

Table 1: STEVAL-POE003V1 bill of materials

Item	Q.ty	Ref.	Description	Part/Value	Manufacturer	Order code
1	4	C1, C2, C3, C4	Capacitors	10 nF 250 V C0805	TDK	C2012X7R2E103K125AA
2	1	C5	Capacitor	2.2 nF 2KV C1812	AVX	
3	4	C6, C7, C8, C9	Capacitors N.M.	1 nF 2KV C1812	TDK	
4	1	C10	Capacitor	1nF 2KV C1812	AVX	
5	2	C11, C12	Capacitors	1 nF 250 V C0805	TDK	
6	2	C13, C17	Capacitors	100 nF 100 V C0805	Any	
7	1	C14	Capacitor	10 nF 100 V C0603	Any	
8	1	C15	Aluminium Electrolytic capacitor	33 μ F 100 V C-POL8-10	Panasonic	EEEFK2A330P
9	2	C16, C24	Capacitor	4.7 μ F 100 V C1210	TDK	
10	1	C18	Capacitor	2.2 nF 100 V C0603	Several	
11	1	C19	Capacitor	68 nF 100 V C0805	Several	
12	2	C20, C22	Capacitors N.M.	2200 pF 2KV C1812	AVX	
13	3	C21, C34, C35, C54	Capacitors	2200 pF 2KV C1812	AVX	
14	2	C23, C26, C39, C46, C86, C95	Capacitor	1 nF 100 V C0805	Any	
15	1	C25, C44, C45, C50, C51, C55, C56, C58	Capacitor	100 nF 25 V C0603	Any	
16	2	C27, C28, C30	Capacitors N.M.	100 V C0805	Any	
17	1	C29	Aluminium Electrolytic capacitor	33 μ F 100 V C-POL8-10	Panasonic	EEEFK2A330P
18	3	C31, C32, C33	Capacitors	4.7 μ F 100 V C1210	TDK	
19	6	C36, C37, C38, C40, C41, C42	Capacitor	47 μ F 16 V C1210	Murata	GRM32ER61C476ME15
20	1	C43	Aluminium Electrolytic capacitor	330 μ F 16 V Case F	Panasonic	EEEFK1C331GP
21		C47, C96	Capacitor	2.2 μ F 25 V C0603	Any	
22		C48, C49	Capacitor	47 nF 200 V C1206	Any	
23		C52	Capacitor	100 pF 25 V C0603	Any	

Item	Q.ty	Ref.	Description	Part/Value	Manufacturer	Order code
24		C53	Capacitor	33 nF 25 V C0603	Any	
25		C57, C60, C61, C62, C63, C64, C81	Capacitor	22 nF COG 25 V C0603	Any	
26		C59	Capacitor	220 pF COG 25 V C0603	Any	
27		C75, C76	Capacitor	100 pF 50 V C0805	Any	
28		C78	Capacitor N.M.	25 V C0603	Any	
29		C82, C83, C84	Capacitor	1 nF 100 V C0603	Any	
30		C85	Capacitor	20 K 0805	Any	
31		C87, C88, C89, C90, C91, C92, C93, C94	Capacitors N.M.	10 nF 1KV C1210	AVX	1210AC103KAT1A
32		C97, C98	Capacitors	47 K 0603	Any	
33		D1, D9, D13, D16, D48	Diode	SOD-323	Any	BAS16J
34		D2, D17	Diode	SOD-23	Any	BZX84C10
35		D3	Diode	SOT23	Any	BAV70
36		D4, D5, D6	LED diodes	T2	Kingbright	AA3528CGSK
37		D7	Diode TVS	SMA	ST	SMAJ58A
38		D8	Transil Diode	SMA	ST	SMAJ58A
39		D11	Zener diode N.M.	SOT23-D	Any	BZX84C10
40		D12, D49, D50, D51	Diode	SOD-323	Any	BAS70
41		D14, D20, D37, D43, D45, D46, D47	Diode	SOD323	ST	BAT46J
42		D15	LED Diode	VOUT Led LED_SMD_0805	Any	
43		D39	LED Diode	FAUX	Kingbright	AA3528CGSK
44		D40	LED Diode	STBY	Kingbright	AA3528CGSK
45		D41, D42	Diode	SMC	ST	STPS4S200S
46		D44	LED Diode	RAUX	Kingbright	AA3528CGSK
47		D52, D53	Dual Diode Common anodes	SOT-23	Any	BAS70-05
48		J1, J2	Connector	RJ45-8PIN	Bell Stewart	SS-7188S-A-NF
49		J4, J6	Connector	BANANA-JACK BOC_10A	Any	
50		J9	Power Jack	AUX Front	Switchcraft	P-JACK-RAPC722
51		J10	Power Jack	AUX Rear	Switchcraft	P-JACK-RAPC722

Item	Q.ty	Ref.	Description	Part/Value	Manufacturer	Order code
52		L1	Inductor	Power inductor	Wurth Elektronik	74439346056
53		L1	Inductor	Power inductor	Coilcraft	XAL5050-562
54		L2, L3	Inductor N.M.	220 R 805	TDK	MPZ2012S221AT000
55		L4	Inductor	3.6 µH	Coilcraft	SER2013-362L
56		L5, L6, L7, L8	Ferrite beads	220 R 805	TDK	MPZ2012S221AT000
57		L9	Low profile power inductor		Coilcraft	LPS4018-105ML
58		P1	Push button	SLEEP/WKUP push-7914	Bourns	
59		P2	Push button	SHDN push-7914	Bourns	
60		Q1, Q5	Power MOSFET	POWERFLAT_5X6	ST	STL110NS3LLH7
61		Q2	Power MOSFET N.M.	STL110NS3LLH7 POWERFLAT_5X6	ST	STL110NS3LLH7
62		Q3	Switching transistor N.M.	MMBT3904LT1 SOT23_BEC_T	Any	MMBT3904LT1
63		Q4	Power MOSFET	BSC190N15NS3 POWERFLAT_5X6	Infineon	BSC190N15NS3
64		Q7	Switching MOSFET P channel	POWERFLAT_3X3		FDMC86259P
65		Q8	Power MOSFET N.M.	POWERFLAT_5X6	ST	STL110NS3LLH7
66		Q9, Q12	Switching transistor NPN	SOT23_BEC_T	Any	PBSS4240T
67		Q10, Q11	Switching transistor PNP N.M.	SOT23_BEC_T	Any	PBSS5240T
68		Q13, Q14	N channel MOSFET	SOT23	Any	2N7002
69		R1, R2, R3, R4, r5, R6, R7, R8	Resistor	75 R R0603	Any	
70		R9	Resistor	0R0 R1210	Any	
71		R14	Resistor	26.1 K ±1% R0603	Any	
72		R15	Resistor N.M.	R1206	Any	
73		R16, R33	Resistor N.M.	5R6 R0805	Any	
74		R17	Resistor	22 R R0805	Any	
75		R18, R19, R20	Resistor	3.9 K R0603	Any	
76		R21, R30	Resistor N.M.	10 K R0805	Any	
77		R22	Resistor	51R1 ±1% R0805	Any	
78		R23	Resistor	36R5 ±1% R0805	Any	
79		R24, R26	Resistor	0R0 R1206	Any	

Item	Q.ty	Ref.	Description	Part/Value	Manufacturer	Order code
80		R25, R37, R40, R56	Resistor	10 K R0603	Any	
81		R27	Resistor N.M.	R2010	Any	
82		R28	Resistor	0 R R0603	Any	
83		R29, R35	Resistor	1 K R0805	Any	
84		R31, R41	Resistor N.M.	R0603	Any	
85		R32, R36, R38	Resistor	10 R R0805	Any	
86		R34	Resistor	22 R R0805	Any	
87		R43	Resistor	130 K $\pm 1\%$ R0603	Any	
88		R44	Resistor	R050 $\pm 1\%$ R1210	Any	
89		R45	Resistor	270K $\pm 1\%$ R0603	Any	
90		R46	Resistor	91K $\pm 1\%$ R0603	Any	
91		R47	Resistor	2 K R0603	Any	
92		R48	Resistor	10 R $\pm 1\%$ R0603	Any	
93		R49	Resistor	0R0 R0603	Any	
94		R50	Resistor	220 R $\pm 1\%$ R0603	Any	
95		R51	Resistor	560R $\pm 1\%$ R0603	Any	
96		R52	Resistor	20 k $\pm 1\%$ R0603	Any	
97		R53	Resistor	4.7 K $\pm 1\%$ R0603	Any	
98		R54	Resistor	15 K $\pm 1\%$ R0603	Any	
99		R55	Resistor	12 K $\pm 1\%$ R0603	Any	
100		R57, R58, R9, R60	Resistor N.M.	0R0 R0805 N.M.	Any	
101		R61	Resistor	3K3 R0805	Any	
102		R62	Resistor N.M.	5K6 R0805	Any	
103		R67	Resistor N.M.	0 R R0805	Any	
104		R69	Resistor	100 k R0805	Any	
105		R75, r123	Resistor	1 k R0805	Any	
106		R76, R77, R118	Resistor	0R R0805	Any	
107		R78	Resistor	0 R R1206	Any	
108		R101	Resistor N.M.	$\pm 1\%$ R0603	Any	
109		R102	Resistor	220 R R0603	Any	
110		R103	Resistor	12k $\pm 1\%$ R0603	Any	
111		R104	Resistor	45.3 K $\pm 1\%$ R0603	Any	
112		R105	Resistor N.M.	R0603	Any	
113		R107	Resistor	0R0 R0805	Any	
114		R108	Resistor	R050 R1210	Any	
115		R114	Resistor	4k7 R0603	Any	
116		R115, R116	Resistor	100k R0805	Any	

Item	Q.ty	Ref.	Description	Part/Value	Manufacturer	Order code
117		R117	Resistor	4k7 R0603	Any	
118		R119	Resistor N.M.	100 k R0603	Any	
119		R120	Resistor	4k3 R0603	Any	
120		R121	Resistor	20 K R0805	Any	
121		R122	Resistor	47 K R0805	Any	
122		R124	Resistor	10 R R0805	Any	
123		R125	Resistor	47 K R0603	Any	
124		R126	Resistor	10 R0603	Any	
125		R127	Resistor	470 K R0603	Any	
126		R128	Resistor	10 K R0603	Any	
127		R129	Resistor N.M.	6K8 R0603	Any	
128		R130	Resistor N.M.	2K2 R0603	Any	
129		R131, R132	Resistor	0R0 R0603	Any	
130		R133	Resistor	100 K R0603	Any	
131		RV1, RV2	Surge arrester N.M.	1812	TDK	B88069X9231T203
132		T1	Data Trafo	POE Trafo	Würth Elektronik	7490220123
133		T2	Common Choke N.M.	RN112	Schaffner	RN 112-4-02-0M7
134		T3	Power Trafo	RA7129-BL	Coilcraft	
135		T4	Planar Power Trafo N.M.		Coilcraft	
136		T5, T6	Common Choke N.M.	WURTH_WE-SL5	Würth Elektronik	744272471
137		T7, T8	Common Choke	RN102	Schaffner	RN 102-2-02-1M1
138		TP1, TP3, TP5, TP7, TP8, TP12, TP13, TP14, TP15, TP16, TP17, TP18, TP19, TP20	Test point red	KEYSTONE_5010	Keystone	
139		TP2, TP4, TP6, TP9	Test point black	KEYSTONE_5011	Keystone	
140		TP10, TP11	Test point turret	MILLMAX_2501	Millmax	
141		U1	Controller	QFN56-8X8X1-49P	ST	PM8805
142		U2	Controller	16QFN_3X3X0.75	ST	PM8804
143		U3	Optocoupler		Fairchild	FOD817AS
144		U4	Voltage Reference	SOT-23-5LEAD	ST	TS431AILT
145		U5	Transil	Diode TVS SMC	ST	SM15T68CA
146		U6, U7, U8, U9	Transil N.M.	Diode TVS SMC		
147		U10, U16	Transil	Diode TVS SMC	ST	SM15T68CA

Item	Q.ty	Ref.	Description	Part/Value	Manufacturer	Order code
148		U11	Transil N.M.	Diode TVS SMC		
149		U17, U18, U19	Transil	Diode TVS SMC	ST	SM15T68CA
150		U20, U21	Transil N.M.	Diode TVS SMC		
151		U22	Optocoupler	FOD817	Fairchild	FOD817AS
152		U23	Voltage Reference	SOT-23-5LEAD	ST	TS431AILT
153		U24	Voltage Reference N.M.	SOT-23-3L	ST	TS2431-AILT

**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.