

Qty	Part ID	Description	Manufacturer P/N	Vendor P/N	Price	Ext
NUCplus4 Main Board						
1	NUCplus4 Main PCB V1.5	113.8 x 117.4 mm 2-LAYER 1.2mm 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-A1CKS100	Mouser 667-ECE-A1CKS100	\$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 (modified – remove 2 positions)	CONN HEADER VERT FEMALE 16POS 2.54MM	TDH16SG-VP-R	Jameco 308592	\$0.89	\$0.89
1	J2 (modified – remove 1 position)	CONN HEADER VERT FEMALE 8POS 2.54MM	7400-1X8SG-R	Jameco 70755	\$0.49	\$0.49
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	FEMALE/MALE JUMPER WIRES 3 INCHES	Adafruit 1953	Mouser 485-1953	\$1.95	\$1.95
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-B4Z	Jameco 2344975	\$0.39	\$0.39
1	X2	CRYSTAL TUNING FORK 32.768 KHZ	JVP-325243-R	Jameco 325244	\$0.45	\$0.45
1	B1	BATTERY HLDR COIN 20MM 1 CELL PC PIN	KeyStone Electronics 103	Mouser 534-103	\$1.12	\$1.12
1	B1	BATTERY 3V 20MM COIN CELL	CR2032	Jameco 14162	\$0.79	\$0.79
1	PICO1	Pi Pico RP2040 TYPE-C 16MB Purple	---	AliExpress RP2040 16MB Purple	\$1.85	\$1.85
2	PICO1 (Socket)	CONN HEADER VERT FEMALE 20POS 2.54MM	G85-20-R	Jameco 308567	\$0.95	\$1.90
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	Jameco 2303943	\$3.69	\$3.69
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	6100-8-R	Jameco 51626	\$0.49	\$0.49
3	U6,U7,U9	CONN IC MP 0.3" DIP SOCKET 16POS	16MTLP	Jameco 37402	\$0.85	\$2.55
3	U3	CONN IC MP 0.3" DIP SOCKET 20POS	20MTLP.3	Jameco 38623	\$1.09	\$3.27
3	U4	CONN IC MP 0.3" DIP SOCKET 24POS	ICA243STT	Jameco 2289783	\$0.69	\$2.07
1	U5	CONN IC MP 0.3" DIP SOCKET 28POS	28MTLP.3	Jameco 114412	\$1.29	\$1.29
5	U1,U2	CONN IC MP 0.6" DIP SOCKET 32POS	ICM-632-1-GT	Jameco 105381	\$1.29	\$6.45
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 = \$79.80

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).

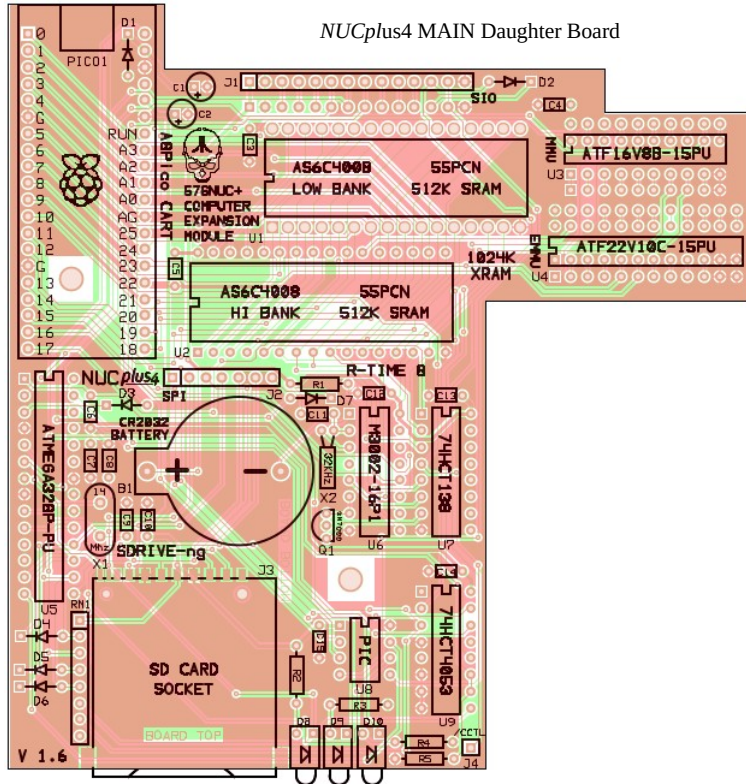
The ATMEGA328P-PU and the Pi Pico RP240 16MB Purple and the PIC12F629 MCUs need to have firmware flashed.

*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

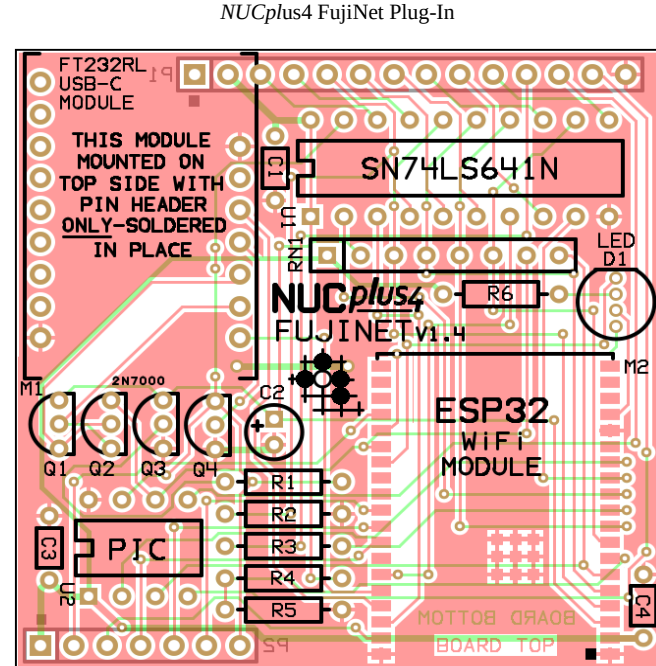
This BOM has been broken mainly into two vendors, Jameco and Mouser Electronics. Jameco gives us a great discount, in some cases 50% less than other sources. However they don't have all the parts required, thus the reason that Mouser shares the BOM. Jameco also has a \$20 minimum buy, so quantity when ordering is important. If you'd rather order everything from one source, then match the description.

Qty	Part ID	Description	Manufacturer P/N	Vendor P/N	Price	Ext
NUCplus4 FujiNet Plug-In Module						
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	8541900000	Jameco 143132	\$0.45	\$0.45
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	7000-1X14SG-R	Jameco 2294687	\$0.35	\$0.35
1	P2	CONN HEADER VERT MALE 7POS 2.54MM	7000-1X7SG-R	Jameco 2076800	\$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	20MTLP.3	Jameco 38623	\$1.09	\$1.09
1	U2	CONN IC MP 0.3" DIP SOCKET 8POS	6100-8-R	Jameco 51626	\$0.49	\$0.49
1	M1	FT232RL USB-C INTERFACE MODULE	---	AliExpress FT232RL FTDI Type-C	\$2.42	\$2.42
1	M1 (break apart for 7 and 9 pins)	CONN HEADER VERT MALE 16POS 2.54MM	7000-1X16G-R	Jameco 2294703	\$0.75	\$0.75
1	M2	16 MB WIFI-Bluetooth Module SMD	ESP32-WROVER-E-N16R8	Mouser 356-ESP32WRVE22864PC	\$3.28	\$3.28

Shipping Not Included Total = \$21.59



NUCplus4 MAIN Daughter Board



NUCplus4 FujiNet Plug-In