C 1 C 2 C 4 C 2 C 2 C 3 C 1 C 1 C 1 C Sub-totals:	C2 C3 C4,C6 C5,C8,C18,C20 C7,C9 C10,C12 C11,C13,C19 C15 C16 C21	0.1uF 22uF 1nF 0.1uF 4.7uF 4.7pF 10uF 0.1uF	0603_CAP 1210_CAP 0402_CAP 0402_CAP 0603_CAP 0402_CAP 0805_CAP 0603_CAP	€0,025 €0,025 €0,025 €0,025 €0,025 €0,025 €0,025
1 C C C C C C C C C C C C C C C C C C C	23 24,C6 25,C8,C18,C20 27,C9 210,C12 211,C13,C19 215 216 221 s eferences	22uF 1nF 0.1uF 4.7uF 47pF 10uF 0.1uF	1210_CAP 0402_CAP 0402_CAP 0603_CAP 0402_CAP 0805_CAP 0603_CAP 0603_CAP	€0,025 €0,025 €0,025 €0,025 €0,025 €0,025 €0,025
2 C 4 C 2 C 2 C 3 C 1 C 1 C 1 C Sub-totals:	C4,C6 C5,C8,C18,C20 C7,C9 C10,C12 C11,C13,C19 C15 C16 C21	1nF 0.1uF 4.7uF 47pF 10uF 0.1uF 1uF	0402_CAP 0402_CAP 0603_CAP 0402_CAP 0805_CAP 0603_CAP 0603_CAP	€0,025 €0,025 €0,025 €0,025 €0,025 €0,025 €0,025
4 C 2 C 2 C 3 C 1 C 1 C 1 C Sub-totals:	25,C8,C18,C20 27,C9 210,C12 211,C13,C19 215 216 221 s eferences	0.1uF 4.7uF 47pF 10uF 0.1uF 1uF 10uF	0402_CAP 0603_CAP 0402_CAP 0805_CAP 0603_CAP 0603_CAP	€0,025 €0,025 €0,025 €0,025 €0,025 €0,025 €0,025
2 C 2 C 3 C 1 C 1 C 1 C Sub-totals:	27,C9 210,C12 211,C13,C19 215 216 221 s eferences	4.7uF 47pF 10uF 0.1uF 1uF 10uF	0603_CAP 0402_CAP 0805_CAP 0603_CAP 0603_CAP	€0,025 €0,025 €0,025 €0,025 €0,025 €0,025
2 C 3 C 1 C 1 C 1 C Sub-totals:	C10,C12 C11,C13,C19 C15 C16 C21 S	47pF 10uF 0.1uF 1uF 10uF	0402_CAP 0805_CAP 0603_CAP 0603_CAP	€0,025 €0,025 €0,025 €0,025 €0,025
3 C 1 C 1 C 1 C Sub-totals:	C11,C13,C19 C15 C16 C21 S eferences	10uF 0.1uF 1uF 10uF	0805_CAP 0603_CAP 0603_CAP	€0,025 €0,025 €0,025 €0,025
1 C 1 C 1 C Sub-totals:	C15 C16 C21 S eferences	0.1uF 1uF 10uF	0603_CAP 0603_CAP	€0,025 €0,025 €0,025
1 C 1 C Sub-totals:	C16 C21 S eferences	1uF 10uF	0603_CAP	€0,025 €0,025
1 C Sub-totals:	c21 s eferences	10uF		€0,025
Sub-totals:	s eferences		NULL	
	<u>eferences</u>			₽ O AOO
36 Resistors	<u>eferences</u>			₹0,400
O		M.L.	DOD Dod oo	1120000
		<u>Value</u> 220	PCB Package 0603_RES	<u>Unit Cost</u>
	₹3	100k	-	
			0603_RES	
	₹4	30k	0603_RES	
	₹ 5	10k	0603_RES	
	₹	100	0603_RES	
	R7,R33-R34	1k5	0603_RES	60.040
	8	3k3	0603_RES	€0,010
	R9-R10,R17	470	0603_RES	€0,010
	R11	2k	0402_RES	€0,010
	R12,R16,R31-R32	0	0603_RES	€0,010
	R14	2k	0603_RES	€0,010
	R15,R18	12k	0603_RES	€0,010
	R21,R24,R26,R28-R30	47k	0603_RES	€0,010
	2 23	10k	0603_RES	€0,010
	R35-R42	0	0402_RES	€0,010
Sub-totals:				€0,270
7 Integrated			DOD D	
<u>Quantity </u>		Value TSS721ADR	PCB Package SOIC127P600X175-16N	<u>Unit Cost</u>
	J2-U3	EL357NC-TA-G	EL357NCTAG	
	и И	CP2102N	QFN50P500X500X100-29N-D	€3,000
	J5	AMS1117-3V3	SOT223-4	€0,300
	J6	ESP-WROOM-32	ESP32-S	€4,000
	л Л	HTE501	DFN-8 HTE501	€2,000
Sub-totals:	-	001	D. I. O. III LOOT	€9,300

Quantity	References	Value	PCB Package	Unit Cost				
2	Q1-Q2	BC846B	SOT23	€0,080				
Sub-totals:				€0,160				
8 Diodes								
<u>Quantity</u>	<u>References</u>	Value	PCB Package	Unit Cost				
2	D1,D4	LED	0805	€0,100				
6	D2-D3, D5-D8	NZL5V6AXV3T1G	SOTFL50P160X80-3N	€0,080 €0,680				
Sub-totals:								
1 Ferrite Beads								
<u>Quantity</u>	References	Value	PCB Package	Unit Cost				
1	FB1	1k@100MHz	0805	€0,200				
	Sub-totals: €0,200							
5 Conne		Malica	DOD Davis	Libelt Const				
Quantity	References J1	Value	PCB Package 1759017	Unit Cost				
1		PHOENIX_1759017		€1,200				
1	J2	101181920001LF	AMPHENOL_101181920001LF	€0,400				
1	J3	CONN-SIL8	CONN-SIL8	€0,100				
1	J4	CONN-SIL2	CONN-SIL2	€0,100				
1	J5	MICRSO SD SLOT	MEM20750014001A	€0,100				
Sub-totals:				€1,900				
2 Switch								
<u>Quantity</u>	References	Value	PCB Package	<u>Unit Cost</u>				
1	SW1	EN	2-PIN TACTILE SWITCH	€0,200				
1	SW2	BOOT	2-PIN TACTILE SWITCH	€0,200 €0,400				
Sub-totals:								
6 Miscell								
<u>Quantity</u>	References	Value	PCB Package	<u>Unit Cost</u>				
6	TP1-TP6	TESTPAD	TP_CIRCLE					
Sub-totals:	10 (€0,000				
6 Additio								
<u>Quantity</u>	<u>References</u>	Value	PCB Package	Unit Cost				
1	CT1	E-Test	NULL	€10,000				
1	CT2	MIKROE M-Bus Board (inkl. Versand)	NULL	€32,000				
1	СТЗ	Bestücken/Löten (ca. 2h)	NULL	€60,000				
1	CT4	Versand (Österreich)	NULL	€6,900				
1	CT5	Kabel+RJ12 Adapter	NULL	€3,000				
1	CT6	PCB (ENIG)	NULL	€4,900				
Sub-totals:				€116,800				
Totals:				€130,110				