

**Table 1: STEVAL-TTM004V1 bill of materials**

Item	Q.ty	Ref.	Part/Value	Description	Manufacturer	Order code
1	32	C1 C2 C3 C5 C8 C11 C13 C15 C17 C20 C23 C26 C27 C30 C41 C47 C48 C50 C54 C55 C56 C57 C58 C59 C62 C63 C65 C66 C72 C73 C76 C77	0.1 $\mu\text{F} \pm 10\%$ 25 V 0603	Ceramic capacitors	Kemet	C0603C104K3RACTU
2	20	C4 C6 C9 C12 C14 C16 C18 C21 C24 C28 C31 C33 C35 C37 C39 C49 C51 C52 C53 C60	100 nF 100 V X7R 0603 $\pm 20\%$	Ceramic capacitors	TDK Corporation	C1608X7R2A103M080AA
3	3	C10 C43 C44	2.2 $\mu\text{F}$ 16 V X7S 0603 $\pm 20\%$	Ceramic capacitors	TDK Corporation	CGA3E1X7S1C225M080AC
4	6	C19 C22 C25 C29 C32 C61	4.7 $\mu\text{F} \pm 20\%$ 10V X5R 0603	Ceramic capacitors	Würth Electronics Inc.	885012106012
5	4	C34 C36 C38 C40	47nF $\pm 10\%$ 50V X7R 0603	Ceramic capacitors	Murata Electronics North America	GCM188R71H473KA55D
6	1	C42	1 $\mu\text{F} \pm 10\%$ 16V X7R 0603	Ceramic capacitors	Würth Electronics Inc.	885012206052
7	2	C45 C46	8pF $\pm 0.5$ pF 50V C0G 0603	Ceramic capacitors	TDK Corporation	CGA3E2C0G1H080D080AA
8	16	C64 C67 C71 C74 C79 C80 C90 C91 C92 C94 C95 C97 C98 C100 C101 C103	47pF $\pm 5\%$ 50V C0G 0603	Ceramic capacitors	TDK Corporation	C1608C0G1H470J080AA
9	10	C68 C69 C70 C81 C82 C83 C84 C85 C87 C88	10pF $\pm 0.5$ pF 50V C0G 0603	Ceramic capacitors	TDK Corporation	CGA3E2C0G1H100D080AD
10	3	C75 C86 C93	4.7nF $\pm 10\%$ 25V X7R 0603 4700PF	Ceramic capacitors	Würth Electronics Inc.	885012206063
11	3	C78 C89 C96	2200pF $\pm 10\%$ 2200PF 25V X7R 0603	Ceramic capacitors	AVX Corporation	06033C222KAT2A
12	1	C99	1100pF $\pm 5\%$ 1100PF 25V C0G/ NP0 0603	Ceramic capacitors	Murata Electronics North America	GRM1885C1E112JA01D
13	1	C102	1nF $\pm 10\%$ 1000PF 25V X7R 0603	Ceramic capacitors	Samsung Electro-Mechanics	CL10B102KA8NNNC
14	4	C104 C105 C106 C111	0.1 $\mu\text{F} \pm 10\%$ 25V X7R 0603	Ceramic capacitors	Kemet	C0603C104K3RACTU
15	2	C107 C112	10 $\mu\text{F} \pm 20\%$ 16V X5R 0805	Ceramic capacitors	Würth Electronics Inc.	885012107014
16	1	C108	6.8 $\mu\text{F} \pm 20\%$ 16V X7S 0805	Ceramic capacitors	TDK Corporation	CGA4J1X7S1C685M125AC

Item	Q.ty	Ref.	Part/Value	Description	Manufacturer	Order code
17	2	C109 C113	470nF ± 10 % 25V X7R 0603	Ceramic capacitors	Wurth Electronics Inc.	885012206075
18	1	C110	22 µF ± 20 % 6.3V X7R 1206	Ceramic capacitors	TDK Corporation	CGA5L1X7R0J226M160AC
19	1	C114	68nF ± 10 % 50V X7R 0603	Ceramic capacitors	Kemet	C0603C683K5RACTU
20	1	C115	8.2nF ± 5% 8200PF 50V NP0 0603	Ceramic capacitors	TDK Corporation	CGA3E2NP01H822J080AA
21	1	C116	27pF ± 5 % 50V C0G/NP0 0603	Ceramic capacitors	Murata Electronics North America	GCM1885C1H270JA16D
22	1	C117	820pF ± 5 % 100V NP0 0603	Ceramic capacitors	TDK Corporation	C1608NP02A821J080AA
23	1	CON1	14P female connector DIN 41651 0.1 gold PCB	Connector header	Sullins Connector Solutions	SFH11-PBPC-D07-ST-BK
24	2	CON2 CON4	CON5 MTA-100 vertical T 5pos 2.54mm	Connector header	TE Connectivity AMP Connectors	640456-5
25	1	CON3	34P female connector DIN 41651 0.1 gold PCB	Connector header	Sullins Connector Solutions	SFH11-PBPC-D17-ST-BK
26	1	CON5	JTAG 2.54 mm 14 pos gold PCB	Connector header	Sullins Connector Solutions	SBH11-PBPC-D07-ST-BK
27	1	CON6	User Digital Out male 2.54mm dual STR 8pos 4x2 contact length 5.84mm	Connector header	Any	
28	1	CON7	LevShift_LV male 2.54mm STR 4 pos contact length 5.84mm	Connector header	Any	
29	1	CON8	LevShift_HV male 2.54 mm STR 4pos contact length 5.84mm	Connector header	Any	
30	2	CON9 CON12	User Analog Out male 2.54 mm STR 4pos 2x2 contact length 5.84mm	Connector header	Any	
31	1	CON10	User Analog Inputs male 2.54 mm STR 10pos 5x2 contact length 5.84mm	Connector header	Any	
32	1	CON11	User Digital Input male 2.54 mm STR 8pos 4x2 contact length 5.84mm	Connector header	Any	
33	4	D1 D2 D3 D34	20mA 0603 SMD	Green LED	OSRAM Opto Semiconductors Inc.	LP L296-J2L2-25-0-20-R18-Z

Item	Q.ty	Ref.	Part/Value	Description	Manufacturer	Order code
34	6	D4 D5 D6 D7 D8 D9	5mA clear 2SMD	Red LED	Everlight Electronics Co Ltd	19-217/R6C-AL1M2VY/3T
35	17	D10 D11 D12 D13 D17 D18 D21 D22 D23 D25 D26 D27 D28 D30 D31 D32 D33	ESDLIN1524BJ 160W	Automotive single line ESD protection for LIN bus in SOD323	ST	<a href="#">ESDLIN1524BJ</a>
36	3	D14 D15 D19	BAT30KFILM 530mV @ 300mA	General purpose Schottky diode	ST	<a href="#">BAT30KFILM</a>
37	4	D16 D20 D24 D29	3.6V 1V @ 10mA 200MW SOD323F	Zener diode	ON Semiconductor	MM3Z3V6C
38	1	IC1	A6986F 16-TSSOP (0.173", 4.40mm Width) Exposed Pad	IC REG BUCK 1.5A 16HTSSOP	ST	A6986F
39	2	J1 J3	DB9-male connector D-SUB PLUG 9pos vert solder	Connector	Amphenol ICC (Commercial Products)	L717TSEH09POL2RM5
40	1	J2	Term_Res 2pos vert T/H	Connector header	Amphenol FCI	77311-118-02LF
41	1	J4	Con2 2pos vert T/H	Connector header	Amphenol FCI	77311-118-02LF
42	1	J5	MOR2 2.54mm 2pos	Connector terminal block	Phoenix Contact	1725656
43	1	J6	VDDL2V 2pos vert T/ H	Connector header	Amphenol FCI	77311-118-02LF
44	4	L1 L2 L38 L40	330Ohm@100MHz 0603 1LN	Ferrite bead	Murata Electronics North America	BLM18SG331TN1D
45	2	L3 L4	600Ohm@100MHz 0603 1LN	Ferrite bead	Würth Electronics Inc.	742863160
46	33	L5 L6 L7 L8 L9 L10 L11 L12 L13 L14 L15 L16 L17 L18 L19 L20 L21 L22 L23 L24 L25 L26 L27 L28 L29 L30 L31 L32 L33 L34 L35 L36 L37	120Ohm@100MHz 0603 1LN	Ferrite bead	Würth Electronics Inc.	742792625
47	1	L39	8.2 $\mu$ H $\pm$ 20 % 2.7A 39 MOHM SMD	Fixed inductor	Würth Electronics Inc.	744787082
48	2	MH1 MH2	M3 hole pan head	Mounting hole		
49	1	Q1	BC847ALT1G TO-236-3, SC-59, SOT-23-3 NPN 45V 0.1A	Bipolar transistor	ON Semiconductor	BC847ALT1G

Item	Q.ty	Ref.	Part/Value	Description	Manufacturer	Order code
50	12	R1 R5 R8 R9 R11 R15 R16 R17 R19 R21 R52 R85	0.125W, 1/8W 0805 SMD 0 OHM jumper	Resistors	Yageo	RC0805JR-070RL
51	9	R2 R50 R51 R55 R56 R93 R101 R110 R121	1.5k $\pm$ 1 % 1/10W 0603 SMD	Resistors	Yageo	RC0603FR-071K5L
52	2	R3 R4	820 0.1W, $\pm$ 1 % 1/10W 0603 SMD	Resistors	Yageo	RC0603FR-07820RL
53	8	R6 R7 R10 R12 R53 R54 R80 R81	0.125W, 1/8W 0805 SMD 0 OHM jumper	Resistors (not assembled)	Yageo	RC0805JR-070RL
54	21	R13 R14 R18 R24 R25 R29 R32 R34 R36 R42 R45 R47 R48 R59 R60 R77 R78 R79 R91 R98 R128	0.1W, SMD 0 OHM jumper 1/10W 0603	Resistors	Panasonic Electronic Components	ERJ-3GEY0R00V
55	14	R20 R26 R27 R41 R61 R68 R69 R70 R73 R74 R75 R94 R105 R116	0.1W, $\pm$ 0.1 % SMD 10K OHM 1/10W 0603	Resistors	Panasonic Electronic Components	ERA-3AEB103V
56	1	R22	0.125W, $\pm$ 1 % 1/8W 0603 SMD 5.6K	Resistors	Vishay Beyschlag	MCT06030C5601FP500
57	4	R23 R87 R99 R112	3.3 k, 0.1 W $\pm$ 0.1 % 1/10W 0603 SMD	Resistors	Panasonic Electronic Components	ERA-3AEB332V
58	5	R28 R30 R31 R33 R37	0.1 W $\pm$ 1 % SMD 0 OHM jumper 1/10W 0603	Resistors (not assembled)	Panasonic Electronic Components	ERJ-3GEY0R00V
59	1	R35	0.1 W $\pm$ 1 % SMD 0 OHM jumper 1/10W 0603	Resistors	Panasonic Electronic Components	ERJ-3GEY0R00V
60	2	R38 R39	0.1 W $\pm$ 1 % SMD 33 K OHM 1/10W 0603	Resistors	Yageo	RC0603FR-0733KL
61	4	R40 R43 R44 R46	0.1 W $\pm$ 1 % SMD 510 OHM jumper 1/10W 0603	Resistors	Any	
62	1	R49	0.1 W $\pm$ 1 % 0.4W 0805 SMD 120 OHM	Resistors	Rohm Semiconductor	ESR10EZPF1200
63	5	R57 R82 R83 R84 R134	0.1 W $\pm$ 1 % 1/10W 0603	Resistors	Yageo	RC0603FR-071KL
64	1	R58	0.1 W $\pm$ 1 % SMD 2.2K OHM 1/10W 0603	Resistors	Yageo	RC0603FR-072K2L
65	14	R62 R63 R64 R65 R66 R67 R89 R90 R97 R100 R108 R114 R119 R126	0.1 W $\pm$ 1 % SMD 100 OHM 1/10W 0603	Resistors	Yageo	RC0603FR-07100RP

Item	Q.ty	Ref.	Part/Value	Description	Manufacturer	Order code
66	5	R71 R72 R76 R109 R120	0.1 W $\pm$ 1 % SMD 4.7K OHM 1% 1/10W 0603	Resistors	Yageo	RC0603FR-074K7L
67	3	R86 R92 R96	0.1 W $\pm$ 1 % SMD 100K OHM 1/10W 0603	Resistors	Yageo	RC0603FR-07100KL
68	3	R88 R102 R113	0.1 W $\pm$ 1 % SMD 1/10W 0603	Chip resistors	Any	
69	3	R95 R106 R117	0.1 W SMD 0 OHM jumper 1/10W 0603	Resistors	Yageo	RC0603JR-070RL
70	4	R103 R107 R115 R122	0.125W, $\pm$ 1 % SMD 1.8K OHM 1/8W 0603	Resistors	Vishay Beyschlag	MCT06030C1801FP500
71	4	R104 R111 R118 R123	0.1 W $\pm$ 0.1 % SMD 3.6K OHM 1/10W 0603	Resistors	Panasonic Electronic Components	ERA-3AEB362V
72	1	R124	0.1 W $\pm$ 1 % SMD 4.99K OHM 1/10W 0603	Resistors	Yageo	RC0603FR-074K99L
73	1	R125	0.1 W $\pm$ 1 % SMD 2.87K OHM 1/10W 0603	Resistors	Yageo	RC0603FR-072K87L
74	1	R127	0.1 W $\pm$ 1 % SMD 2.49K OHM 1/10W 0603	Resistor (not assembled)	Stackpole Electronics Inc.	RMCF0603FT2K49
75	1	R129	0.1 W $\pm$ 1 % SMD 1/10W 0603	Chip resistor	Any	
76	1	R130	0.1W, $\pm$ 0.1 % SMD 220K OHM 1/10W 0603	Resistors	Panasonic Electronic Components	ERA-3AEB224V
77	1	R131	0.1 W $\pm$ 1 % SMD 1.33K OHM 1/10W 0603	Resistors	Yageo	RC0603FR-071K33L
78	1	R132	0.1 W $\pm$ 1 % SMD 24K OHM 50ppm/C 1/10W 0603	Resistors	Yageo	RT0603FRE0724KL
79	1	R133	0.125W, $\pm$ 1 % 560K OHM 1/8W 0603	Resistors	Vishay Beyschlag	MCT06030C5603FP500
80	1	R_REF_1	10K OHM 0.25W GW TOP ADJ	Trimmer	Bourns Inc.	3314G-1-103E
81	1	SW1	1437566-3 6.00mm x 3.50mm SPST- NO 0.05A 24V	Tactile switch	TE Connectivity ALCOSWITCH Switches	1437566-3
82	1	SW2	1437566-3 6.00mm x 3.50mm SPST- NO 0.05A 24V	Tactile switch	TE Connectivity ALCOSWITCH Switches	1437566-3
83	1	TP1	+VDD_HV 0.100" Dia x 0.180" L (2.54mm x 4.57mm) PC MINI .040"D RED	Test point (not assembled)	Keystone Electronics	5000

Item	Q.ty	Ref.	Part/Value	Description	Manufacturer	Order code
84	1	TP2	VDD_HV_AD 0.100" Dia x 0.180" L (2.54mm x 4.57mm) PC MINI .040"D RED	Test point (not assembled)	Keystone Electronics	5000
85	1	TP3	VDD_HV_ADR 0.100" Dia x 0.180" L (2.54mm x 4.57mm) PC MINI .040"D RED	Test point (not assembled)	Keystone Electronics	5000
86	1	TP4	VDD_HV_JTAG_OS 0.100" Dia x 0.180" L (2.54mm x 4.57mm) PC MINI .040"D RED	Test point (not assembled)	Keystone Electronics	5000
87	1	TP5	VDD_HV_ADV 0.100" Dia x 0.180" L (2.54mm x 4.57mm) PC MINI .040"D RED	Test point (not assembled)	Keystone Electronics	5000
88	1	TP6	VDD_IO_Main 0.100" Dia x 0.180" L (2.54mm x 4.57mm) PC MINI .040"D RED	Test point (not assembled)	Keystone Electronics	5000
89	1	TP7	VDD_HV_IO_FLEX 0.100" Dia x 0.180" L (2.54mm x 4.57mm) PC MINI .040"D RED	Test point (not assembled)	Keystone Electronics	5000
90	1	TP8	VDD_HV_FLA 0.100" Dia x 0.180" L (2.54mm x 4.57mm) PC MINI .040"D RED	Test point (not assembled)	Keystone Electronics	5000
91	1	TP9	VDD_LV 0.100" Dia x 0.180" L (2.54mm x 4.57mm) PC MINI .040"D RED	Test point (not assembled)	Keystone Electronics	5000
92	24	TP10 TP11 TP12 TP20 TP21 TP22 TP23 TP24 TP25 TP26 TP27 TP28 TP29 TP30 TP31 TP32 TP33 TP34 TP35 TP36 TP37 TP38 TP39 TP40	0.100" Dia x 0.180" L (2.54mm x 4.57mm) PC MINI .040"D BLACK	Test point (not assembled)	Keystone Electronics	5001
93	1	TP13	NMI_1 0.100" Dia x 0.180" L (2.54mm x 4.57mm) PC MINI .040"D BLACK	Test point (not assembled)	Keystone Electronics	5001
94	1	TP14	CAN_H 0.100" Dia x 0.180" L (2.54mm x 4.57mm) PC MINI .040"D BLACK	Test point (not assembled)	Keystone Electronics	5001

Item	Q.ty	Ref.	Part/Value	Description	Manufacturer	Order code
95	1	TP15	CAN_L 0.100" Dia x 0.180" L (2.54mm x 4.57mm) PC MINI .040"D BLACK	Test point (not assembled)	Keystone Electronics	5001
96	1	TP16	NMI_2 0.100" Dia x 0.180" L (2.54mm x 4.57mm) PC MINI .040"D BLACK	Test point (not assembled)	Keystone Electronics	5001
97	1	TP17	CAN_Tx 0.100" Dia x 0.180" L (2.54mm x 4.57mm) PC MINI .040"D BLACK	Test point (not assembled)	Keystone Electronics	5001
98	1	TP18	CAN_Rx 0.100" Dia x 0.180" L (2.54mm x 4.57mm) PC MINI .040"D BLACK	Test point (not assembled)	Keystone Electronics	5001
99	1	TP19	RESET 0.100" Dia x 0.180" L (2.54mm x 4.57mm) PC MINI .040"D BLACK	Test point (not assembled)	Keystone Electronics	5001
100	1	TP41	VDD_LV 0.100" Dia x 0.180" L (2.54mm x 4.57mm) PC MINI .040"D RED	Test point (not assembled)	Keystone Electronics	5000
101	2	U1 U10	ESDA5V3LY TO-236-3,SC-59,SO3VWM 19VC	Automotive dual Transil array for ESD protection	ST	<a href="#">ESDA5V3LY</a>
102	1	U2	ESDA6V1LY TO-236-3,SC-59,SO5.2VWM 16VC	Automotive dual Transil array for ESD protection	ST	<a href="#">ESDA6V1LY</a>
103	1	U3	SPC58NN84E7 eLQFP176	32-bit power architecture MCU for automotive ASIL-D	ST	<a href="#">SPC58NN84E7</a>
104	1	U4	MCP2562FD-E/SN 8-SOIC (0.154", 3.90mm Width)	High speed IC TXRX CAN	Microchip Technology	MCP2562FD-E/SN
105	1	U5	ST3232EBTR 16-TSSOP (0.173", 4.40mm Width) RS232 ESD 16-TSSOP	15 KV ESD protected, RS232 drivers and receivers	ST	<a href="#">ST3232EBTR</a>
106	1	U6	STM6315RDW13F TO-253-4, TO-253AA CIRC 2.63V SOT-143	Open drain microprocessor reset	ST	<a href="#">STM6315RDW13F</a>
107	1	U7	ST2378ETTR 20-TSSOP (0.173", 4.40mm Width)	8-bit level translator with 15kV ESD protection	ST	<a href="#">ST2378ETTR</a>

Item	Q.ty	Ref.	Part/Value	Description	Manufacturer	Order code
108	1	U8	TS954IYPT 14-TSSOP (0.173", 4.40mm Width)	Real input and output rail to rail low distortion	ST	<a href="#">TS954IYPT</a>
109	1	U9	LD1117DT33TR TO-252-3, DPak (2 Leads + Tab), SC-63	Adjustable and fixed low drop positive voltage regulator	ST	<a href="#">LD1117DT33TR</a>
110	1	Y1	40 MHz 0.098" L x 0.079" W (2.50mm x 2.00mm)	Crystal	ECS Inc.	ECS-400-8-36CKM
111	1	PCB	1 PCB 4 Layers 87x69 mm	PCB	Any	



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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.

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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.