

Confirmed	Board	Ref	Item	Description	MFR	MPFN	Dist	DPN	v Per U.	PCBA	LAYER	Note	Farnell#
x	BadgeBottom	M1	PICO MODUL						1	SMD	BOTTOM	in stock	
x	BadgeTop	Disp1	TFT Display	1.28 inch round TFT display		SUN-0827			1	NOPOP	TOP	TH SOLDER Type: AZ Displays ATM012B01 ??? IC: GC9A01 similar looking Amazon -> fast - try this! <a href="https://www.amazon.de/ARCELI-SPI-Schnittstelle-LCD-Anzeigemodul-Instrumentenanzeige-Echtzeit%3%8Cberwachung/dp/B0CFXY1K1T">https://www.amazon.de/ARCELI-SPI-Schnittstelle-LCD-Anzeigemodul-Instrumentenanzeige-Echtzeit%3%8Cberwachung/dp/B0CFXY1K1T</a>	
x	BadgeTop	LY 1, LY 2, LY 3, LY 4, LY 5, LY 6, LY 7, LY 8	LED YELLOW	LED YELLOW CLEAR CHIP 0805 SMD	Kingbright	APT20125YCK	Digi-key	754-1134-1-ND	8	SMD	TOP	in stock	
x	BadgeTop	SW10, SW11, SW12	BUTTON 12x12	Tactile Switch SPST-NO Too Actuated SMD	JS Switch	TL3300DF200Q	Digi-key	EG4907CT-ND	3	SMD	TOP	usable non SMD variant in stock. Could be bent and cut	
x	BadgeTop	SW1, SW2, SW3, SW4, SW5, SW6, SW7, SW8, SW9	BUTTON 6x6	SWITCH TACTILE SPST-NO .05A 12V	C&K	PT5645SKS05AATTR02 LFS	Digi-key	CN4908TR-ND	9	SMD	TOP	button 6x6 SMD. Other color in stock	
x	BadgeTop	SW13	Joystick	5 POSITION TACTILE, 12X12	TE Connectivity	ALCOSWITCH	Digi-key	450-2425755-1TR-ND	1	SMD	TOP	no farnell - not super critical check on e-waste	
x	BadgeBottom	SW14	SWITCH	SWITCH SLIDE SPDT 200mA 30V	E-Switch	EG1218	Digi-key	EG1903-ND	1	NOPOP	BOTTOM	TH SOLDER easy to use geric slide switch	
x	BadgeBottom	U1	CODEC	Audio Codec	Asahi Kasei Microdevices/AKM	AK4619VN	Digi-key	974-AK4619VNCT-ND	1	SMD	BOTTOM	nor Farnell	ordered on ALI - could be too slow
x	BadgeBottom	U2	OpAmp	IC OPAMP GP 4 CIRCUIT 14TSSOP	Texas Instruments	LMV324AIPWR	Digi-key	296-51366-1-ND	1	SMD	BOTTOM	replace with ST LTMV324IPT 1842586	
x	BadgeBottom	U3	Shift Register	IC LED DRIVER LINEAR 45MA 24SSOP	Texas Instruments	TLC59283DBQR	Digi-key	296-30546-1-ND	1	SMD	BOTTOM	replace with TI TLC59281 or other 16bit serial LED cc	
x	BadgeBottom	U4	Audio Amplifier	IC AMP MONO 700MW 8SOIC	Texas Instruments	TPA321DR	Digi-key	296-46365-1-ND	1	SMD	BOTTOM	sink IC - in stock	3004583
x	BadgeBottom	T1	MOSFET	MOSFET P-CH 20V 4.2A SOT23	Diodes Incorporated	DMG2305UX-7	Digi-key	DMG2305UX-7DICT-ND	1	SMD	BOTTOM	Farnell	generic P-FET sot23-
x	BadgeBottom	ZD1	ZenerDiode	IC VREF SHUNT 0.5% SOT23	Diodes Incorporated	LM4040C30FTA	Digi-key	LM4040C30FTAICT-ND	1	SMD	BOTTOM	3V Zener sot123-3	3483099
x	BadgeBottom	C3, C4, C10, C11, C13, C14, C17, C18, C19, C20	CAPACITOR	CAP CER 0.1UF 16V X7R 0603	Samsung Electro-Mechanics	CL10B104K08NNNC	Digi-key	1276-1005-1-ND	10	SMD	BOTTOM	KIT	
x	BadgeBottom	C5, C6, C7, C8, C9, C12, C15, C16	CAPACITOR	CAP CER 2.2UF 16V X5R 0603	Samsung Electro-Mechanics	CL10A225K08NNNC	Digi-key	1276-1040-1-ND	8	SMD	BOTTOM	KIT	
x	BadgeBottom	C1,C2	Tantalum Capacitor	Tantalum Capacitor 0805	TAI826K016RNJ	M20-996045	Digi-key	478-1682-1-ND	2	SMD	BOTTOM	use anything maybe some big ceramic - 3V3 buffer use	
x	BadgeBottom	R1	RESISTOR	Resistor 22R 0805	YAGEO	RC0603JR-0722RL	Digi-key	311-22GRCT-ND	1	SMD	BOTTOM	KIT	
x	BadgeBottom	R8	RESISTOR	Resistor 330R 0805	YAGEO	RC0603JR-13330RL	Digi-key	13-RC0603JR-13330RLCT-ND	1	SMD	BOTTOM	KIT	
x	BadgeBottom	R9, R10, R11	RESISTOR	Resistor 680R 0805	YAGEO	RC0603JR-13680RL	Digi-key	13-RC0603JR-13680RLCT-ND	3	SMD	BOTTOM	KIT	
x	BadgeBottom	R2, R5, R6, R7, R12, R13	RESISTOR	Resistor 2K7 0805	YAGEO	RES 2.7K OHM 5% 1/10W 0603	Digi-key	311-2.7KGRCT-ND	6	SMD	BOTTOM	KIT	
x	BadgeBottom	R4	RESISTOR	Resistor 22K 0805	YAGEO	RC0603FR-1022XKL	Digi-key	13-RC0603FR-1022XKLCT-ND	1	SMD	BOTTOM	KIT	
x	BadgeBottom	R3	RESISTOR	Resistor 47K 0805	YAGEO	RES 47K OHM 1% 1/10W 0603	Digi-key	13-RC0603FR-1347KLCT-ND	1	SMD	BOTTOM	KIT	
x	BadgeTop	CON1	CONNECTOR	CONN HEADER R/A 4POS 2.54MM	Harwin Inc.	CONN HEADER R/A 4POS	Digi-key	952-3286-ND	2	NOPOP	TOP	TH SOLDER Pinheader	
x	Expansion	CON1E	CONNECTOR	CONN HDR 4POS 0.1 TIN PCB R/A	Sullins Connector Solutions	PPTC041LGBN-RC	Digi-key	55440-ND	2	NOPOP	TOP	TH SOLDER Pinheader	
x	BadgeTop	CON2	CONNECTOR	CONN SOCKET 4POS 0.1 GOLD PCB	Preci-Dip		Digi-key	1212-1227-ND	1	NOPOP	TOP	TH SOLDER Pinheader	
x	BadgeBottom	BH1, BH2	BATTERY HOLDER	BATT HOLDER AA 1 CELL PC PIN	Keystone Electronics	#2460	SAGER	<a href="https://www.sager.com/product/246">https://www.sager.com/product/246</a>	2	NOPOP	BOTTOM	TH SOLDER MULTICOMP PRO MP000032	3126558
x	BadgeBottom	SP1	SPEAKER	SPEAKER 80HM 800MW 20mm 8Ohm	Taoglas Limited	SPKM.20.8.A	Digi-key	931-SPKM.20.8.A-ND	1	NOPOP	BOTTOM	TH SOLDER use random 80hm speaker	
x	BadgeBottom	L1	Choke 0805	FIXED IND 47UH 170MA 3.7 OHM 0805	TDK Corporation	ML22012M470WT000	Digi-key	445-6400-1-ND	1	SMD	BOTTOM	could be rplaced with anything or 0Ohm	