

Name	Value	Case	Article number	Distributor	Price	Notes
C1	10µF	C_ELKO_RM2,54_DM6	RAD FC 10/50	Reichelt	0,20 €	
C2	10nF 630V	4X10R7,62	MKP10-630 10N2	Reichelt	0,29 €	
C3	10nF 630V	4X10R7,62	MKP10-630 10N2	Reichelt	0,29 €	
C4	10nF 630V	4X10R7,62	MKP10-630 10N2	Reichelt	0,29 €	
C5	1pF 500V	6X3R5,08	KERKO-500 1,0P	Reichelt	0,07 €	
C6	22pF 500V	6X3R5,08	KERKO-500 22P	Reichelt	0,07 €	
C7	100µF	C_ELKO_RM3,5_L8x12	RAD FC 100/35	Reichelt	0,30 €	Optional part for 6...26V input
C8	100nF	2,54x5,08_RM2,54	X7R-2,5 100N	Reichelt	0,08 €	Optional part for 6...26V input
C9	100nF	2,54x5,08_RM2,54	X7R-2,5 100N	Reichelt	0,08 €	Optional part for 6...26V input
C10	100µF	C_ELKO_RM2,54_DM6	RAD FC 100/16	Reichelt	0,17 €	Optional part for 6...26V input
C11	100µF	C_ELKO_RM2,54_DM6	RAD FC 100/16	Reichelt	0,17 €	
C12	100µF	C_ELKO_RM2,54_DM6	RAD FC 100/16	Reichelt	0,17 €	
D1	1N4007	D_RM12,7_DM3	1N 4007 DIO	Reichelt	0,03 €	Alternative part: UF 4007 DIO (Reichelt) – better switching performance
D2	1N4007	D_RM12,7_DM3	1N 4007 DIO	Reichelt	0,03 €	Alternative part: UF 4007 DIO (Reichelt) – better switching performance
D3	1N4007	D_RM12,7_DM3	1N 4007 DIO	Reichelt	0,03 €	Alternative part: UF 4007 DIO (Reichelt) – better switching performance
D4	1N4007	D_RM12,7_DM3	1N 4007 DIO	Reichelt	0,03 €	Alternative part: UF 4007 DIO (Reichelt) – better switching performance
D5	200V	DO41	BZT 03C200 TEL	Reichelt	0,55 €	BZT03C200 glass case seems light sensitive, cover in heat-shrink tubing.
D6	200V	DO41	BZT 03C200 TEL	Reichelt	0,55 €	Alternative parts: BZX85C200, 2EZ200D5 (plastic case)
D7	LED 3mm red (high brightness)	LED_3MM_ROT	KBT L-7104SRD-E	Reichelt	0,25 €	Alternative part: KBT L-7104SRC-D
D8	P6KE27A	DO15	P6KE 27A	Reichelt	0,17 €	
D9	LED 3mm green (low-current)	LED_3MM_GRÜN	LED 3MM 2MA GN	Reichelt	0,14 €	
D10	BAT43	DO35	BAT 43	Reichelt	0,05 €	
F1	500mA	PFRA-5,08	PFRA 050	Reichelt	0,32 €	
IC1	R-78E5.0	R-78E5.0	R-78E50-05	Reichelt	3,30 €	Optional part for 6...26V input, alternative DCDC: LC78_05-0.5
IC1a	LM2940CT-5.0	TO220	LM 2940 CT5	Reichelt	0,00 €	LDO might be used instead of DCDC module (IC1), but needs heatsink
IC1a	Heatsink		V PR5/15-M3	Reichelt	0,00 €	Small heatsink for linear regulator
IC2	ESP32 DevKit V1			eBay	9,00 €	2x15pin module (WiFi)
IC2a	Header 1x15 (female)	BLG1X15	1492307 – 62	Conrad	0,78 €	2pcs needed to mount ESP32
IC3	Moteino R6			-	0,00 €	Use instead of IC2 for LoRa
IC3a	Header 1x13 (female)	BLG1X13	1492305 – 62	Conrad	0,00 €	2pcs needed to mount Moteino R6
IC3b	LoRa Antenna		673-W3312B0100	Mouser	0,00 €	868 Mhz antenna for Moteino R6
J1	DC IN	KLEMMME2	AKL 101-02	Reichelt	0,26 €	
J2	DC SEL	Stiftleiste_2x03_G_2,54	MPE 087-2-006	Reichelt	0,16 €	
J2a	Jumper		JUMPER 2,54 SW	Reichelt	0,04 €	2pcs needed for DC select header
J3	I2C 3V	B4B-XH-A	JST XH4P ST	Reichelt	0,22 €	
J4	I2C 5V	B4B-XH-A	JST XH4P ST	Reichelt	0,22 €	
J5	UART 5V	B4B-XH-A	JST XH4P ST	Reichelt	0,22 €	
J6	UART2 3V	S4B-XH-A-1	S4B-XH-A-1	TME	0,29 €	
L1	22mH	Fastron 11P	L-11P 22M	Reichelt	0,95 €	
R1	1K	0207	1/4W 1,0K	Reichelt	0,15 €	
R2	100K	0207	1/4W 100K	Reichelt	0,15 €	
R3	1K	0207	1/4W 1,0K	Reichelt	0,15 €	
R4	150K	0207	1/4W 150K	Reichelt	0,15 €	

R5	10M	0207	1/4W 10M	Reichelt	0,15 €	
R6	10M	0207	1/4W 10M	Reichelt	0,15 €	
R7	10M	0207	1/4W 10M	Reichelt	0,15 €	
R8	4,7M	0207	1/4W 4,7M	Reichelt	0,15 €	
R9	470K	0207	1/4W 470K	Reichelt	0,15 €	
R10	10M	0207	1/4W 10M	Reichelt	0,15 €	
R11	10M	0207	1/4W 10M	Reichelt	0,15 €	
R12	10K	0207	1/4W 10K	Reichelt	0,15 €	
R13	1K	0207	1/4W 1,0K	Reichelt	0,15 €	
R14	4,7K	0207	1/4W 4,7K	Reichelt	0,15 €	
R15	1,5K	0207	1/4W 1,5K	Reichelt	0,15 €	
R16	4,7K	0207	1/4W 4,7K	Reichelt	0,00 €	I2C pull-up for Moteino R6, not needed for ESP32
R17	4,7K	0207	1/4W 4,7K	Reichelt	0,00 €	I2C pull-up for Moteino R6, not needed for ESP32
T1	2N3904	TO92B	2N 3904	Reichelt	0,05 €	
T2	BC327	TO92B	BC 327-25	Reichelt	0,05 €	
T3	MPSA42	TO92B	MPSA 42	Reichelt	0,07 €	
T4	BC517	TO92B	BC 517	Reichelt	0,11 €	
T5	2N7000	TO92B	2N 7000 DIO	Reichelt	0,08 €	
VT1	SBM-20			eBay	25,00 €	
VT1a	Fuse Holder 6,3x25	01020071Z	LITT 01020071Z	Reichelt	0,38 €	2pcs needed to mount geiger tube
PCB	Circuit board			Aisler	6,03 €	
					Total:	53,79 €

Mechanical parts

Name	Value	Case	Article number	Distributor	Price	Notes
GEH	Plastic box 160x80x55mm IP65	BXPBABS1608055-E01	ELBE 1608055 SW	Reichelt	15,30 €	Alternative part: G368/G258. Use IP67 PG screw connection for cables
SCR	Screws M3x6	M3x6	SP M3X6	Reichelt	0,37 €	Use four M3x6 screws to mount the circuit board
CG	Cable gland	M20	LAPP 53111520	Reichelt	0,99 €	Whatever fits the cable / sealing ring used
	Nut for cable gland	M20	LAPP 53119023	Reichelt	0,32 €	
	O-Ring for cable gland	M20	LAPP 52122021	Reichelt	0,98 €	
SR	Sealing ring for 2 cables	M20 - 2x5mm	LAPP 53320250	Reichelt	1,10 €	When using two 5mm cables (e.g. power and sensor)
MEM	Pressure equalization membrane		157881	ELV	4,95 €	Prevents water ingress
					Total:	24,01 €