

**Table 1: STEVAL-DPSTPFC1 bill of materials**

Item	Q.ty	Ref.	Part/Value	Description	Manufacturer	Order code
1	1	<a href="#">STEVAL-DPS334C1</a>		Digital power control board	ST	Not available for separate sale
2	1	<a href="#">STEVAL-DPSTPFC0</a>		PFC bridge-less totem pole	ST	Not available for separate sale

**Table 2: STEVAL-DPS334C1 bill of materials**

Item	Q.ty	Ref.	Part/Value	Description	Manufacturer	Order code
1	1	<a href="#">STEVAL-DPS334M1</a>		Digital power control module	ST	Not available for separate sale
2	1	<a href="#">STEVAL-DPSADP01</a>		DSMPS adapter	ST	Not available for separate sale

**Table 3: STEVAL-DPS334M1 bill of materials**

Item	Q.ty	Ref.	Part/value	Description	Manufacturer	Order code
1	2	C1, C4	15 pF 25 V $\pm$ 10% smc0603 XR7	Ceramic capacitor	Any	
2	11	C2, C3, C7, C8, C10, C12, C13, C14, C15, C18, C33	100 nF 25 V $\pm$ 10% smc0603 XR7	Ceramic capacitor	Any	
3	2	C5, C6	22 pF 25 V $\pm$ 10% smc0603 XR7	Ceramic capacitor	Any	
4	2	C9, C11	100 $\mu$ F 16 V $\pm$ 20% capAluminumC	Electrolytic capacitor	PANASONIC	EEEFT1C101AR
5	1	C16	10 $\mu$ F 16 V $\pm$ 10% tantalioB	Tantalium capacitor	KEMET	T491B106K010AT
6	1	C17	10 nF 25 V $\pm$ 10% smc0603 XR7	Ceramic capacitor	Any	
7	1	C19	470 nF 25 V $\pm$ 10% smc0603 XR7	Ceramic capacitor	Any	
8	13	C20, C21, C22, C23, C24, C25, C26, C27, C28, C29, C30, C31, C32	100 pF 25 V $\pm$ 10% smc0603 XR7	Ceramic capacitor	Any	
9	3	DA1, DA2, DA3	DA108S1 sog0508wg244I200	Diode array	ST	<a href="#">DA108S1</a>
10	1	D1	1.9 V smd0603	Green LED	KINGBRIGHTH	KP-1608CGCK
11	1	D2	1.9 V smd0603	Blue LED	KINGBRIGHTH	KP-1608QBC-D
12	1	D3	1.9 V smd0603	Red LED	KINGBRIGHTH	KP-1608 SRC-PRV
13	2	J1, J2	USART_CON COn4TE215079	Ribbon cable connector	TE Connectivity	7-215079-4
14	1	J3	EXT SUPPLY MOR2X254	Terminal block	Phoenix Contact	1725656
15	3	J4, J5, J6	CON2A SIPTM2002	Strip Line Male 2X1 pitch 2, 54mm	Any	

Item	Q.ty	Ref.	Part/value	Description	Manufacturer	Order code
16	1	J7	SWD/COM AMPMODE10	Connector header	HARTING	9185106324
17	1	L1	470 Ohm 100 MHz 250 mA sml0402	Ferrite beads	WURTH ELEKTRONIK	7427927141
18	1	P1	64 pin Conn64X254Harting090216	Male DIN 41612 through hole	Erni	533406
19	5	R1, R12, R20, R21, R37	0 1/16 W ±1% smr0603 SMD	Thick film resistor	Any	
20	2	R2, R10	820 1/16 W ±1% smr0603 SMD	Thick film resistor	Any	
21	2	R3, R9	39 1/16 W ±1% smr0603 SMD	Thick film resistor	Any	
22	2	R4, R11	47 1/16 W ±1% smr0603 SMD	Thick film resistor	Any	
23	2	R5, R7	0 750 mW ±5% SMR2010 SMD	Thick film resistor	VISHAY	CRCW20100000Z0EF
24	0	R6, R8	750 mW ±5% SMR2010 SMD	Thick film resistor (not mounted)	Any	
25	0	R13, R14	750 mW ±5% SMR2010 SMD	Thick film resistor (not mounted)	Any	
26	1	R15	100 1/16 W ±1% smr0603 SMD	Thick film resistor	Any	
27	14	R16, R22, R23, R24, R25, R26, R27, R28, R29, R30, R31, R32, R33, R34	10 1/16 W ±1% smr0603 SMD	Thick film resistor	Any	
28	1	R17	86.6 1/16 W ±1% smr0603 SMD	Thick film resistor	Any	
29	1	R18	0 1/4 W ±1% smr1206 SMD	Thick film resistor	Any	
30	1	R19	10 K 1/16 W ±1% smr0603 SMD	Thick film resistor	Any	
31	2	R35, R36	4.7 k 1/16 W ±1% smr0603 SMD	Thick film resistor	Any	

Item	Q.ty	Ref.	Part/value	Description	Manufacturer	Order code
32	37	TP1, TP2, TP3, TP4, TP5, TP6, TP7, TP8, TP9, TP10, TP11, TP12, TP13, TP14, TP15, TP16, TP17, TP18, TP19, TP20, TP21, TP22, TP23, TP24, TP25, TP26, TP27, TP28, TP29, TP30, TP31, TP32, TP33, TP34, TP35, TP36, TP37		Test point	Any	
33	2	U1, U2	PS9821 sog0508wg244I200	Optocoupler 1 channel	NEC	PS9821-1-F3-AX
34	1	U3	LD1117 800 mA ±1% SMDPACK	Adjustable and fixed low drop positive voltage regulator	ST	<a href="#">LD1117DT33TR</a>
35	1	U4	STM32F334R8T6 (LQFP64) quad50m64wg1200	Mainstream mixed signals MCU Arm Cortex-M4 core	ST	<a href="#">STM32F334R8T6</a>
36	1	U5	BAR43S 30 V, 0.1 A smsot23123	General purpose signal Schottky diode	ST	<a href="#">BAR43SFILM</a>
37	1	X1	8 MHz HC49/US	Crystal oscillator	EUROQUART	8.000MHZ 49USMX/30/50/40/18PF/ ATF
37	1		2.54 mm	Flat cable	Samtec Inc.	HCSD-05-D-11.40-01- N-G-R
38	1		Micro-Match 4 ways, 9.9", 250mm, 1.27mm	AMP Micro- MaTch	TE Connectivity	1483350-3

**Table 4: STEVAL-DPSADP01 bill of materials**

Item	Q.ty	Ref.	Part	Description	Manufacturer	Order code
1	8	C1, C2, C3, C4, C5, C6, C7, C8	100 nF 25 V ± 10% smc0603	Capacitor Ceramic XR7	Any	
2	1	J2	CON6 blkcon100vhtm2oew2	Stripline male 3x2 2.54mm	Any	
3	1	J3	Jtag conn. walcon100vhtm2oew	JTAG connector	TE-Connectivity	5103308-5
4	2	J6, J7	JP_JTDI siptm2002	Jumper pitch 2, 54 mm	Any	
5	1	J8	JP_JTDI siptm2002	Stripline Male 2X1 pitch 2, 54 mm	Any	
6	2	J9, J11	JP_JTDI siptm3003	Stripline Male 3X1 pitch 2, 54 mm	Any	
7	1	J10	SWD/COM AMPMODE10	Prog Connector	HARTING	9185106324
8	1	P1	DB9-Female dsubrs318tm9f	90° Through Hole	TE-Connectivity	1-1634584-2
9	1	P2	DB9-Male dsubrp318tm9mcon	90° Through Hole	RS-Pro	
10	2	R1, R2	4.7 k 1/16 W ± 1% smr0603 SMD	Thick film resistor	Any	
11	1	R3	10 k 1/16 W ± 1% smr0603 SMD	Thick film resistor	Any	
12	1	R4	120 1/16 W ± 1% smr0603 SMD	Thick film resistor	Any	
13	1	R5	0 1/16 W ± 1% smr0603 SMD	Thick film resistor	Any	
14	0	R6	N.M. 1/16W ± 1% smr0603 SMD	Thick film resistor (not mounted)	Any	
15	1	S1	RST puls4smd	Surface mount tactile switch	TE Connectivity	FSM4J
16	1	U1	ST3232CTR SOG65M16WG820L	RS-232 driver and receiver	ST	<a href="#">ST3232CTR</a>
17	1	U2	SN65HVD232D SOG0508WG244L20	CAN transceiver	TI	SN65HVD232D

**Table 5: STEVAL-DPSTPFC0 bill of materials**

Item	Q.ty	Ref.	Part/Value	Description	Manufacturer	Order code
1	18	C1, C10, C11, C33, C52, C53, C57, C58, C87, C100, C102, C104, C108, C110, C115, C116, C121, C123	10 nF cms0805 25 V ±10 % SMD_0805	Capacitors	WURTH ELEKTRONIK	885012207066

Item	Q.ty	Ref.	Part/Value	Description	Manufacturer	Order code
2	10	C2, C13, C18, C22, C28, C30, C40, C45, C49, C50	1 $\mu$ F cms0805 25 V $\pm 10$ % SMD_0805	Capacitors	WURTH ELEKTRONIK	885012207078
3	9	C3, C15, C25, C35, C38, C109, C111, C122, C124	4.7 $\mu$ F cms0805 16 V $\pm 10$ % SMD_0805	Capacitors	WURTH ELEKTRONIK	885012207053
4	4	C4, C5, C6, C7	100 pF cms0805 25 V $\pm 5$ % SMD_0805	Capacitors	WURTH ELEKTRONIK	885012207054
5	2	C8, C9	68 nF cms0805 25 V $\pm 5$ % SMD_0805	Capacitors	WURTH ELEKTRONIK	885012207071
6	20	C14, C19, C27, C31, C34, C43, C51, C56, C84, C88, C97, C101, C105, C107, C113, C114, C117, C120, C126, C133	100 nF cms0805 25 V $\pm 10$ % SMD_0805	Capacitors	WURTH ELEKTRONIK	885012207072
7	9	C16, C63, C82, C128, C130, C65, C66, C74, C75	4.7 nF capa_Y2_LS_7_5mm 400 VAC $\pm 10$ %	Capacitors	Kemet	C947U472MZVDAAWL45
8	1	C17	150 pF capa_Y2_LS_7_5mm 440 VAC $\pm 10$ %	Capacitors	Any	
9	1	C20	3.9 nF cms0805 25 V $\pm 5$ % SMD_0805	Capacitors	Any	
10	2	C21, C39	2.2 nF cms0805 25 V $\pm 5$ % SMD_0805	Capacitors	WURTH ELEKTRONIK	885012207062
11	3	C23, C41, C99	1 nF cms0805 25 V $\pm 10$ % SMD_0805	Capacitors	WURTH ELEKTRONIK	885012207060
12	8	C24, C26, C29, C36, C37, C42, C44, C46	150 pF cms0805 25 V $\pm 10$ % SMD_0805	Capacitors	WURTH ELEKTRONIK	885012207055
13	2	C32, C55	22 nF capa_x2_15mm 305 VAC $\pm 10$ % SMD_0805	Capacitors	Any	
14	5	C54, C62, C64, C79, C80	33 nF capa_x2_15mm 305 VAC $\pm 10$ %	Capacitors	WURTH ELEKTRONIK	890334025006
15	1	C67	3.3 $\mu$ F capa_X2_27.5mm 275 VAC $\pm 10$ %	Capacitors	WURTH ELEKTRONIK	8324027025CS
16	2	C68, C69	470 nF capa_x2_22_5mm 305 VAC $\pm 10$ %	Capacitors	Any	

Item	Q.ty	Ref.	Part/Value	Description	Manufacturer	Order code
17	3	C76, C77, C78	680 $\mu$ F/450V capa_680uf-450V 450 V $\pm$ 20 %	Capacitors	WURTH ELEKTRONIK	861141486026
18	1	C81	220 nF capa_x2_15mm 305 VAC $\pm$ 10 %	Capacitors	Any	
19	1	C83	220 $\mu$ F/25 V capa_cms_16V_D 25 V $\pm$ 20 %	Capacitors	Any	
20	1	C85	1.5 mF/16 V capa_cms_63v_H13 16 V $\pm$ 20 %	Capacitors	WURTH ELEKTRONIK	865080362017
21	3	C90, C91, C92	22 $\mu$ F/16V capa_cms_63V 16 V $\pm$ 20 %	Capacitors	Any	
22	2	C93, C94	10 $\mu$ F/450V capa_cms_450V_K16 450 V $\pm$ 20 %	Capacitors	Any	
23	1	C95	220 $\mu$ F/63V capa_cms_63v_H13 63 V $\pm$ 20 %	Capacitors	Any	
24	1	C96	100 $\mu$ F/16V capa_cms_16V_D 16 V $\pm$ 20 %	Capacitors	WURTH ELEKTRONIK	865060343005
25	1	C98	2.2 $\mu$ F/35V capa_cms_63V 35 V $\pm$ 20 %	Capacitors	WURTH ELEKTRONIK	865250540001
26	2	C103, C118	22 $\mu$ F/25V cms0805 25 V $\pm$ 20 %	Capacitors	Any	
27	4	C106, C112, C119, C125	33 $\mu$ F/25V capa_cms_35V_4_7uF 25 V $\pm$ 20 %	Capacitors	Any	
28	13	DC-, DC +, LINE, X1_S, X1_G, X1_D, LINE1, X3_S, X3_G, X3_D, NEUTRAL, NEUTRAL1, TP1	HVDC, L1, L2, N1, N2	Test point	VERO	20-136
29	1	DZ1	P6KE440A do15 440 V 600 W	600 W TVS in DO-15	ST	<a href="#">P6KE440A</a>
30	1	DZ2	1.5KE400A do201 400 V 600 W	1500 W TVS in DO-201	ST	<a href="#">1.5KE400A</a>
31	1	D2	STTH1L06A sma 600 V 1 A	Low drop ultra fast diode	ST	<a href="#">STTH1L06</a>
32	2	D7, D12	TS756 P600 600 V 6 A	TS756_diode_stand	Any	
33	1	D8	MMSZ5256BT1G SOD123 30 V 500 mW $\pm$ 5 %	Zener diode	Any	

Item	Q.ty	Ref.	Part/Value	Description	Manufacturer	Order code
34	1	D10	MMSZ5V6T3G SOD123 5.6 V 500 mW ±5 %	Zener diode	Any	
35	1	D11	MMSZ5245BT1G SOD123 15 V 500 mW ±5 %	Zener diode	Any	
36	3	D13, D16, D17	STPS1150A sma 150 V 1 A	Power Schottky rectifier	ST	<a href="#">STPS1150</a>
37	1	D14	STTH112UFY smbflat 1200 V 1 A	Ultra fast diode	ST	<a href="#">STTH112UFY</a>
38	1	D15	STTH1R06A sma 600 V 1 A	Turbo 2 ultra fast diode	ST	<a href="#">STTH1R06A</a>
39	2	D18, D19	DZ2W03300L SOD123 3.3 V 1 W	3V3_zener_diode_S	Any	
40	1	F1	FUSE support_fusible_6_3_3	Fuse holder	SCHURTER	0031.8231
41	1	GT1	GTD_EC600X GTD_EC600X 600 V 5 kA	Gas tube discharge	EPCOS	B88069X2830S102
42	3	JP1, JP2, JP3	OR_10A shunt_harwin_10A 10 A	SMD jumper	Any	
43	1	J1	conn_5_pts con_5pts_RS_pas3_5n	Terminal block	Any	
44	2	J3, J8	15A_connector 15A_connector 15 A	Connector	KEYSTONE	7691
45	3	J5, J6, J7	30A_connector 30A_DC_connector 30 A	Connector	KEYSTONE	8197
46	5	LED1, LED2, LED3, LED4, LED5	Led_bicolor led_bicolor_small_pad	LED	VISHAY	VLMV3100-GS08
47	2	LED6, LED7	LED_RED_SMD1206 cms1206	LED	Any	
48	7	L1, L6, L8, L12, L13, L15, L16	2 A cms0805 2 A ±25 %	Ferrite bead	MURATA	BLM21PG221SN1D
49	3	L3, L4, L14	1.6 mH_16A WE_CMBH_1.6mH_16 16.4 A	WE-CMBHV series	WURTH ELEKTRONIK	744831016164
50	1	L5	1 mH 1mH_WE_TI 300 mA ±5 %	Power inductor	WURTH ELEKTRONIK	744741102
51	2	L7, L9	39 mH filter_39mH_WE_CMB 300 mA ±2=30 %	Filter	WURTH ELEKTRONIK	744821039
52	1	L10	2 mH_10A filter_2mH_10A_WE_C 10 A	Filter	WURTH ELEKTRONIK	7448031002
53	1	L18	self_boost_WE self_boost_WE_toroid 360 µH 16 A	PFC boost inductor	WURTH ELEKTRONIK	750318545

Item	Q.ty	Ref.	Part/Value	Description	Manufacturer	Order code
54	1	P1	DIN41612_b_64	Digital power connector	Any	
55	3	Q1, Q6, Q7	STN4NF03L sot223 30 V 4 A	StripFET power MOSFET	ST	<a href="#">STN4NF03L</a>
56	2	Q2, Q3	2N2907A to18 60 V 600 mA	60 V_PNP BJT	Any	
57	1	Q4	BUL216 to220ab 800 V 4 A	High voltage fast switching NPN power transistor	ST	<a href="#">BUL216</a>
58	1	Q5	STQ1NK80ZR-AP to92am 800 V 300 mA	SuperMESH power MOSFET	ST	<a href="#">STQ1NK80ZR-AP</a>
59	4	R1, R2, R3, R4	10 R cms0805 0.125 W $\pm 1$ %	Resistors	Any	
60	11	R5, R6, R7, R8, R9, R10, R11, R12, R13, R97, R98	300 R cms0805 0.125 W $\pm 5$ %	Resistors	Any	
61	1	R14	5 R cms0805 0.125 W $\pm 1$ %	Resistors	Any	
62	5	R15, R36, R42, R86, R106	10 k cms0805 0.125 W $\pm 1$ %	Resistors	Any	
63	9	R16, R17, R18, R21, R22, R23, R24, R27, R28	470 k cms1206 0.25 W $\pm 1$ %	Resistors	Any	
64	2	R19, R20	39 K cms0805 0.125 W $\pm 5$ %	Resistors	Any	
65	6	R25, R26, R45, R53, R84, R105	1 k cms0805 0.125 W $\pm 5$ %	Resistors	Any	
66	3	R29, R31	10 k cms0805 0.125 W $\pm 1$ %	Resistors	Any	
67	1	R30	10 k potar_vertical_rotatif 0.05 W $\pm 20$ %	Resistors	Any	
68	4	R32, R38, R34, R40	24 R cms1206 0.25 W $\pm 1$ %	Resistors	Any	
69	2	R33, R39	510 R cms0805 0.125 W $\pm 5$ %	Resistors	Any	
70	1	R35	5 k cms0805 0.125 W $\pm 0.1$ %	Resistors	Any	
71	1	R37	75 R cms0805 0.125 W $\pm 5$ %	Resistors	Any	
72	1	R43	1.3 k cms0805 0.125 W $\pm 1$ %	Resistors	Any	
73	2	R44, R52	100 R cms0805 0.125 W $\pm 1$ %	Resistors	Any	
74	4	R46, R47, R55, R56	390 R cms0805 0.125 W $\pm 5$ %	Resistors	Any	



Item	Q.ty	Ref.	Part/Value	Description	Manufacturer	Order code
75	2	R48, R57	270 R cms0805 0.125 W $\pm 5\%$	Resistors	Any	
76	2	R49, R58	47 R r1w 2 W $\pm 5\%$	Resistors	Any	
77	3	R50, R51, R54	160 k cms1206 0.25 W $\pm 0.1\%$	Resistors	Any	
78	1	R59	3 k cms0805 0.125 W $\pm 0.1\%$	Resistors	Any	
79	9	R60, R61, R62, R69, R73, R74, R79, R80, R81	1M5 cms1206 0.25 W $\pm 5\%$	Resistors	Any	
80	1	R63	33 k 5 W res1000 5 W $\pm 5\%$	Resistors	VISHAY	CW00533K00JE12
81	6	R64, R65, R66, R67, R103, R104	165 k cms1206 0.125 W $\pm 5\%$	Resistors	Any	
82	1	R68	3.3 k cms0805 0.125 W $\pm 5\%$	Resistors	Any	
83	1	R82	3.9 k cms0805 0.125 W $\pm 1\%$	Resistors	Any	
84	1	R83	38k3 cms0805 0.125 W $\pm 1\%$	Resistors	Any	
85	1	R85	100 k cms0805 0.125 W $\pm 1\%$	Resistors	Any	
86	8	R87, R88, R89, R90, R93, R94, R95, R96	60R cms1206 0.25 W $\pm 1\%$	Resistors	Any	
87	1	R107	47R r5W 5W $\pm 5\%$	Resistors	Any	
88	2	SIOV1, SIOV5	S14K250/EPC NTC_S238_EPCOS 250 VAC	Varistors	Any	
89	5	SIOV2, SIOV3, SIOV4, SIOV6, SIOV7	S14K385/EPC NTC_S238_EPCOS 385 VAC	Varistors	Any	
90	2	SW1, SW2	switch_HVDC	SPDT PCB slide switch	Any	
91	1	T1	myrra74010 12 W	Flyback transformer	MYRRA	74010
92	1	U2	MCP6231UT-E/OT sot23_5	CMOS operational amplifier	MICROCHIP	MCP6231UT-E/OT
93	2	U3, U5	STGAP2SM so8	Galvanically isolated single gate driver	ST	<a href="#">STGAP2SM</a>
94	3	U6, U7, U13	LTV-817 dip4	LTV-817_DIP4	Any	
95	1	U8	LM35/TO220 to220ab	Temperature sensor	TEXAS INSTRUMENT	LM35DT/NOPB
96	2	U9, U12	L78M05ABDT LM2931_DPAK 5 V 0.5 A	Precision 500 mA regulator	ST	<a href="#">L78M05ABDT-TR</a>

Item	Q.ty	Ref.	Part/Value	Description	Manufacturer	Order code
97	1	U10	LD2985BM33R sot23_5	Very low drop and low noise voltage regulator with inhibit function	ST	<a href="#">LD2985BM33R</a>
98	1	U11	viper26LD SOIC16	High voltage converter with direct feedback	ST	<a href="#">VIPER26LD</a>
99	1	U14	TL432 sot23	Voltage reference	TEXAS INSTRUMENT	TL432BQDBZR
100	2	U15, U16	MGJ2D122005SC MGJ2_murata	DC-DC converter	MURATA	MGJ2D122005SC
101	1	U28	LEM CASR 15-NP LEM_CASR_15_NP 15 A	CASR 15-NP	LEM	CASR 15-NP
102	2	X1, X3	SCTW35N65G2V to247ae	Silicon carbide power MOSFET	ST	<a href="#">SCTW35N65G2V</a>
103	2	X2, X4	TN3050H-12WY to247ae	Automotive grade AEC-Q101 SCR Thyristor	ST	<a href="#">TN3050H-12WY</a>

**STMicroelectronics****EVALUATION BOARD LICENSE AGREEMENT**

By using this evaluation board or kit (together with all related software, firmware, components, and documentation provided by ST, "Evaluation Board"), You ("You") are agreeing to be bound by the terms and conditions of this Evaluation Board License Agreement ("Agreement"). Do not use the Evaluation Board until You have read and agreed to this Agreement. Your use of the Evaluation Board constitutes Your acceptance of this Agreement.

**LICENSE**

STMicroelectronics ("ST") grants You the right to use the enclosed Evaluation Board offering limited features only to evaluate and test ST products solely for Your evaluation and testing purposes in a research and development setting. The Evaluation Board shall not be, in any case, directly or indirectly assembled as a part in any production of Yours as it is solely developed to serve evaluation purposes and has no direct function and is not a finished product. If software and/or firmware is accompanied by a separate end user license agreement ("EULA"), then such software and/or firmware shall be governed by such EULA.

**EVALUATION BOARD STATUS**

The Evaluation Board offers limited features allowing You only to evaluate and test the ST products. The Evaluation Board is not intended for consumer or household use. You are not authorized to use the Evaluation Board in any production system, and it may not be offered for sale or lease, or sold, leased or otherwise distributed for commercial purposes. If the Evaluation Board is incorporated in an evaluation system, the evaluation system may be used by You solely for Your evaluation and testing purposes. Such evaluation system may not be offered for sale or lease or sold, leased or otherwise distributed for commercial purposes and must be accompanied by a conspicuous notice as follows: "This device is not, and may not be, offered for sale or lease, or sold or leased or otherwise distributed for commercial purposes".

**OWNERSHIP AND COPYRIGHT**

Title to the Evaluation Board remains with ST and/or its licensors. You may not remove any copyright or other proprietary rights notices without prior written authorization from ST. You may make one copy of the software and/or firmware of the Evaluation Board for back up or archival purposes provided that You reproduce and apply to such copy any copyright or other proprietary rights notices included on or embedded in the software and/or firmware. You agree to prevent any unauthorized copying in whole or in part of the Evaluation Board.

**RESTRICTIONS AND WARNINGS**

Before You handle or use the Evaluation Board, You must carefully review any related documentation provided by ST. Such documentation may contain important warnings. You shall comply with all such warnings and other instructions and employ reasonable safety precautions in using the Evaluation Board. Failure to do so may result in death, personal injury, or property damage. If You have any questions regarding the safe usage of the Evaluation Board, You should contact ST for guidance. You may not sell, assign, sublicense, lease, rent or otherwise distribute the Evaluation Board for commercial purposes, in whole or in part, or use Evaluation Board in a production system, with the exception that if You are an authorized ST distributor, You may resell the Evaluation Board in compliance with the applicable terms and conditions. Except as provided in this Agreement or as explicitly permitted in the documentation of the Evaluation Board, You may not reproduce the Evaluation Board or modify, reverse engineer, de-compile or disassemble its software and/or firmware, in whole or in part. You shall not use the Evaluation Board in any safety critical or functional safety testing, including but not limited to testing of life supporting, military or nuclear applications. ST expressly disclaims any responsibility for such usage which shall be made at Your sole risk, even if ST has been informed in writing of such usage. Unless expressly designated in writing by ST as suitable for use in testing automotive or aerospace applications, You shall not use the Evaluation Board in such testing.

**Notice applicable to Evaluation Boards according to European Regulation**

For the European Regulation of the Evaluation Board, the applicable EU directives are considered, with a particular attention to the Low Voltage Directive (LVD) 2014/35/EU, the Electromagnetic Compatibility (EMC) Directive 2014/30/EU, and the Radio Equipment Directive (RED) 2014/53/EU. If the Evaluation Board is outside the scope of the foregoing Directives, then the General Product Safety Directive (GPSD) 2001/95/EC and Council Directive 93/68/EEC, amending Directive 73/23/EEC on electrical equipment designed for use within certain voltage limits, are applicable.

The Evaluation Board meets the requirements of the Restriction of Hazardous Substances (RoHS 2 or RoHS recast) Directive 2011/65/EU, Annex II, as amended by Directive 2015/863/EU.

**Notice applicable to Evaluation Boards not FCC-Approved**

This kit is designed to allow:

- (1) Product developers to evaluate electronic components, circuitry, or software associated with the kit to determine whether to incorporate such items in a finished product and
- (2) Software developers to write software applications for use with the end product.

This kit is not a finished product and when assembled may not be resold or otherwise marketed unless all required FCC equipment authorizations are first obtained. Operation is subject to the condition that this product not cause harmful interference to licensed radio stations and that this product accept harmful interference. Unless the assembled kit is designed to operate under part 15, part 18 or part 95 of 47 CFR, Chapter I ("FCC Rules"), the operator of the kit must operate under the authority of an FCC license holder or must secure an experimental authorization under part 5 of this chapter.

**For Evaluation Boards annotated as FEDERAL COMMUNICATIONS COMMISSION (FCC) Part 15 Compliant**

- **FCC Interference Statement for Class A Evaluation Boards:** This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.
- **FCC Interference Statement for Class B Evaluation Boards:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
  - Reorient or relocate the receiving antenna.
  - Increase the separation between the equipment and receiver.
  - Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
  - Consult the dealer or an experienced radio/TV technician for help.
- This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

**WARRANTY**

ST WARRANTS THAT IT HAS THE RIGHT TO PROVIDE THE EVALUATION BOARD TO YOU. THIS WARRANTY IS PROVIDED BY ST IN LIEU OF ALL OTHER WARRANTIES, WRITTEN OR ORAL, STATUTORY, EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY AS TO MERCHANTABILITY, NON-INFRINGEMENT, FITNESS FOR ANY PARTICULAR PURPOSE, OR UNINTERRUPTED OR ERROR-FREE OPERATION, ALL OF WHICH ARE EXPRESSLY DISCLAIMED. THE EVALUATION BOARD IS PROVIDED "AS IS".

YOU WARRANT TO ST THAT YOU WILL ENSURE THE EVALUATION BOARD IS USED ONLY BY ELECTRONICS EXPERTS WHO UNDERSTAND THE DANGERS OF HANDLING AND USING SUCH ITEMS, YOU ASSUME ALL RESPONSIBILITY AND LIABILITY FOR ANY IMPROPER OR UNSAFE HANDLING OR USE OF THE EVALUATION BOARD BY YOU, YOUR EMPLOYEES, AFFILIATES, CONTRACTORS, AND DESIGNEES.

**LIMITATION OF LIABILITIES**

IN NO EVENT SHALL ST BE LIABLE TO YOU, WHETHER IN CONTRACT, TORT (INCLUDING NEGLIGENCE), STRICT LIABILITY, OR ANY OTHER LEGAL THEORY, FOR ANY INDIRECT, SPECIAL, CONSEQUENTIAL, INCIDENTAL, PUNITIVE, OR EXEMPLARY DAMAGES WITH RESPECT TO ANY MATTERS RELATING TO THIS AGREEMENT, REGARDLESS OF WHETHER ST HAS BEEN ADVISED OF THE POSSIBILITY OF THE SAME. IN NO EVENT SHALL ST'S LIABILITY ARISING OUT OF THIS AGREEMENT IN THE AGGREGATE EXCEED THE AMOUNT PAID BY YOU UNDER THIS AGREEMENT FOR THE PURCHASE OF THE EVALUATION BOARD, OR TEN UNITED STATES DOLLARS (\$10.00) IF NO PURCHASE PRICE WAS PAID.

**INDEMNIFICATION**

You shall, at Your expense, defend ST and its Affiliates against a claim or action brought by a third party for infringement or misappropriation of any patent, copyright, trade secret or other intellectual property right of a third party to the extent resulting from (1) Your combination of the Evaluation Board with any other component, system, software, or firmware, (2) Your modification of the Evaluation Board, or (3) Your use of the Evaluation Board in a manner not permitted under this Agreement. You shall indemnify ST and its Affiliates against and pay any resulting costs and damages finally awarded against ST or its Affiliates or agreed to in any settlement, provided that You have sole control of the defense and settlement of the claim or action, and ST cooperates in the defense and furnishes all related evidence under its control at Your expense. ST will be entitled to participate in the defense of such claim or action and to employ counsel at its own expense.

"Affiliates" means any corporation or other entity directly or indirectly controlled by, controlling or under common control with the entity in question, for so long as such ownership exists. "Control" means the direct or indirect beneficial ownership of more than fifty (50%) percent of the stock or other equity interests entitled to vote for the election of directors or an equivalent governing body. Any such corporation or other legal entity shall be deemed to be an Affiliate of such Party only as long as such Control exists.

**TERMINATION**

ST may terminate this Agreement without notice if You breach this Agreement. Upon termination, You shall immediately destroy or return all copies of the software, firmware, and documentation of the Evaluation Board to ST and certify in writing to ST that You have done so.

**APPLICABLE LAW AND JURISDICTION**

This Agreement shall be governed, construed and enforced in accordance with the laws of Switzerland, without regard to its conflict of laws rules. The UN Convention on Contracts for the International Sale of Goods shall not apply to this Agreement. In case of dispute and in the absence of an amicable settlement, the only competent jurisdiction shall be the Courts of Geneva, Switzerland. Any breach of this Agreement by You may result in irreparable damage to ST for which ST will not have an

adequate remedy at law. Accordingly, in addition to any other remedies and damages available, You acknowledge and agree that ST may immediately seek enforcement of this Agreement in any jurisdiction by means of specific performance or injunction, without any requirement to post a bond or other security.

#### **SEVERABILITY**

If any provision of this agreement is or becomes, at any time or for any reason, unenforceable or invalid, no other provision of this agreement shall be affected thereby, and the remaining provisions of this agreement shall continue with the same force and effect as if such unenforceable or invalid provisions had not been inserted in this Agreement. In addition, any unenforceable or invalid provision shall be deemed replaced by a provision that is valid and enforceable and that comes closest to expressing the intention of the unenforceable or invalid provision.

#### **WAIVER**

The waiver by either party of any breach of any provision of this Agreement shall not operate or be construed as a waiver of any other or a subsequent breach of the same or a different provision.

#### **RELATIONSHIP OF THE PARTIES**

Nothing in this Agreement shall create, or be deemed to create, any joint venture, partnership, principal-agent, employer-employee or other relationship between the Parties, except that of independent contractors. Neither Party has the authority or power to bind, to contract in the name of, or to create a liability for the other in any way or for any purpose.

#### **SURVIVAL**

Any provision of this Agreement which imposes an obligation after termination of this Agreement shall survive the termination of this Agreement.

#### **SECTION HEADINGS**

Section headings are inserted for convenience only and shall not be used to interpret this Agreement.

#### **WASTE AND RECYCLING**

**The Evaluation Board is not to be disposed of as urban waste. At the end of its life cycle, differentiated waste collection must be followed.** Consult the local authorities for more information on the proper disposal channels. It is mandatory to separately collect the Evaluation Board and make sure it is delivered it to the appropriate waste management and recycling centers.

As of 15 August 2018, in all the countries belonging to the European Union, the Evaluation Board is subject to the WEEE Directive 2012/19/EU requirement; therefore, it is forbidden to dispose of the Evaluation Board as undifferentiated waste or with other domestic wastes. Consult the local authorities for more information on the proper recycling centers.

Disposing of the Evaluation Board incorrectly may cause damage to the environment and may be subject to fines based on specific countries' rules.