



Bill of Materials for the POE-GEVB Evaluation Board

Designator	Quantity	Description	Value	Tolerance	Footprint	Manufacturer	Manufacturer Part Number	Substitution Allowed	Lead Free
C1,C2,C15,C16,C43,C44	6	0.10uF 100V Ceramic Capacitor X7R	100nF	±10%	0603	Murata Electronics	GRM188R72A104KA35D	Yes	Yes
C4,C5,C6,C7	4	CAP CER 10000PF 100V X7R	10nF,100V	±10%	0603	TDK Corporation	C1608X7R2A103K080AA	Yes	Yes
C8	1	CAP CER 470PF 200V X7R	470pF,200V	±10%	0603	AVX Corporation	0603C2471KAT2A	Yes	Yes
C9	1	1000nF 200V Ceramic Capacitor X7R	1uF,2kV	±10%	1206	Yageo	1206G2C102KAT2A	Yes	Yes
C10	1	CAP TANT 68uF 25V	68uF,25V,55mR	±10%	2917	AVX Corporation	TPME68K025R005	Yes	Yes
C11	1	CAP TANT 10uF 20V	10uF,20V	±20%	1210	AVX Corporation	TPSB106M020R0500	Yes	Yes
C12	1	0.10uF 50V Ceramic Capacitor X7R	100nF	±10%	0805	Würth Electronics	885012207098	Yes	Yes
C13	1	CAP CER 2.2uF 16V X7R	2.2uF,25V	10%	0805	Würth Electronics	885012207052	Yes	Yes
C14	1	CAP ALUM 100uF 63V	100uF,63V	20%	SMD	Panasonic Electronic Component	EEE-FK1J101P	Yes	Yes
C17	1	CAP CER 1000PF 100V X7R	1uF,100V	20%	SMD	Yageo	CX0603MRX7R0BB102	Yes	Yes
C18	1	CAP CER 0.47uF 50V X7R	470nF,50V	10%	0603	Taiyo Yuden	UMK107B7474KA-TR	Yes	Yes
C19	1	CAP CER 0.012uF 50V X7R	12nF,50V	10%	0603	Kemet	C0603C123K5RACU	Yes	Yes
C20	1	CAP CER 0.047uF 50V X7R	47nF,50V	10%	0603	Würth Electronics	885012206093	Yes	Yes
C21	1	CAP CER 0.039uF 50V X7R	39nF	10.0%	0603	Kemet	C0603C393K5RACU	Yes	Yes
C22	1	0.10uF 100V Ceramic Capacitor X7R	DNP	DNP	DNP	Murata Electronics	GRM188R72A104KA35D	Yes	Yes
C23	1	CAP CER 100PF 200V X7R	100pF,200V	±10%	0603	AVX Corporation	0603C2101KAT2A	Yes	Yes
C24	1	CAP CER 10uF 50V X7R	10uF,50V	±20%	1210	Taiyo Yuden	UMK325AB7106MM-T	Yes	Yes
C25,C39,C89,C90,C93	5	CAP CER 10uF 16V X5R	10uF,16V	±20%	0805	Würth Electronics	88501210714	Yes	Yes
C26,C32,C33	3	0.10uF 16V Ceramic Capacitor X7R	100nF	±10%	0603	Würth Electronics	885012206046	Yes	Yes
C27,C28,C29,C30,C92,C94	6	1uF 16V Ceramic Capacitor X7R	1uF,16V	±10%	0603	Würth Electronics	885012206052	Yes	Yes
C31	1	CAP ALUM 10uF 16V SMD	10uF,16V	20.0%	-	United Chemi-Con	EMVE160ADA100MD55G	Yes	Yes
C36	1	CAP CER 0.1uF 16V X7R	0.1uF,16V	10.0%	0603	Würth Electronics	885012206046	Yes	Yes
C37,C40	2	22pF 16V Ceramic Capacitor NP0	22pF	5.0%	0402	Würth Electronics	885012005027	Yes	Yes
C45	1	CAP CER 2200PF 200V X7R	2200pF,2kV	±10%	1812	TDK Corporation	C4532X7R33P222K130KA	Yes	Yes
C85,C86,C87,C88	4	CAP CER 0.22uF 16V X7R	DNP	DNP	DNP	Würth Electronics	885012206046	Yes	Yes
C91	1	CAP CER 10000PF 16V X7R	10uF,16V	±10%	0603	Würth Electronics	885012206040	Yes	Yes
D6	1	TVS DIODE 58VWM 93.6VC SMA	1SMA58A	-	SMA	ON Semiconductor	1SMA58AT3G	Yes	Yes
D10	1	DIODE ARRAY SCHOTTKY 60V 6A DPAK	60V, 6A	-	D-PAK	Vishay Semiconductor	VS-12CW06FNBPBF	Yes	Yes
D11,D16	2	DIODE GEN PURP 100V 200MA	100V 200MA	-	SOD-323	ON Semiconductor	BAS16HT1G	No	Yes
D12	1	DIODE SCHOTTKY 100V 2A SMB	100V 2A	-	SMA	ON Semiconductor	MBR52H100T3G	No	Yes
D13	1	TVS DIODE 100VWM 162VC SMB	100VWM 162VC	-	SMB	ON Semiconductor	1SMB100AT3G	No	Yes
D14,D15	2	DIODE GEN PURP 200V 2A SMB	200V 2A	-	SMB	ON Semiconductor	MURS120T3G	No	Yes
D17	1	IC VREF SHUNT ADJ	36 V, 100 mA	-	SOT-23.3	ON Semiconductor	NCP431AVSNT1G	No	Yes
D18,D20	2	Green 570nm LED Indication - Discrete 2V	GREEN	-	0603	Würth Electronics	1506060V875000	Yes	Yes
D19	1	Green 570nm LED Indication - Discrete 2V	GREEN LED	-	0603	Würth Electronics	1506060V875000	Yes	Yes
D21	1	DIODE SCHOTTKY 20V 500MA	DIODE SCHOTTKY	-	SOD123	ON Semiconductor	MBR0520LTIG	No	Yes
ISO1	1	OPTOISOLATOR 2.5KV TRANS 4-SSOP	-	-	SOT-23.3	CEL	PS2801-1E3-A	Yes	Yes
J1	1	CONN MOD JACK 8PNC R/A SHIELDED	-	-	-	Würth Electronics	615008137421	Yes	Yes
J2	1	6 Position Right Angle Through Hole Terminal Block Header, Male Pins, Shrouded (4 Side)	CON6	-	0.098" (2.50mm)	Würth Electronics	691382010006	Yes	Yes
J3	1	STACKING HEADER ARDUINO SHIELD	CON8	-	-	Samtec	ESW-108-24-G-S	Yes	Yes
J4	1	2 Through Hole Gold Positions Header, Unshrouded Connector	DNP	DNP	0.100" (2.54mm)	Würth Electronics	61300211121	Yes	Yes
J5	1	STACKING HEADER ARDUINO SHIELD	CONN TRBLK 10	-	-	Samtec	ESW-110-24-G-S	Yes	Yes
J6	1	STACKING HEADER ARDUINO SHIELD	CONN TRBLK 8	-	-	Samtec	ESW-108-24-G-S	Yes	Yes
J7	1	STACKING HEADER ARDUINO SHIELD	CONN TRBLK 6	-	-	Samtec	ESW-106-24-G-S	Yes	Yes
J8	1	2 Position Right Angle Through Hole Terminal Block Header, Male Pins, Shrouded (4 Side)	CON2	-	0.150" (3.81mm)	Würth Electronics	691322100002	Yes	Yes
L1	1	10uH Unshielded Wirewound Inductor 3.45A 15m Ohm Max Radial, Vertical Cylinder	10uH,3A	10%	Through Hole	Murata Electronics	1BR 103C	Yes	Yes
L2,L3	2	FERRITE BEAD 1 KOHM 1LN	1000E@100MHz	25%	0805	Würth Electronics	747929096	Yes	Yes
L4	1	FERRITE BEAD 120 OHM 1LN	BLM21	25%	0805	Murata Electronics	BLM21BD121SN1D	Yes	Yes
L5	1	FERRITE BEAD 120 OHM 1LN	BLM21BD121SN1D	25%	0805	Murata Electronics	BLM21BD121SN1D	Yes	Yes
Q1	1	MOSFET N-CH 200V 3.7A POWERS6	FDMS2672	-	MLP-8	ON Semiconductor	FDMS2672	No	Yes
Q2	1	TRANS PNP 25MA 15V 5GHZ	BFT92	-	SOT-23	NXP Semiconductors	BFT92.215	Yes	Yes
R1,R4,R34,R35,R36	5	RES SMD 1K OHM 1% 1/10W	1K	1.0%	0603	Yageo	RC0603FR-071KL	Yes	Yes
R5,R6,R7,R8,R9,R10	6	RES SMD 75 OHM 1/8W	75E	1.0%	0805	Yageo	RC0805FR-0775RL	Yes	Yes
R11	1	RES SMD 39K OHM 1/8W	39K	5.0%	0805	Yageo	RC0805FR-0739KL	Yes	Yes
R13	1	RES SMD 820 OHM 1/8W	820E	1.0%	0805	Yageo	RC0805FR-07820RL	Yes	Yes
R14	1	RES SMD 24.9K OHM 0.1/8W	24.9K	1.0%	0805	Yageo	RT0805BRD07249KL	Yes	Yes
R15,R27	2	RES SMD 5.1K OHM 1/8W	5.1K	1.0%	0805	Yageo	RC0805FR-075KL	Yes	Yes
R16	1	RES SMD 845E OHM 1/8W	845E	1.0%	0805	Yageo	RC0805FR-07845RL	Yes	Yes
R18	1	RES SMD 20K OHM 1/8W	20K	1.0%	0805	Yageo	RC0805FR-0720KL	Yes	Yes
R19	1	RES SMD 15K OHM 1/8W	15K	1.0%	0805	Yageo	RC0805FR-0715KL	Yes	Yes
R20	1	RES SMD 30.1 OHM 1/8W	30.1E	1.0%	0805	Yageo	RC0805FR-0730R1L	Yes	Yes
R21	1	RES SMD 121K OHM 1/8W	121K	1.0%	0805	Yageo	RC0805FR-07121KL	Yes	Yes
R22	1	RES SMD 44.2K OHM 1/8W	44.2K	1.0%	0805	Yageo	RC0805FR-0744R2L	Yes	Yes
R23	1	RES SMD 150K OHM 1/8W	150K	1.0%	0805	Yageo	RC0805FR-07150KL	Yes	Yes
R24	1	RES SMD 10 OHM 1/8W	10E	1.0%	0805	Yageo	RC0805FR-0710RL	Yes	Yes
R25	1	RES SMD 330 OHM 1/8W	330E,3W	1.0%	2512	Vishay Dale	RCL122530RINEG	Yes	Yes
R26	1	RES SMD 3.92K OHM 1/8W	3.9K	1.0%	0805	Yageo	RC0805FR-073K92L	Yes	Yes
R29	1	RES SMD 0.1 OHM 3W	0.1 3W	1.0%	2512	Bourns Inc.	CRA2512-FZ-R100ELF	Yes	Yes
R30,R31,R32	3	RES SMD 1K OHM 1/10W	DNP	DNP	0603	Yageo	RC0603FR-071KL	Yes	Yes
R33,R50,R51,R52,R114,R116,R117,R120	8	RES SMD 0.0OHM JUMPER 1/10W	0E	1.0%	0603	Yageo	RC0603FR-070RL	Yes	Yes
R37,R38	2	RES SMD 10K OHM 1/10W	10K	1.0%	0603	Vishay Dale	CRW060310K0FKEA	Yes	Yes
R41	1	RES SMD 1M OHM 1/10W	1M	1.0%	0603	Yageo	RC0603FR-071ML	Yes	Yes
R43	1	RES SMD 300 OHM 1/10W	300E	1.0%	0603	Yageo	RC0603FR-07300RL	Yes	Yes
R44	1	RES SMD 12K OHM 1/10W	12K	1.0%	0603	Yageo	RC0603FR-0712KL	Yes	Yes
R45,R65,R66,R113,R115,R118	6	RES SMD 0.0OHM JUMPER 1/10W	DNP	DNP	0603	Yageo	RC0603FR-070RL	Yes	Yes
R46,R47,R48,R49,R121	5	RES SMD 10K OHM 1/10W	10K	1.0%	0603	Vishay Dale	CRW060310K0FKEA	Yes	Yes
R58,R59,R60,R61	4	RES SMD 49.9 OHM 1/10W	49.9E	0.5%	0805	Susumu	RR1220Q-49R9-D-M	Yes	Yes
R62	1	RES SMD 470K OHM 1/8W	470K	0.1%	0805	Yageo	RT0805BRD07470KL	Yes	Yes
TP1,TP2,TP3	3	-	TEST POINT	-	-	-	-	Yes	Yes
TP4	1	-	T POINT S	-	-	-	-	Yes	Yes
U1	1	TVS Diode Arrays 4 CHANNEL TVS ARRAY	DNP	DNP	DNP	ON Semiconductor	TVS8814MUTAG	No	Yes
U2	1	WE-LAN Transformer for Power-over-Ethernet	749012013	-	-	Würth Electronics	749 012 013	Yes	Yes
U3,U4	2	TVS DIODE 5VWM 20VC 8S0IC	LCO3 6R2	-	SOIC-8	ON Semiconductor	LCO3-6R2G	No	Yes
U5	1	Transformer	POE300F-12LD	-	20.57 mm x 11.43 mm	Coilcraft	POE300F-12LD	Yes	Yes
U6	1	IC CONV CTLR POE-PD 40W 20-TSSOP	NCP1083	-	TSSOP-20 EP	ON Semiconductor	NCP1083DER2G	No	Yes

U7	1	Ethernet Controller 10/100 Base-T/TX PHY SPI Interface 80-LQFP (10x10)	W5100	-	LQFP-80	WIZnet	W5100	Yes	Yes
U9	1	IC SCHMITT TRIG INV SOT-23-5	74LVC1G14DBV	-	SOT-23-5	Texas Instrument	SN74LVC1G14DBVR	Yes	Yes
U11	1	IC IO EXPANDER I2C 16B QFN-24	PCA9655E	-	QFN-24	ON Semiconductor	PCA9655EMTTXG	No	Yes
U14,U15	2	IC OR CTRLR BRIDGE RECT 12MLP	FDMQ8205	-	MLP-16	ON Semiconductor	FDMQ8205	No	Yes
Y1	1	25MHz ±20ppm Crystal 8pF 100 Ohm AEC-Q200	25MHZ	20 PPM	3.2 mm x 2.5 mm	AVX Corp/Kyocera Corp	CX3225CA25000D0HSSCC	Yes	Yes
J2 Female	1	6 Position 180° Free Hanging (In-Line) Terminal Block Plug, Female Sockets	CON6 Female	-	0.098" (2.50mm)	Würth Electronics	691381000006	Yes	Yes
J8 Female	1	2 Position 180° Free Hanging (In-Line) Terminal Block Plug, Female Sockets	CON2 Female	-	0.150" (3.81mm)	Würth Electronics	691361300002	Yes	Yes