



Bill of Materials

File name:	Fleet-Monitor
Project:	Fleet-Monitor.PrjPcb
Variant:	V1.0
Creation Date:	24.10.2021
Print Date:	24.11.2021

Designator	Component Description	Component Value	Footprint	JLC-Parts	Farnell	Mouser	Digikey	Quantity	Unit Price	Total Price
C1, C32, C33	Multilayer Ceramic Capacitors MLCC	10µF 10V	SMD Keramikkondensator 0603	C19702	2113070	963-LMK107BBJ106MALT	587-3258-1-ND	3	SFr. 0.01	SFr. 0.03
C2, C4, C10, C11, C12, C13, C14, C15, C16, C17, C31, C34, C35	Multilayer Ceramic Capacitors MLCC	100nF 50V	SMD Keramikkondensator 0603	C14663	2210822	810-CGA2B3X7R1H104K	445-6899-1-ND	13	SFr. 0.01	SFr. 0.13
C3	Multilayer Ceramic Capacitors MLCC	1µF 50V	SMD Keramikkondensator 0603	C15849	3013383	187-CL10A105KB8NNNC	1276-1860-1-ND	1	SFr. 0.01	SFr. 0.01
C5, C6, C18, C19	Multilayer Ceramic Capacitors MLCC	22pF 50V	SMD Keramikkondensator 0603	C1653	2332643	187-CL10C220JB8NNNC	1276-1023-1-ND	4	SFr. 0.01	SFr. 0.04
C7	Multilayer Ceramic Capacitors MLCC	470pF 3kV	SMD Keramikkondensator 1808	C106130	2812607	710-885342210003	732-12100-1-ND	1	SFr. 0.11	SFr. 0.11
C8, C9	Multilayer Ceramic Capacitors MLCC	22µF 25V	SMD Keramikkondensator 0603	C45783	3013459	187-CL21A226MAQNNNE	1276-2908-1-ND	2	SFr. 0.04	SFr. 0.08
C20	Multilayer Ceramic Capacitors MLCC	4.7µF 16V	SMD Keramikkondensator 0603	C19666	3013397	187-CL10A475KO8NNNC	1276-1784-1-ND	1	SFr. 0.01	SFr. 0.01
C21, C23, C24, C25	Multilayer Ceramic Capacitors MLCC	10nF 50V	SMD Keramikkondensator 0603	C57112	1833876	581-06031C103J	478-3700-1-ND	4	SFr. 0.01	SFr. 0.04
C22	Multilayer Ceramic Capacitors MLCC	22nF 50V	SMD Keramikkondensator 0603	C21122	3013425	187-CL10B223KB8NNNC	1276-1104-1-ND	1	SFr. 0.01	SFr. 0.01
C26	Multilayer Ceramic Capacitors MLCC	4.7nF 50V	SMD Keramikkondensator 0603	C53987	2332650	581-06035C472JAT2A	478-10355-1-ND	1	SFr. 0.01	SFr. 0.01
C27	Multilayer Ceramic Capacitors MLCC	1nF 3kV	SMD Keramikkondensator 1808	C173224	1886070	605-302R29W102KV4E	709-1047-1-ND	1	SFr. 0.06	SFr. 0.06
C28, C29, C30	Multilayer Ceramic Capacitors MLCC	10µF 50V	SMD Keramikkondensator 0805	C440198	3790440	81-GRM21BR61H106KE3L	490-18663-1-ND	3	SFr. 0.13	SFr. 0.39
D1, D2, D3	ESD Suppressor	PD4E1U06	SMD IC SOT-363 (SC-70-6)	C194628	3116516	595-TPD4E1U06DCKR	296-39347-1-ND	3	SFr. 0.12	SFr. 0.36
D4, D5	Schottky Barrier Diode	SS54	SMD Diode DO-214-AC	C22452	1861427	750-SS54-HF	641-SS54-HFCT-ND	2	SFr. 0.10	SFr. 0.20
F1	PTC Resettable Fuse	60V/300mA/600mA/100ms	SMD PPTC-Fuse 1812	C117855	1961501	576-1812L035/60MR	F8131CT-ND	1	SFr. 0.07	SFr. 0.07
F2	PTC Resettable Fuse	15V/500mA/1000mA/100ms	SMD PPTC-Fuse 1206	C315893	2752736	576-1206L050/15YR	F3733CT-ND	1	SFr. 0.23	SFr. 0.23
J1	Through Hole Jumper	2-Pol	THT Jumper	C358684	2668454	538-22-28-4023	WM50016-02-ND	1	SFr. 0.01	SFr. 0.01
J2, J3, J4	Solder Jumper	2-Pol	SMD Solder Jumper 1x2mm					3	SFr. 0.00	SFr. 0.00
L1	Common Mode Filter	ACT45B-101-2P-TL003	SMD Common Mode Choke 4.5x3.2	C88056	3407556	810-ACT45B1012PTL003	445-3959-1-ND	1	SFr. 0.56	SFr. 0.56
L2, L3	Power Inductor	4.7uH	SMD INDUCTOR/FERRITE 0805	C86094	2840129	81-LQM2MPN4R7MG0L	490-12073-1-ND	2	SFr. 0.09	SFr. 0.18
L4	Power Inductor	2.2uH	SMD INDUCTOR/FERRITE 0805	C136243	2470314	810-TFM201610GHM2R2A	445-173104-1-ND	1	SFr. 0.13	SFr. 0.13
P1, P2	RGB LED	67-23/R6GHBHC-B01/2T	SMD LED PLCC-4	C264607		593-VAOS-SP4RGB4	VAOS-SP4RGB4CT-ND	2	SFr. 0.19	SFr. 0.38
P3	General Purpose LED	Yellow (5mA, 2.0V)	SMD LED 0603	C72038	1465989	645-598-8040-107F	350-2032-1-ND	1	SFr. 0.34	SFr. 0.34
P4	General Purpose LED	Green (5mA, 2.4V)	SMD LED 0603	C72043	1465991	645-598-8070-107F	350-2035-1-ND	1	SFr. 0.34	SFr. 0.34
Q1	Crystal	25MHz	SMD Crystal 2520	C252264	3649710	520-250-10-36B-CTNT	XC3050CT-ND	1	SFr. 0.14	SFr. 0.14
R1, R3, R9	Isolated Resistor Array	330 (4x, 50V, 62.5mW, 5%)	SMD Widerstand Array 4-Fach 0603	C12018	2060160	667-EXB-V8V331JV	Y4331CT-ND	3	SFr. 0.01	SFr. 0.03
R2, R7, R8, R27, R28	Isolated Resistor Array	10k (4x, 50V, 62.5mW, 5%)	SMD Widerstand Array 4-Fach 0603	C29718	2060167	667-EXB-V8V103JV	Y4103CT-ND	5	SFr. 0.01	SFr. 0.05
R4, R10	Chip Resistor	1M (75V, 100mW, 1%)	SMD Widerstand 0603	C22935	2303325	667-ERJ-3EKF1004V	P1.00MHCT-ND	2	SFr. 0.01	SFr. 0.02
R5	Chip Resistor	120 (75V, 100mW, 1%)	SMD Widerstand 0603	C22787	2303067	667-ERJ-3EKF1200V	P120HCT-ND	1	SFr. 0.01	SFr. 0.01
R6	Chip Resistor	4.7k (75V, 100mW, 1%)	SMD Widerstand 0603	C23162	2303181	667-ERJ-3EKF4701V	P4.70KHCT-ND	1	SFr. 0.01	SFr. 0.01
R11	Chip Resistor	12.4k (75V, 100mW, 1%)	SMD Widerstand 0603	C194071	2059414	667-ERJ-3EKF1242V	P12.4KHCT-ND	1	SFr. 0.01	SFr. 0.01
R12, R13, R15, R16, R17, R21, R22, R23	Chip Resistor	49.9 (75V, 100mW, 1%)	SMD Widerstand 0603	C23184	2059274	667-ERJ-3EKF49R9V	P49.9HCT-ND	8	SFr. 0.01	SFr. 0.08
R14	Chip Resistor	10 (75V, 100mW, 1%)	SMD Widerstand 0603	C22859	2302958	667-ERJ-3EKF10R0V	P10.0HCT-ND	1	SFr. 0.01	SFr. 0.01
R18, R25	Chip Resistor	75 (75V, 100mW, 1%)	SMD Widerstand 0603	C4275	2059282	667-ERJ-3EKF75R0V	P75.0HCT-ND	2	SFr. 0.01	SFr. 0.02
R19, R26	Chip Resistor	150 (75V, 100mW, 1%)	SMD Widerstand 0603	C22808	2303076	667-ERJ-3EKF1500V	P150HCT-ND	2	SFr. 0.01	SFr. 0.02
R20, R24	Chip Resistor	82 (75V, 100mW, 1%)	SMD Widerstand 0603	C23255	2303052	667-ERJ-3EKF82R0V	P82.0HCT-ND	2	SFr. 0.01	SFr. 0.02
S1, S2	Tactile Switch	TS-1187A-B-A-B	SMD Button 5.2x5.2	C318884	3780596	611-PTS526SK15SMR2L	CKN12221-1-ND	2	SFr. 0.02	SFr. 0.04
T1	RJ45 Transformer	HR601680	SMD Transformer 500x375	C172799	2673883	652-SM13072APEL	SM13072APELCT-ND	1	SFr. 0.57	SFr. 0.57
U1	Xtensa single-core 32-bit LX7 MCU	ESP32-S2-WROOM	SMD ESP32-S2-WROOM	C967026		356-ESP32S2WRMI320UH	1965-ESP32-S2-WROOMTR-ND	1	SFr. 2.54	SFr. 2.54
U2	Isolated DC-DC-Converter	R1SX-3.305/H-R	SMD DCDC R1SX			919-R1SX-3.305/H-R	945-3197-1-ND	1	SFr. 3.94	SFr. 3.94
U3	Unidirectional Digital Isolator	ISO7221BDR	SMD IC SOIC-8	C138522		595-ISO7221BDR	296-38965-2-ND	1	SFr. 2.94	SFr. 2.94
U4	CAN Transceiver 1Mbps	MCP2551T-I/SN	SMD IC SOIC-8	C49558	2763381	579-MCP2551T-I/SN	MCP2551T-I/SNTR-ND	1	SFr. 1.04	SFr. 1.04
U5	Ethernet Controller	W5500	SMD IC LQFP-48	C32843		950-W5500	1278-W5500TR-ND	1	SFr. 3.76	SFr. 3.76
U6	DC-DC Stepdown Converter	RPMB3.3-3.0	SMD DCDC RPM 2.0		3551809	919-RPMB3.3-3.0	945-RPMB3.3-3.0CT-ND	1	SFr. 7.43	SFr. 7.43
U7	High-Performance 3-Xxis Accelerometer	LIS2DH12TR	SMD IC LGA-12	C110926		511-LIS2DH12TR	497-14851-2-ND	1	SFr. 0.87	SFr. 0.87
X1	M12 Receptacle Connector PCB Assembly	T4145015021-001	THT Connector M12				A126521-ND	1	SFr. 6.97	SFr. 6.97
X2	Pin Header Through Hole Wire To Board	436500315	THT Connector 0436500315	C293546	1654451	538-43650-0315	WM1918-ND	1	SFr. 0.38	SFr. 0.38
X3	USB-Buchse	MUSBD111M5	THT Connector MUSBD111M5		3728524	523-MUSBD111M5	MUSBD111M5-ND	1	SFr. 11.17	SFr. 11.17
X4	RJ45 etherCON IP65	NE8FDH-C5E-TOP	THT Connector NE8FDH-C5E-TOP		3014323	568-NE8FDH-C5E-TOP		1	SFr. 12.83	SFr. 12.83
X5	JTAG-Header (ARM-Cortex)	SHF-105-01-L-D-SM (2x5)	SMD Connector 1.27mm (2x5)		1885915	200-SHF10501LDSM	SAM10710-ND	1	SFr. 2.89	SFr. 2.89
Case	Polycarbonat with Transparent Lid	1554J2GYCL			2904345	546-1554J2GYCL	HM1799-ND	1	SFr. 21.23	SFr. 21.23
Plastic Vent	Vent Screw-Type M6	VENT-PS2NBK-O8001			2991687	523-VENT-PS2NBK08001	1754-1549-ND	1	SFr. 3.80	SFr. 3.80
Cable Assembly	Micro-Fit 3.0 Female-to-Micro-Fit 3.0 Female	2147501032			3526486	538-214750-1032	900-2147501032-ND	1	SFr. 3.06	SFr. 3.06
FMS-Connector	KALI-2004 DIN 72585 4 Pole (Set), Kalitec Shop: 00013385	1-0967325-1 (1x), 1-0967402-1 (1x), 0-0965687-1 (1x), 0-0962981-1 (4x), 0-0962971-1 (4x), 0-0828920-1 (8x)						1	SFr. 7.15	SFr. 7.15
Connector Cable-Cap	Cap 180° for Corrugated Pipe NW 8.5, Kalitec Shop: 00011856	0-0965785-1						1	SFr. 0.62	SFr. 0.62
										SFr. 97.37

Autor			Florian Baumgarnter & Luca Jost			 		
-------	--	--	---------------------------------	--	--	---	--	--