

EVALPM8803-FWD Bill of material

With minimal BOM changes it is possible to switch from 3.3 V to 5 V output voltage.

Table 1. EVALPM8803-FWD BOM

3.3 V	5 V	Reference	Description	Value	Tol.	Voltage	Body	Vendor
1	1	EVALPM8803-FWD ACFWD rev1	Board PCB					
7	7	C1,C2,C3,C4,C11C36, C57	Ceramic capacitor	100 nF		50 V	603	Std
4	4	C5,C6,C7,C8	Ceramic capacitor	10 nF	10%	100 V	603	TDK
NM	NM	C9,C22	Ceramic capacitor	NM			1812	NM
6	6	C10,C39,C41, C48,C53,C59	Ceramic capacitor	1 μ F	20%	16 V	603	Std
1	1	C12	Ceramic capacitor	2.2 nF		2 kV	1812	TDK
NM	NM	C13,C20	Ceramic capacitor	NM		100 V	603	NM
3	3	C14,C16,C21	Ceramic capacitor	1 nF	10%	100 V	603	TDK
NM	NM	C15,C17,C24,C60	Ceramic capacitor	NM		100 V	805	NM
2	2	C18,C32	Ceramic capacitor	0.1 μ F	10%	100 V	805	TDK
2	2	C19, C38	Ceramic capacitor	22 nF		50 V	603	Std
NM	NM	C42,C46,C56,C66C69	Ceramic capacitor	NM			603	NM
1	1	C26	Aluminium capacitor	33 μ F	20%	100 V	10x10.2	Std
2	2	C33,C35	Ceramic capacitor	10 μ F	20%	6.3 V	805	Std
2	2	C28,C29	Ceramic capacitor	1 μ F	20%	100 V	1206	TDK
2	2	C31,C37	Ceramic capacitor	1 nF	10%	100 V	805	Std
1	1	C34	Aluminium capacitor	330 μ F		6.3 V	8x10.5	Suncon
NM	NM	C40	Ceramic capacitor	NM			805	NM
NM	NM	C43	Aluminium capacitor	NM			4x6	NM

Table 1. EVALPM8803-FWD BOM (continued)

3.3 V	5 V	Reference	Description	Value	Tol.	Voltage	Body	Vendor
NM	NM	C47	Ceramic capacitor	NM			603	NM
1	1	C49	Ceramic capacitor	22 nF		50 V	603	Std
1	1	C50	Ceramic capacitor	100 nF		50 V	603	Std
1	1	C51	Ceramic capacitor	47 nF		200 V	1206	Syfer
1	1	C54	Ceramic capacitor	470 pF		50 V	603	Std
1	1	C55	Ceramic capacitor	100 pF		50 V	603	Std
1	1	C56	Ceramic capacitor	22 nF		50 V	603	Std
1	1	C61	Ceramic capacitor	2.2 nF		2 kV	1812	TDK
1	1	D1, D21	Std diode	STTH302S		200 V	SMC	STMicroelectronics
NM	NM	D2,D3,D5,D6, D15D16,D18,D19	Zener diode	(BZX84C10)			SOT23	NM
1	1	D32	Zener diode	BZX84C10			SOT23	Std
8	8	D4,D7,D8,D9, D12D13,D14, D17	Schottky diode	STPS2H100A		100 V	SMA	STMicroelectronics
NM	NM	D10	TVS diode	NM			SMA	NM
1	1	D11	TVS diode	SMAJ58A			SMA	STMicroelectronics
1	1	D20	LED diode	AUX		2.2 V	PLCC-2	Std
NM	NM	D22,D23	Schottky diode	NM			Dpak	Option diode rect.
NM	NM	D24,D25	Bridge rectifier	NM			SDIP	NM
1	1	D26	LED diode	Green LED		2.2 V	PLCC-2	Std
NM	NM	D27	Zener diode	NM			SOT23	NM
9	9	D28,D29,D30, D31D37,D38, D39, D40D41	Schottky diode	BAT46J		100 V	SOD323	STMicroelectronics
NM	NM	D42	Schottky diode	NM			SMA	NM
1	1	D44	LED diode	L1 OK		2.2 V	PLCC-2	Std

Table 1. EVALPM8803-FWD BOM (continued)

3.3 V	5 V	Reference	Description	Value	Tol.	Voltage	Body	Vendor
2	2	JM1,JM2	Connector	Jumper 3 pins male			Pitch 2.54 mm	Std
2	2	Jumper		Jumper 2 pins female			Pitch 2.54 mm	Std
2	2	J1, J2	Power jack	SA, SP				Std
1	1	J3	RJ45 connector	Data and power input				Std
1	1	J4	RJ45 connector	Data output				Std
1	1	J5	Terminal block 2-way	MOR-10X10.5-P5-2PIN				Std
1	1	L2	SMT inductor	1 mH			LPS4018-105ML	Coilcraft
NM	1	L3	SMT inductor	10 μ H			SER1360-103KL	Coilcraft
1	NM	L3	SMT inductor	6 μ H			SER1360-602KL	Coilcraft
1	1	L5	SMT inductor	10 μ H			MSS7341-103ML	Coilcraft
NM	NM	Q1,Q2,Q3,Q4	MOSFET, P-ch	IRF6216PbF		100 V	SO8	IR
NM	NM	Q5,Q6,Q7,Q8	MOSFET, N-ch	STS4NF100		100 V	SO8	STMicroelectronics
2	2	Q11,Q12	MOSFET, N-ch	STS14N3LLH5		30 V	SO8	STMicroelectronics
1	1	Q14	Transistor, NPN	MMBT3904LT1		40 V	SOT23	Std
1	1	Q17	MOSFET, N-ch	Si4848DY		150 V	SO8	Vishay
1	1	Q20	MOSFET, P-ch	Si2325DS		150 V	SOT23	Vishay
NM	NM	Q21	MOSFET, P-ch	IRF6216PbF		150 V	SO8	NM
4	4	R1,R2,R5,R7	Chip resistor	0			603	Std
NM	NM	R3,R4,R6,R8,R16	Chip resistor	NM			805	NM
4	4	R10,R11,R12,R13	Chip resistor	75 Ω			603	Std
NM	NM	R14,R125	Chip resistor	NM			1206	NM
1	1	R15	Chip resistor	0			805	Std
2	2	R17,R43	Ferrite bead	MPZ012101A		100 Ω , 4 A	805	TDK
4	4	R26,R37,R49,R54	Chip resistor	0			805	Std

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3.3 V	5 V	Reference	Description	Value	Tol.	Voltage	Body	Vendor
NM	NM	R19,R20,R22,R25R39, R40,R41,R42	Chip resistor	NM			603	NM
2	2	R27,R58	Chip resistor	124 k Ω	1%		603	Std
NM	NM	R28,R29,R30,R31R33, R34,R35,R36R70,R100 ,R104, R120,R121	Chip resistor	NM			603	NM
2	2	R32,R51	Chip resistor	100 k Ω			805	Std
3	3	R38,R65,R117	Chip resistor	4.75 k Ω	1%		603	Std
3	3	R44,R52,R119	Chip resistor	1 k Ω			603	Std
2	2	R45,R99	Chip resistor	47 k Ω			603	Std
2	2	R53,R59	Chip resistor	10 Ω			805	Std
2	2	R57,R60	Chip resistor	5.6 Ω			805	Std
1	1	R62	Chip resistor	10 Ω			603	Std
3	3	R64,R68,R98	Chip resistor	0			603	Std
NM	NM	R66,R97	Chip resistor	NM			603	NM
2	2	R67,R106	Chip resistor	10 k Ω			603	Std
1	1	R72	Chip resistor	124 k Ω	1%		603	Std
1	1	R73	Trimmer resistor	100 k Ω				Vishay
NM	NM	R79,R86	Chip resistor	NM			805	NM
1	1	R89	Chip resistor	2.7 k Ω			603	Std
1	1	R90	Chip resistor	680 Ω			603	Std
1	1	R91	Chip resistor	10 Ω			603	Std
1	1	R92	Chip resistor	22 Ω			603	Std
1	NM	R93	Chip resistor	680 Ω			603	Std
NM	1	R93	Chip resistor	820 Ω			603	Std

Table 1. EVALPM8803-FWD BOM (continued)

3.3 V	5 V	Reference	Description	Value	Tol.	Voltage	Body	Vendor
1	1	R94	Chip resistor	21 kΩ	1%		603	Std
1	1	R95	Chip resistor	24.9 kΩ	1%		603	Std
1	1	R96	Chip resistor	0			603	Std
NM	NM	R101	Chip resistor	NM			603	NM
1	1	R102	Chip resistor	35.7 Ω	1%		805	Std
1	1	R103	Chip resistor	510 Ω			603	Std
1	1	R104	Chip resistor	4.75 kΩ	1%		603	Std
1	1	R107	Chip resistor	100 kΩ			603	Std
2	2	R108,R109	Chip resistor	0.30 Ω			1206	Std low value
1	1	R111	Chip resistor	12.4 kΩ	1%		603	Std
NM	1	R112	Chip resistor	15 kΩ	1%		603	Std
18	18	TP1,TP2,TP4,TP5,TP6, TP7,TP9, TP10,TP13,TP14,TP15, TP16,TP17,TP18,TP20, TP21,TP22,TP26	Test points	Red				Std
7	7	TP3,TP8,TP11, TP12,TP19,TP23,TP24	Test points	Black				std
2	2	T1,T2	PoE+ magnetics	ETH1-230LD				Coilcraft
NM	NM	T3	CM choke	NM				NM
NM	1	T5	Power transformer	HA3691-AL				Coilcraft
1	NM	T5	Power transformer	JA4173-AL				Coilcraft
NM	NM	T6	Power transformer	(PoE300F)				NM
NM	NM	T7	Power transformer	(PoE13P)				NM
1	1	U1	PoE+ controller	PM8803			HTSSOP20	STMicroelectronics
3	3	U2,U3,U7	SMT optocoupler	Fairchild FOD817AS			4PDIP	Fairchild

Table 1. EVALPM8803-FWD BOM (continued)

3.3 V	5 V	Reference	Description	Value	Tol.	Voltage	Body	Vendor
1	1	U4	Shunt regulator	TS431AILT			SOT23-5	STMicroelectronics
NM	NM	U5	Shunt regulator	TS2431AILT			SOT23	NM