

PROJECT NAME:

STEVAL-IPP002V1

June 27, 2011

BILL OF MATERIALS

Item	Quantity	Reference	Part / Value	Tolerance %	Voltage Current	WATT	TECNOLOGY information	PACKAGE-FOOT-PRINT	Manufacturer	Manufacturer Code	RS/Distelec/Other Code
1	1	CM3	IND-EPCOS-B82721K				Power line chokes 10mH 0.7 A	Trouhg hole	EPCOS	B82721K2701N020	Digi-Key: 495-2739-ND
2	1	CN1	PORT 0				R/A DB9 male connector (plug)	Trouhg hole	any		RS:542-8009
3	1	CN2	USB_TYPEB				USB socket	Trouhg hole	any		Distelec: 124164
4	1	C2	120pF	5%	50V		X7R/COG ceramic capacitor	SMD 0603	any		any
5	2	C3, C48	100pF	5%	50V		X7R/COG ceramic capacitor	SMD 0603	any		any
6.00	30	C21	100nF	10%	25V		X7R ceramic capacitor	SMD 0603	any		any
6	30	C4, C7, C13, C14, C15, C17, C18, C19, C22, C43, C47, C49, C50, C51, C52, C53, C65, C66, C64, C75, C78, C79, C80, C81, C82, C83, C87, C88, C89	100nF	10%	25V		X7R ceramic capacitor	SMD 0603	any		any
7.00	5	C42	10uF	20%	10V		Y5V ceramic capacitor	SMD 1206	any		RS:434-8097
7	5	C5, C12, C16, C23	10uF	20%	10V		Y5V ceramic capacitor	SMD 1206	any		RS:434-8097
8	1	C6	220nF X2	20%	305Vac		EMI suppression X2 Capacitor	Trough hole 15mm lead spacing	Epcos	B32922A2224M	RS:497-4129
9	3	C1, C85	10nF	10%	25V		X7R ceramic capacitor	SMD 0603	any		any
10	1	C8	2.2 nF	5%	25V		COG ceramic capacitor	SMD 0603	any		any
11	1	C9	120 pF	5%	50V		COG ceramic capacitor	SMD 0603	any		any
12	1	C10	10nF	10%	50V		X7R ceramic capacitor	SMD 0805	any		any
13	1	C11	15nF	10%	50V		X7R ceramic capacitor	SMD 0805	any		any
14	1	C20	47uF	10%	16V		Tantalum capacitor	SMD 6032-28	any		RS: 407-0047
15	2	C24,C25	82uF	20%	350V		Aluminum electrolytic capacitor	Trough hole 18mm diameter, 7.5mm lead spacing	Panasonic	EEUED2V820S	RS: 526-2247
16	1	C26	33nF X2	10%	250 Vac		Chip Monolithic X2 Ceramic Capacitors	SMD 2220	Murata	GA355XR7GB333KY06L	Distelec: 830079
17	1	C27	1000uF 16v ZL	20%	16V		Low ESR electrolytic capacitor	Trough hole 10mm diameter, 5mm lead spacing	Rubycon	16ZL1000M10X20	Distelec: 801841

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18	1	C28	470uF 16v ZL	20%	16V		Low ESR electrolytic capacitor	Trough hole 10mm diameter, 5mm lead spacing	Rubycon	16ZL470M10X12.5	Distelec: 801839
19	9	C29, C30, C38, C67, C68, C69, C70, C71, C77	100nF	10%	25V		X7R ceramic capacitor	SMD 0805	any		any
20	1	C31	3.3uF	20%	35V		Aluminum electrolytic capacitor	Trough hole	any		any
21	1	C32	330uF	20%	16V		Low ESR electrolytic capacitor	Trough hole	Panasonic	EEUFC1C331	RS: 315-0451
22	1	C33	100uF 10v ZL	20%	16V		Low ESR electrolytic capacitor	Trough hole	Rubycon	16ZLH100M5x11	Distelec: 801183
23	1	C34	2.2nF - Y1	20%	250 Vac		Y1 Ceramic Multi-Layer Capacitors	Trough hole	MURATA	DE1E3KX222MA5B	Farnell: 3531995
24	1	C35	1nF	5%	50V		COG ceramic capacitor	SMD 0805	any		any
25	1	C36	470nF	10%	16V		X7R ceramic capacitor	SMD 0805	any		any
26	1	C37	4.7nF	10%	50V		X7R ceramic capacitor	SMD 0805	any		any
27	1	C39	4.7uF	20%	25V		electrolytic capacitor	Trough hole	any		any
28	1	C40	15 pF	5%	50V		COG ceramic capacitor	SMD 0603	any		any
29	1	C41	4.7 pF	5%	50V		COG ceramic capacitor	SMD 0603	any		any
30	2	C44, C45	1 nF	10%	25V		X7R ceramic capacitor	SMD 0603	any		any
31	2	C60,C61	10pF	5%	50V		COG ceramic capacitor	SMD 0603	any		any
32	2	C62,C63	22pF	5%	50V		COG ceramic capacitor	SMD 0603	any		any
33	2	C72, C90	4.7uF	20%	10V		Y5V ceramic capacitor	SMD 0805	MURATA	GRM21BF51A475ZA01L	Distelec: 830046
34	1	C76	4.7nF	10%	50V		X7R ceramic capacitor	SMD 0805	any		any
35	1	C84	470nF	10%	16V		ceramic capacitor	SMD 0603	any		any
36	1	C86	10uF	10%	10V		Tantalum capacitor	SMD 6032-28	any		RS: 648-0575
37	2	C91,C92	47nF	10%	50V		X7R ceramic capacitor	SMD 0805	any		any
38	2	DL1, D14	GREEN		20 mA		green led diode	SMD 0805	Kingbright	KP-2012MGC	RS: 466-3778
39	2	DL2, D15	YELLOW		20 mA		yellow led diode	SMD 0805	Kingbright	KP-2012SYC	RS: 466-3835
40	1	D13	RED		20 mA		red led diode	SMD 0805	Kingbright	KP-2012SRC-PRV	RS: 466-3813

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41	1	DZ1	P6KE200A		200V		TRANSIL Diode	Trough hole DO-204AC	ST	P6KE200A	
42	1	D1	LL4148		100V/150mA		Small signal rectifier	SMD DO213AA	any		RS: 652-7494
43	2	D3,D5	STPS1L30A		30V/1A		LOW DROP POWER SCHOTTKY RECTIFIER	SMD SMA/DO-214AC	ST	STPS1L30A	
44	1	D4	SM6T15CA				Transil Diode	SMD SMB/DO-214AA	ST	SM6T15CA	
45	1	D6	SM6T6V8CA				Transil Diode	SMD SMB/DO-214AA	ST	SM6T6V8CA	
46	2	D7, D9	SM4007		1000V/1A		Standard rectifier diode	SMD melf/ DO-213AB	any		RS: 505-4939
47	1	D8	STPS2150		150V/2A		Power Schottky rectifier diode	SMD SMA/DO-214AC	ST	STPS2150A	
48	1	D10	STTH108		800V/1A		HIGH VOLTAGE ULTRAFAST RECTIFIER	Through hole DO-41	ST	STTH108	
49	1	D11	STPS1150		150V/1A		Power Schottky rectifier diode	Through hole DO-41	ST	STPS1150	
50	1	D12	STPS1L60		60V/1A		Power Schottky rectifier diode	SMD SMA/DO-214AC	ST	STPS1L60A	
51	1	F1	2A FUSE		250Vac/2A		FUSE, TIME DELAY, 2A	Through hole Radial 5mm lead spacing	BUSSMANN	BK/ETF 2A	Farnell:3029979
52	3	FB1, FB2, FB3	BLM21PG331SN1		1500mA		EMIFIL (Inductor type) Chip Ferrite Bead, Impedance 330 ohm	SMD 0805	Murata	BLM21PG331SN1	Digi-Key: BLM21PG331SN1D ND
53	1	IC1	ST3232EBDR				RS-232 drivers and receivers	SMD SO-16	ST	ST3232EBDR	
54	1	IC2	TFDU4301				IRDA TRANSCEIVER	SMD	VISHAY SEMICONDUCTOR	TFDU4300-TR1	Farnell: 1469607
55	7	JP15	OPEN								
55	7	JP11, JP12, JP13, JP14, JP17, JP18	CLOSE								
56	4	JP4, JP5, JP6, JP7	CLOSE				2 way stripline connector	Trough hole 2.54mm pitch	any		RS:251-8086
57	4	JP8	OPEN				not mounted	SMD			
58	1	J2	CON6A				6 way 2row vertical IDC box header	Trough hole 2.54mm pitch	any		Distrelec: 121631
59	1	J3	CON10AP				10 way 2row vertical IDC box header	Trough hole 2.54mm pitch	any		RS: 473-8254
60	1	J8	VDD_12V				2 way horizontal header,5.08mm pitch	Trough hole 5 mm pitch	Tyco Electronics	282815-2	RS: 361-7544

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61	1	J9	MAINS_CON		250Vac / 2.5A		Flush-type device plug C8 Snap-in	Trough hole	Schurter	4300.0099	Distelec: 110275
62	1	J10	CON10				Right-angled IDC boxed header, 10 way 2row	Trough hole 2.54mm pitch 90°	any		RS: 473-8349
63	2	J11, J20	JUMPER				2 way stripline connector	Trough hole 2.54mm pitch	any		RS: 251-8086
64	1	J12	LCD connector				mount 2 connectors: 8 way (2x4) double row strip line socket	Trough hole 2.54mm pitch	any		RS: 488-1730
65	1	J15	JTAG				Right-angled IDC boxed header, 20 way 2row	Trough hole 2.54mm pitch 90°	any		RS: 473-8377
66	1	J19	RTC_CAL				5 way stripline connector	Trough hole 2.54mm pitch	any		RS: 251-8121
67	1	J21	SC_CON - NOT FIT	not mounted			7 way stripline connector	Trough hole 2.54mm pitch			
68	1	J22	CON3	not mounted			3 way top entry socket (strip female)	Trough hole 2.54mm pitch	any		RS: 488-1724
69	1	J23	CON2	not mounted			2 way top entry socket (strip female)	Trough hole 2.54mm pitch	any		RS: 488-1724
70	1	J24	ZigBee - CONN1	not mounted			6 way top entry socket (strip female)	Trough hole 2.54mm pitch	any		RS: 488-1724
71	1	J25	ZigBee - CONN2	not mounted			6 way top entry socket (strip female)	Trough hole 2.54mm pitch	any		RS: 488-1724
72	1	L1	15uH	10%	2.5A		Power inductor	SMD 10x10mm body size	EPCOS	B82464A4153K	Farnell: 7429649
73	1	L2	220uH	10%	240mA		Power inductor	SMD 6x6mm body size	EPCOS	B82462A4224K	RS: 495-8048
74	1	L3	4.7uH	20%	2A		Power inductor	SMD 6x6mm body size	EPCOS	B82462G4472M	Farnell: 7430000
75	1	L4	1mH	10%	120mA		inductor	SMD 2220	EPCOS	B82442H1105K	RS: 496-1347
76	1	L5	BEAD		2A		HIGH CURRENT (2A) FERRITE CHIP BEAD, impedance at 100 MHz: 600 ohm	SMD 0805	KEKITAGAWA	MLB-201209-0600PN	Distelec: 330138
77	2	NTC1,NTC2	16ohm	20%	2.9A	2.1 W	NTC resistor	Trough hole Disc 5mm lead spacing	EPCOS	B57236S0160M000	Distelec: 730576

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78.00	1	Q2	2N7002		60V/0.2A		STripFET™ Power MOSFET	SMD SOT23-3L	ST	2N7002	
79	1	R1	47 kohm	1%		0.1W	metal film resistor	SMD 0603	any		any
80	4	R2, R3, R5, R6	10 kohm	1%		1 W	Professional MELF Resistors	SMD MMB 0207	Vishay		Distelec: 710082
81	1	R4	120 ohm	1%		0.1W	metal film resistor	SMD 0603	any		any
82	1	R7	10 kohm	1%		0.1W	metal film resistor	SMD 0603	any		any
83	1	R8	39 kohm	1%		0.1W	metal film resistor	SMD 0603	any		any
84.00	1	R9	330 ohm	1%		0.1W	metal film resistor	SMD 0603	any		any
85	2	R11,R18	47 kohm	1%		0.1W	metal film resistor	SMD 0603	any		any
86	1	R12	1 kohm	1%		0.1W	metal film resistor	SMD 0603	any		any
87	1	R13	5.1 kohm	1%		0.1W	metal film resistor	SMD 0603	any		any
88	1	R14	24 kohm	1%		0.1W	metal film resistor	SMD 0603	any		any
89	1	R17	150 ohm	1%		0.1W	metal film resistor	SMD 0603	any		any
90.00	25	R10, R30, R31, R32, R33, R34,	4.7 kohm	1%		0.1W	metal film resistor	SMD 0603	any		any
90	25	R15, R19, R20, R21, R23, R24, R25, R26, R27, R28, R29, R58, R90, R71, R72, R73, R74, R88, R89	4.7 kohm	1%		0.1W	metal film resistor	SMD 0603	any		any
91	2	R22, R61	1 kohm	1%		0.1W	metal film resistor	SMD 0603	any		any
92	2	R35, R37	6.8 Mohm	5%		0.25W	metal film resistor	SMD 1206	any		any
93	1	R36	2.5 kohm	5%		0.25W	metal film resistor	SMD 1206	any		any
94	1	R38	33 kohm	1%		0.25W	metal film resistor	SMD 1206	any		any
95	1	R39	10 ohm	5%		0.25W	metal film resistor	SMD 1206	any		any
96	1	R40	not mounted			0.25W	metal film resistor	SMD 1206			
97	1	R41	10 kohm	1%		0.25W	metal film resistor	SMD 1206	any		any
98	1	R42	75 kohm	1%		0.25W	metal film resistor	SMD 1206	any		any
99	1	R43	15 ohm	1%		0.25W	Mini-MELF resistors	SMD 1206	any	Vishay	distelec:713030

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100	1	R44	1.2 ohm	1%		0.25W	Mini-MELF resistors	SMD 1206	any	Vishay	distelec: 713004
101	1	R45	8.2 kohm	1%		0.25W	metal film resistor	SMD 1206	any		any
102	1	R46	1.5 kohm	5%		0.25W	metal film resistor	SMD 1206	any		any
103	1	R47	330 ohm	5%		0.25W	metal film resistor	SMD 1206	any		any
104	9	R48, R49, R50, R51, R53, R54, R55, R57, R75	10 kohm	1%		0.1W	metal film resistor	SMD 0603	any		any
105	1	R52	NOT MOUNTED					SMD 0603			
106	1	R56	1 Mohm	1%		0.1W	metal film resistor	SMD 0603	any		any
107	11	R59, R60, R80, R81, R82, R83, R84, R85, R86, R87, R91	0 ohm	1%		0.1W	metal film resistor	SMD 0603	any		any
108	2	R62,R63	0 - NOT FIT					SMD 0603			
109	1	R64	5 ohm	1%		0.1W	metal film resistor	SMD 0603	any		any
110	1	R65	47 ohm	1%		0.1W	metal film resistor	SMD 0603	any		any
111	2	R66,R67	22 ohm	1%		0.125 W	metal film resistor	SMD 0805	any		any
112	1	R68	1 Mohm	5%		0.125 W	metal film resistor	SMD 0805	any		any
113	1	R69	1.5 Kohm	5%		0.125 W	metal film resistor	SMD 0805	any		any
114	1	R70	100 ohm	1%		0.1W	metal film resistor	SMD 0603	any		any
115	3	R76, R77, R78	300 ohm	5%		0.125 W	metal film resistor	SMD 0805	any		any
116	1	R79	47 ohm	1%		0.1W	metal film resistor	SMD 0603	any		any
117	1	RV1	S14K510	10%	510 Vac		Disk-shaped metal-oxide varistor	Through hole	Epcos	B72214S0511K101	Distelec: 730933
118	3	SW1, SW4, S1	ST7580 Reset				tactile switch 100gf	Through hole 6X6mm 5mm height	any		RS:378-6410
119	1	SW3	E0				3 way stripline connector	Trough hole 2.54mm pitch	any		RS: 251-8092
120	1	SW5	E1				3 way stripline connector	Trough hole 2.54mm pitch	any		RS: 251-8092
121	1	SW6	E2				3 way stripline connector	Trough hole 2.54mm pitch	any		RS: 251-8092
122	1	SW7	BOOT0				3 way stripline connector	Trough hole 2.54mm pitch	any		RS: 251-8092
123	1	SW9	BOOT1				3 way stripline connector	Trough hole 2.54mm pitch	any		RS: 251-8092

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124	5	SW10, SW12, SW16, SW17, SW18	switch					3 way stripline connector	Trough hole 2.54mm pitch	any		RS: 251-8092
125	9	SW11, SW13, SW14, SW15, SW19, SW20, SW21, SW22, SW23	JUMPER					3 way stripline connector	Trough hole 2.54mm pitch	any		RS: 251-8092
126	1	TP1	CL					Loop terminal assembly,1mm hole	trough hole			RS: 101-2391
127	1	TP2	ZC_IN					Loop terminal assembly,1mm hole	trough hole			RS: 101-2391
128	1	TP3	PA_IN-					Loop terminal assembly,1mm hole	trough hole			RS: 101-2391
129	1	TP4	PA_IN+					Loop terminal assembly,1mm hole	trough hole			RS: 101-2391
130	1	TP5	TX_OUT					Loop terminal assembly,1mm hole	trough hole			RS: 101-2391
131	1	TP6	PA_OUT					Loop terminal assembly,1mm hole	trough hole			RS: 101-2391
132	1	TP7	VDDIO					Loop terminal assembly,1mm hole	trough hole			RS: 101-2391
133	1	TP8	VDD					Loop terminal assembly,1mm hole	trough hole			RS: 101-2391
134	1	TP9	VDD_PLL					Loop terminal assembly,1mm hole	trough hole			RS: 101-2391
135	1	TP10	VCC					Loop terminal assembly,1mm hole	trough hole			RS: 101-2391
136	1	TP11	VCCA					Loop terminal assembly,1mm hole	trough hole			RS: 101-2391
137	1	TP12	RX_IN					Loop terminal assembly,1mm hole	trough hole			RS: 101-2391
138	1	T1	VAC 5024X044					Signal-Transformer	SMD	VAC VACUUMSCHMELZE (http://www.vacuumschmelze.de/dynamic/en/index.php)	T60403-K5024-X044 (datasheet: http://www.vacuumschmelze.de/dynamic/docroot/medialib/documents/pdf/kbproduktblaetter/5024-X044_en.pdf)	

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139	1	T2	TDK - REV.C			6W	General Transformers	trough hole	TDK	SRW16ES	
140	1	U1	ST7570				S-FSK power line networking system-on-chip	SMD QFN-48	ST	ST7570	
141	1.00	U2	M25P10-A				1 Mbit, serial Flash memory, 50 MHz SPI bus interface	SMD SO8	NUMONIX	M25P10-AVMN6P	RS: 608-5647
142	1	U3	LF33AB		3.3V		Very low drop voltage regulators with inhibit	SMD DPAK	ST	LF33ABDT-TR	
143	1	U4	ALTAIR04-900				Off-line all-primary-sensing switching regulator	SMD SO16N	ST	ALTAIR04-900	
144	1	U5	STM32F103VET6				32-bit MCU	SMD LQFP100	ST	STM32F103VET6	
145	1	U6	M24128-BWMN6P				128 Kbit, 64 Kbit and 32 Kbit serial I ² C bus EEPROM	SMD SO8	ST	M24128-BWMN6TP	
146	1	U7	USBLC6-2P6 - NOT FIT				Very low capacitance ESD protection	SMD SOT-666	ST	USBLC6-2P6	not mounted
147	1	U8	MT008-A				joystick				
148	1	U9	TSM0505S	10%	5V/5V 200mA		DC/DC converter	SMD SOIC-14			RS: 510-5431
149	1	U10	IL712S-1E		2500 Vrms		Bi-directional Digi Isolator	SMD MSOP-8	NVE	IL712S-1E	RS: 418-436
150	1	V1	BATTERY HOLDER				PCB mount coin cell holder,12mm	trough hole	Keystone	500	RS: 430-653
151	2	Y1,Y3	8MHz	30 ppm			8 MHz crystal	trough hole HC49S	any		RS: 672-0268
152	1	Y2	32.768 Khz	20ppm			32.768kHz crystal		any		RS: 547-6979
153	1	ISO1	TLP 421				Optocoupler	Trough hole DIP4	Toshiba	TLP 421	Distrelec: 631515
154	7	spacer					5mm metal spacer With inner and outer threads	trough hole	any		Distrelec: 341130
155	5	spacer					35mm metal spacer With RH and LH internal threads	trough hole	any		Distrelec: 341077
156	2	rondelle					rondella M3		any		RS: 189-620
157	2	dadi					dado M3		any		RS: 483-0502