

Qty	Part ID	Description	Manufacturer P/N	Vendor P/N	Price	Ext
<b>NUCplus4 Main Board</b>						
1	NUCplus4 Main PCB V1.7	113.8 x 117.4 mm 2-LAYER <b>1.2mm</b> Thick PCB	JLC (Minimum Order 5 pieces)	N.A.	\$5.37	\$5.37
2	C8,C9	CAP CERAMIC 22PF 50V RADIAL	K220J15C0GF5TH5	Mouser 594-K220J15C0GF5TH5	\$0.27	\$0.54
1	C11	CAP CERAMIC 24PF 50V RADIAL	C325C240JAG5TA	Mouser 80-C325C240JAG5TA	\$0.38	\$0.38
1	C6	CAP CERAMIC 0.01UF 50V RADIAL	K103K15X7RF5TH5	Mouser 594-K103K15X7RF5TH5	\$0.24	\$0.24
8	C3,C4,C5,C10,C12,C13,C14,C15	CAP CERAMIC 0.1UF 50V RADIAL	K104K15X7RF5TH5	Mouser 594-K104K15X7RF5TH5	\$0.23	\$1.84
1	C7	CAP CERAMIC 1UF 50V RADIAL	FG28X5R1H105KRT06	Mouser 810-FG28X5R1H105KRT6	\$0.32	\$0.32
2	C1,C2	CAP ALUM ELECTROLYTIC 10UF 16V RADIAL	ECE-A1CK5100	Mouser 667-ECE-A1CK5100	\$0.20	\$0.40
4	R1,R2,R4,R5	RES 3K OHM 1/8W 5% CF AXIAL	CFR-25JB-52-3K	Mouser 603-CFR-25JB-52-3K	\$0.10	\$0.40
1	R3	RES 10K OHM 1/8W 5% CF AXIAL	CFR-25JB-52-10K	Mouser 603-CFR-25JB-52-10K	\$0.10	\$0.10
1	RN1	RES ARRAY 7 RES 10K OHM 8SIP	4608X-101-103LF	Mouser 652-4608X-1LF-10K	\$0.40	\$0.40
7	D1,D2,D3,D4,D5,D6,D7	DIODE SCHOTTKY 40V 350MA DO-35-2	BAT48	Mouser 511-BAT48	\$0.34	\$2.38
1	D8	LED-3MM HIGH EFFICIENCY WHT DIFFUSED	NTE30149	TubeDepot P-LED-DW (WHITE)	\$0.14	\$0.14
1	D9	LED-3MM HIGH EFFICIENCY GRN DIFFUSED	NTE30147	TubeDepot P-LED-DW (GREEN)	\$0.14	\$0.14
1	D10	LED-3MM HIGH EFFICIENCY RED DIFFUSED	NTE30146	TubeDepot P-LED-DW (RED)	\$0.14	\$0.14
3	D8,D9,D10	LED-3MM R/A HOLDER BLACK NYLON	H-101C-1	Mouser 749-H-101C-1	\$0.82	\$2.46
1	Q1	MOSFET N-CH 60V 200MA TO92-3	2N7000BU	Mouser 512-2N7000BU	\$0.36	\$0.36
1	J1	CONN HEADER VERT FEMALE 14POS 2.54MM	M20-7821446	Mouser 855-M20-7821446	\$2.19	\$2.19
1	J2 (modified – remove 3 position)	CONN HEADER VERT FEMALE 10POS 2.54MM	M20-7821046	Mouser 855-M20-7821046	\$1.46	\$1.46
1	J3	CONN SECURE DIGITAL (SD) PUSH-PUSH	SD-RSMT-2-MQ-WF	Mouser 517-SD-RSMT-2-MQ-WF	\$5.71	\$5.71
1	J4	MALE/MALE JUMPER WIRES 3 INCHES	Adafruit 759	Mouser 485-759	\$3.95	\$3.95
1	P1 (modified = 3x14 positions)	CONN HEADER VERT MALE 50POS 2.54MM	TSW-150-15-T-S	Mouser 200-TSW15015TS	\$3.40	\$3.40
4	P2 (modified – remove 2 positions),P3	*CONN HEADER VERT MALE MP 12POS 2.54MM	TS-112-T-AA	Mouser 200-TS112TAA	\$2.53	\$10.12
1	X1	CRYSTAL HC-49/US 14.31818 MHZ	ABL-14.31818MHZ-B2	Mouser 815-ABL-14.31818B2	\$0.28	\$0.28
1	X2	CRYSTAL TUNING FORK 32.768 KHZ	AB38T-32.768KHZ	Mouser 815-AB38T-32.768KHZ	\$0.22	\$0.22
1	B1	BATTERY HLD R COIN 20MM 1 CELL PC PIN	KeyStone Electronics 103	Mouser 534-103	\$0.94	\$0.94
1	B1	BATTERY 3V 20MM COIN CELL	CR2032	Mouser 658-CR2032	\$0.39	\$0.39
1	PICO1	Pi Pico RP2040 TYPE-C 16MB Purple	---	AliExpress <a href="#">RP2040 16MB Purple</a>	\$1.85	\$1.85
2	PICO1 (Socket)	CONN HEADER VERT FEMALE 20POS 2.54MM	M20-7822046	Mouser 855-M20-7822046	\$2.43	\$4.86
1	U2	IC SRAM 4MBIT PARALLEL 32DIP	AS6C4008-55PCN	Mouser 913-AS6C4008-55PCN	\$5.99	\$5.99
1	U5	IC MCU 8BIT 32KB FLASH 28DIP	ATMEGA328P-PU	Mouser 556-ATMEGA328P-PU	\$2.89	\$2.89
1	U6	IC REAL TIME CLOCK 16DIP	M3002-16PI	Surplus M3002-16PI	\$3.46	\$3.46
1	U7	IC DECODER/DEMUX 1X3:8 16DIP	SN74HCT138N	Mouser 595-SN74HCT138N	\$0.76	\$0.76
1	U8	IC MCU 8BIT 1.75KB FLASH 8DIP	PIC12F629-I/P	Mouser 579-PIC12F629IP	\$1.41	\$1.41
1	U9	IC SWITCH SPDT X 3 16DIP	CD74HCT4053E	Mouser 595-CD74HCT4053E	\$0.76	\$0.76
1	U8	CONN IC MP 0.3" DIP SOCKET 8POS	ICM-308-1-GT-HT	Mouser 737-ICM-308-1-GT-HT	\$0.63	\$0.63
3	U6,U7,U9	CONN IC MP 0.3" DIP SOCKET 16POS	ICM-316-1-GT-HT	Mouser 737-ICM-316-1-GT-HT	\$1.07	\$3.21
3	U3	CONN IC MP 0.3" DIP SOCKET 20POS	ICM-320-1-GT-HT	Mouser 737-ICM-320-1-GT-HT	\$1.32	\$3.96
3	U4	CONN IC MP 0.3" DIP SOCKET 24POS	ICM-324-1-GT-HT	Mouser 737-ICM-324-1-GT-HT	\$1.08	\$3.24
1	U5	CONN IC MP 0.3" DIP SOCKET 28POS	ICM-328-1-GT-HT	Mouser 737-ICM-328-1-GT-HT	\$1.60	\$1.60
5	U1,U2	CONN IC MP 0.6" DIP SOCKET 32POS	ICM-632-1-GT-HT	Mouser 737-ICM-632-1-GT-HT	\$1.68	\$8.40
2	Mounting Hardware	HEX STANDOFF M3 X 18MM NYLON	25513	Mouser 534-25513	\$0.93	\$1.86
4	Mounting Hardware	PAN HEAD SCREW M3 X 8MM NYLON	97790803111	Mouser 710-97790803111	\$0.27	\$1.08

Shipping Not Included

**Total = \$90.23**

IC chips U1, U3, U4 all come from the original 576NUC+ Main Board, but U4 needs to be re-flashed with the 1024K JED file.

U1 requires 4 sockets (one soldered & 3 directly stacked). U3 & U4 require 3 sockets each (1 soldered & 2 offset stacked).

The ATMEGA328P-PU and the Pi Pico RP240 16MB Purple and the PIC12F629 MCUs need to have firmware flashed.

\*Proto Supplies has a similar header P/N HDR-27-G (40POS) that is much cheaper per item \$0.95 ea (2 required) but with a shipping fee of \$13

Both BOMs were modified on October 8<sup>th</sup> 2024 to replace Jameco part numbers with Mouser equivalents

Qty	Part ID	Description	Manufacturer P/N	Vendor P/N	Price	Ext
<b>NUCplus4 FujiNet Plug-In Module</b>						
1	NUCplus4-FujiNet PCB V1.4	49.7 x 49.1 mm 2-LAYER 1.6mm Thick PCB	JLC (Minimum Order 5 pieces)	N.A.	\$2.00	\$2.00
2	C1,C3	CAP CERAMIC 0.1UF 50V RADIAL	K104K15X7RF5TH5	Mouser 594-K104K15X7RF5TH5	\$0.23	\$0.46
1	C4	CAP CERAMIC 1UF 50V RADIAL	FG28X5R1H105KRT06	Mouser 810-FG28X5R1H105KRT6	\$0.32	\$0.32
1	C2	CAP ELECTROLYTIC 1UF 50V RADIAL	ESS105M050AB2AA	Mouser 80-ESS105M050AB2AA	\$0.21	\$0.21
1	R4	RES 1K2 OHM 1/8W 5% CF AXIAL	CFR-25JB-52-1K2	Mouser 603-CFR-25JB-52-1K2	\$0.10	\$0.10
2	R2,R5	RES 2K OHM 1/8W 5% CF AXIAL	CFR-25JB-52-2K	Mouser 603-CFR-25JB-52-2K	\$0.10	\$0.20
2	R1,R6	RES 3K OHM 1/8W 5% CF AXIAL	CFR-25JB-52-3K	Mouser 603-CFR-25JB-52-3K	\$0.10	\$0.20
1	R3	RES 33K OHM 1/8W 5% CF AXIAL	CFR-25JB-52-33K	Mouser 603-CFR-25JB-52-33K	\$0.10	\$0.10
1	RN1	RES ARRAY 7 RES 10K OHM 8SIP	4608X-101-103LF	Mouser 652-4608X-1LF-10K	\$0.40	\$0.40
1	D1	5MM RGB COMMON ANODE LED THT	WP154A4SEJ3VBDZGC/CA	Mouser 604-WP154A43VBDZGCCA	\$2.02	\$2.02
1	D1 (Lens)	5MM CLEAR FRESNEL SNAP-IN LENS	CMC_321_CTP	Mouser 593-3210C	\$0.88	\$0.88
4	Q1,Q2,Q3,Q4	MOSFET N-CH 60V 200MA TO92-3	2N7000BU	Mouser 512-2N7000BU	\$0.36	\$1.44
1	P1	CONN HEADER VERT MALE 14POS 2.54MM	PH1-14-UA	Mouser 737-PH1-14-UA	\$0.22	\$0.22
1	P2	CONN HEADER VERT MALE 7POS 2.54MM	PH1-07-UA	Mouser 737-PH1-07-UA	\$0.12	\$0.12
1	U1	IC TXRX NON-INVERT 5.25V 20DIP	SN74LS641N	Mouser 595-SN74LS641N	\$3.78	\$3.78
1	U2	IC MCU 8BIT 1.75KB FLASH 8DIP	PIC12F629-I/P	Mouser 579-PIC12F629IP	\$1.41	\$1.41
1	U1	CONN IC MP 0.3" DIP SOCKET 20POS	ICM-320-1-GT-HT	Mouser 737-ICM-320-1-GT-HT	\$1.32	\$1.32
1	U2	CONN IC MP 0.3" DIP SOCKET 8POS	ICM-308-1-GT-HT	Mouser 737-ICM-308-1-GT-HT	\$0.63	\$0.63
1	M1	FT232RL USB-C INTERFACE MODULE	---	AliExpress <a href="#">FT232RL FTDI Type-C</a>	\$2.42	\$2.42
1	M1	CONN HEADER VERT MALE 7POS 2.54MM	PH1-07-UA	Mouser 737-PH1-07-UA	\$0.12	\$0.12
1	M1	CONN HEADER VERT MALE 9POS 2.54MM	PH1-09-UA	Mouser 737-PH1-09-UA	\$0.18	\$0.18
1	M2	16 MB WIFI-Bluetooth Module SMD	ESP32-WROVER-E-N16R8	Mouser 356-ESP32WRVE22864PC	\$3.28	\$3.28

Shipping Not Included

Total = \$21.81

