

NTNU HSI Prototype v1 Bill-of-Materials

Designator	Kind	Value	Description	Manufacturer Part Nr	Manufacturer	Unit Price [USD]	Quantity	Total Price [USD]	In Stock
U0	FGPA Board	Zynq7030	1GB RAM, 4GB eMMC, 124Mb	AES-Z7PZ-7Z030-SOM-I-G	Avnet	US\$ 454,99	1	US\$ 454,99	✓
U7	Image sensor	CMV2000	2048x1088, 340fps	CMV2000-3E12M1CA	CMOSIS	US\$ 395,310	1	US\$ 395,310	✓
U1	SMPS Module	LMZ31506	5V @ 6A	LMZ31506RUQT	Texas Instruments	US\$ 9,380	1	US\$ 9,380	✓
U2A, U2B	LDO-Regulator	TPS74801	0.8-3.6V @ 1500mA	TPS74801TDRCRQ1	Texas Instruments	US\$ 2,520	2	US\$ 5,040	✓
U3A, U3B	LDO-Regulator	TPS74701	0.8-3.6V @ 500mA	TPS74701QDRCRQ1	Texas Instruments	US\$ 2,520	2	US\$ 5,040	✓
U10	Logic Level Converter	SN74AVC4T774	4 bit, bi-directional	SN74AVC4T774RGYR	Texas Instruments	US\$ 1,240	1	US\$ 1,240	✓
U9	SDIO Port expander	TXS02612	6 channel SPDT	TXS02612RTWR	Texas Instruments	US\$ 1,410	1	US\$ 1,410	✓
U8	USB-UART Converter	FT230XQ	3M Baud Rate , USB 2.0	FT230XQ-T	FTDI	US\$ 2,040	1	US\$ 2,040	✓
U11	IC Switch	TS3A24159	SPDT, 2:1	TS3A24159DRCR	Texas Instruments	US\$ 1,050	1	US\$ 1,050	✓
USB1, USB2	USB Connector	1054500101	USB-C	1054500101	Molex	US\$ 2,290	2	US\$ 4,580	✓
SOM4A, B, C	Board Connectors	61083-101400	High speed, 5mm height	649-61083-101400LF	FCI / Amphenol	US\$ 4,860	3	US\$ 14,580	✓
J1	SD-Card Connector	5025700893	microSD compatible	5025700893	Molex	US\$ 4,160	1	US\$ 4,160	✓
J3	External connector	532610871	8-pin, 1.24mm pitch, PicoBlade	532610871	Molex	US\$ 1,560	1	US\$ 1,560	✓
J2	JTAG connector	878331420	14-pin, 2mm pitch	878331420	Molex	US\$ 1,540	1	US\$ 1,540	✓
P1	Power Jack	PJ-002	2.1mm x 5.5mm barrel jack	PJ-002AH	CUI Inc.	US\$ 0,740	1	US\$ 0,740	✓
D1,D2	Circuit Protection	IP4220	Dual USB 2.0 Protection	IP4220CZ6F	Nexperia	US\$ 0,440	2	US\$ 0,880	✓
D3	Diode	BAT17	Schottky, 130mA	BAT17E6327HTSA1	Infineon Technologies	US\$ 0,310	1	US\$ 0,310	✓
Q1	Mosfet	BSS138	N-Channel Mosfet	BSS138WCT	Nexperia	US\$ 0,420	1	US\$ 0,420	✓
FB1, FB2, FB3, FB4 FB5, FB6	Ferrite Bead	30mOhm	30 Ohms @ 100MHz, 3A	742792609	Worth Electronics	US\$ 0,180	6	US\$ 1,080	✓
LED1	Indicator LED	White	Clear, 3.3V, 250mcd, 20mA	QBLP650-IW	QT Brightek	US\$ 0,410	1	US\$ 0,410	✓
LED2, LED3, LED4	Indicator LED	Orange	Clear, 2V, 90mcd, 20mA	LTST-C170KFKT	Lite-On Inc.	US\$ 2,250	3	US\$ 6,750	✓
C1	Polymer Capacitor	100uF	±20%, 25V, -55C~105C	T521D107M025ATE040	KEMET	US\$ 5,130	1	US\$ 5,130	✓
C2	Polymer Capacitor	47 uF	±20%, 25V, -55C~105C	T525D476M016ATE035	KEMET	US\$ 3,910	1	US\$ 3,910	✓
C4, C5, C6, C7	Ceramic Capacitor	47 uF	±20%, 6.3V, X5R	GRT21BR60J476ME13L	Murata	US\$ 0,614	4	US\$ 2,456	✓
C47, C48, C49, C50, C51, C52, C53, C54, C55, C56, C57, C58, C59, C60, C61, C62	Camera decouple pins	100 nF	±10%, 25V, X7R	CGA3E2X7R1E104K080AA	TDK Corporation	US\$ 0,063	16	US\$ 1,008	✓
C8, C13, C65, C67, C70, C72, C74, C78, C80	Capacitor	1 uF	±10%, 16V, X7R	CGA3E1X7R1C105K080AC	TDK Corporation	US\$ 0,100	9	US\$ 0,900	✓
C9, C14, C64, C66, C68, C69, C71, C73, C75, C79, C81, C82, C83, C86, C88	IC decouple capacitor	100 nF	±10%, 25V, X7R	CGA3E2X7R1E104K080AA	TDK Corporation	US\$ 0,063	15	US\$ 0,945	✓
C10, C15,	Capacitor	1nF	±10%, 25V, X7R	C0603C102K3RACAUTO	KEMET	US\$ 0,074	2	US\$ 0,148	✓
C11, C12, C16, C17	Power decouple capacitor	10uF	±10%, 16V, X5R	GRT188R61C106KE13D	Murata	US\$ 0,348	4	US\$ 1,392	✓
R23, R24, R25	Resistor	1K	±1%, 1/10W	ERJ-3EKF1001V	Panasonic Electronic Components	US\$ 0,063	3	US\$ 0,189	✓
RLC, RLO, RL0, RL1, RL2, RL3, RL4, RL5, RL6, RL7, RL8, RL9, RL10, RL11, RL12, RL13, RL14, RL15, RL15, R33	Determination Resistor	100Ohm	±1%, 1/10W	ERJ-3GEYJ101V	Panasonic Electronic Components	US\$ 0,017	20	US\$ 0,338	✓
R1	Resistor	86.6K	±1%, 1/10W	CRCW060386K6FKEA	Vishay Dale	US\$ 0,042	1	US\$ 0,042	✓
R2	Resistor	196 Ohm	±1%, 1/10W	ERJ-3EKF1960V	Panasonic Electronic Components	US\$ 0,063	1	US\$ 0,063	✓
R3	Resistor	68.1 kOhm	±1%, 1/10W	ERJ-3EKF6812V	Panasonic Electronic Components	US\$ 0,063	1	US\$ 0,063	✓
R4	Resistor	21.5k Ohm	±1%, 1/10W	ERJ-3EKF2152V	Panasonic Electronic Components	US\$ 0,063	1	US\$ 0,063	✓
R13	Resistor	40.20	±1%, 1/10W	ERJ-3EKF40R2V	Panasonic Electronic Components	US\$ 0,063	1	US\$ 0,063	✓
R14, R15	Resistor	4.7 kOhm	±1%, 1/10W	ERJ-3EKF4701V	Panasonic Electronic Components	US\$ 0,063	2	US\$ 0,126	✓
R16	Resistor	0 Ohm	±1%, 1/10W	ERJ-3GEY0R00V	Panasonic Electronic Components	US\$ 0,037	1	US\$ 0,037	✓
R17, R18, R21, R22	Resistor	27	±1%, 1/10W	ERJ-3EKF27R0V	Panasonic Electronic Components	US\$ 0,063	4	US\$ 0,252	✓
R29, R30, R31, R32	Resistor	5.1K	±1%, 1/10W	ERJ-3EKF5101V	Panasonic Electronic Components	US\$ 0,063	1	US\$ 0,063	✓
R19, R20, R28, RLED	Resistor	270	±1%, 1/10W	ERJ-3EKF2700V	Panasonic Electronic Components	US\$ 0,063	4	US\$ 0,252	✓
R5	Resistor	4.3K	±1%, 1/10W	ERJ-3EKF4301V	Panasonic Electronic Components	US\$ 0,063	1	US\$ 0,063	✓
R6, R10	Resistor	2.87K	±1%, 1/10W	ERJ-3EKF2871V	Panasonic Electronic Components	US\$ 0,063	2	US\$ 0,126	✓
R7	Resistor	3.16K	±1%, 1/10W	ERJ-3EKF3161V	Panasonic Electronic Components	US\$ 0,063	1	US\$ 0,063	✓
R8, R12	Resistor	1K15	±1%, 1/10W	ERJ-3EKF1151V	Panasonic Electronic Components	US\$ 0,063	2	US\$ 0,126	✓
R9, R11	Resistor	3.57K	±1%, 1/10W	ERJ-3EKF3571V	Panasonic Electronic Components	US\$ 0,063	2	US\$ 0,126	✓
Total							134	US\$ 930,45	