



06/02/2022

Equipment Authorisation Division
Federal Communications Commission
7435 Oakland Mills Road
Columbia, MD 21046

Subject: Class II permissive change Request
FCC ID: 2AW6Y-CAM20

Granted on: 05/28/2022

To whom may concern:

Pursuant to CRF Section 2.1043, Attenti requests a Class II permissive change to update the filing. All of the changes are not effect to the RF performance, function and power.

Change list:

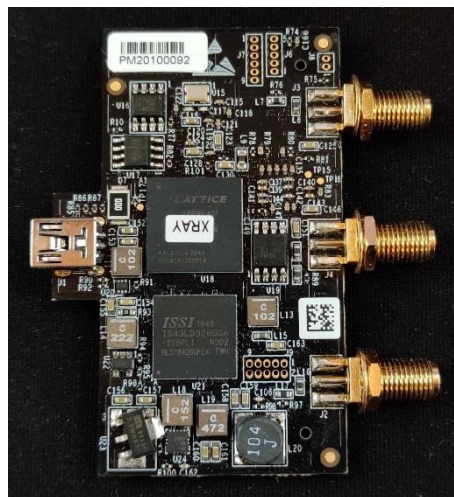
- change product name

- Camera controller:
 - U6 - deserializer - changed from automotive grade to commercial grade
 - U11 - DC/DC 2.5V for DDR and FPGA, changed from variable value component to fixed value, P2P compatible
 - Inducers - added alternative options of the same values for L20, L19, L18, L14, L13, L11, not related to RF
 - **New PCB with the same stackup and overall layout to allow alternative footprints for the DC/DC converters**
 - U25 can populate U11
 - U26 can populate U11
 - U23 was replaced

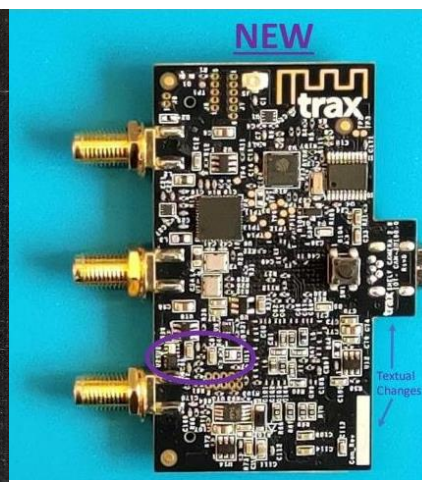
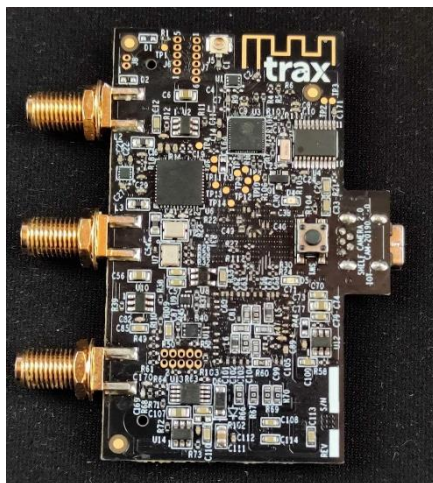


- Camera sensor
 - U4 - serialzier - changed from automotive grade to commercial grade
 - U10 - DC/DC 1.1 for camera sensor, changed from variable value component to fixed value, P2P compatible
 - L5, L8, L7 - added alternative options of the same values, not related to RF
 - **New PCB with the same stackup and overall layout to allow alternative footprints for the DC/DC converters**
 - U13 can populate U10
 - U14 can populate U10
 - U12 can populate U9
 - U11 can populate U9

- Attached comparison between the old and new:
 - TOP



- BOTTOM





- BOM Diff

P/N	DESCRIPTION	TRX-ASSY002 Q.T.Y. REV.01 (OLD)	TRX-ASSY006 Q.T.Y. REV.01 (NEW)	DELTA	ACTION	MFG. P/N	MFG.
TRX-CAP-00006	CAP 0.01UF 25VDC X7R 5% SURFACE MOUNT 0402	0	1	Add C115	1	CC0402JRX7R9BB103	YAGEO
TRX-CAP-00152	CAP CERAMIC 0.01UF 50V X7R 10% SMD 0402	12	11	Remove C115	-1	0402X103J250SNT	CAPAX 1
TRX-CAP-00636	CAP CERAMIC 0.1UF 16V Y5V -20% TO 80% SMD 0402	17	18	Add C172	1	C0402C104Z4VAC7867	KEMET
TRX-ICT00005	IC REG LINEAR 2.5V 500MA 6WSON	0	1	Add U25	1	TPS7A1125PDRVR	TI
TRX-INC-01145	IC LDO REGULATOR 0.55V TO 5.5V 0.5A 6PIN WSON	1	0	Remove U11	-1	TPS74501PDRVR	TI
TRX-PCB-00020	PCB FOR CAMERA CONTROLLER REV.C	1	0	Remove PCB	-1	2000-00-02-999	NONE
TRX-PCB00002	NEW CAMERA CONTROLLER PCB REV.D	0	1	Add New PCB	1	TRX-PCB00002 REV.D	NONE
TRX-RES-00003	RES THICK FILM 0402 100K OHM 5% 0.063W SMD	3	2	Remove R45	-1	RC0402JR-07100KL	YAGEO
TRX-RES-01241	RES THICK FILM 0402 28K OHM 1% 0.063W SMD	1	0	Remove R50	-1	RMCF0402FT28K0	STACKPOLE
TRX-CAP-00006	CAP 0.01UF 25VDC X7R 5% SURFACE MOUNT 0402	0	1	Add C115	1	CC0402JRX7R9BB103	YAGEO
TRX-CAP-00152	CAP CERAMIC 0.01UF 50V X7R 10% SMD 0402	12	11	Remove C115	-1	0402X103J250SNT	CAPAX 1
TRX-INC-01357	IC LDO REGULATOR POS 3.3V 1A 4PIN(3+TAB) SOT-223	TLV1117-33CDCYR	MIC39100-3.3WS-TR	Change U23		MIC39100-3.3WS-TR	MICROCHIP

- Alternatives and optional-support

P/N	DESCRIPTION	Part Reference	Role	MFG. P/N	MFG.
TRX-ICT00005	IC LDO REGULATOR 0.55V TO 5.5V 0.5A 6PIN WSON	U11	U25 replacement	TPS74501PDRVR	TI
TRX-ICT00006	IC REG LINEAR 2.5V 500MA 6WSON	U26	U25 replacement	TLV75525PDRVR	TI
TRX-INC-01151	CONV DC-DC 2.5V TO 5.5V 0.6V TO 2A 6PIN SOT563	U9,U20	U9/U20-alternative	SGM61020XKB6G	SGMICRO
TRX-INC-01143-	CONV DC-DC 2.5V TO 5.5V 0.6V TO 2A 5 PIN SOT23	U22	U22-alternative	SGM61020XN5G	SGMICRO

SPC Diff

OLD

General Construction:

ELECTRICAL LAYERS		[mils]	Control Impedance	Differential Control Impedance
solder mask		0.354		
1	CS	2.1	6 MIL= 50Ω	
	PP	4	εr= 4.2	
2	PLANE	0.7		
	CORE	6	εr= 4.2	
3	SIG	0.7	4.5=52Ω	4/6/4=98.3Ω
	PP	6.5	εr= 4.2	
4	PLANE	0.7		
	CORE	6	εr= 4.2	
5	PLANE	0.7		
	PP	6.5	εr= 4.2	
6	SIG	0.7	4.5=52Ω	4/6/4=98.3Ω
	CORE	6		
7	PLANE	0.7		
	PP	6.5	εr= 4.2	
8	SIG	0.7	4.5=52Ω	4/6/4=98.3Ω
	CORE	6	εr= 4.2	
9	PLANE	0.7		
	PP	4	εr= 4.2	
10	PS	2.1	6 MIL= 50Ω	
solder mask		0.354		
		62.008		
NOMINAL THICKNESS OF BOARD MILS		62.008		
NOMINAL THICKNESS OF BOARD MM		1.57500635		

NEW

PCB SPECIFICATION: Camera Controller 2000-00-02-999-SPC-D1

General Construction:

ELECTRICAL LAYERS		[mils]	Control Impedance	Differential Control Impedance
solder mask		0.354		
1	CS	2.1	6 MIL= 50Ω	
	PP	4	εr= 4.2	
2	PLANE	0.7		
	CORE	6	εr= 4.2	
3	SIG	0.7	4.5=52Ω	4/6/4=98.3Ω
	PP	6.5	εr= 4.2	
4	PLANE	0.7		
	CORE	6	εr= 4.2	
5	PLANE	0.7		
	PP	6.5	εr= 4.2	
6	SIG	0.7	4.5=52Ω	4/6/4=98.3Ω
	CORE	6		
7	PLANE	0.7		
	PP	6.5	εr= 4.2	
8	SIG	0.7	4.5=52Ω	4/6/4=98.3Ω
	CORE	6	Click εr= 4.2	
9	PLANE	0.7		
	PP	4	εr= 4.2	
10	PS	2.1	6 MIL= 50Ω	
solder mask		0.354		
		62.008		
NOMINAL THICKNESS OF BOARD MILS		62.008		
NOMINAL THICKNESS OF BOARD MM		1.57500635		

Sincerely,

DocuSigned by:

Signature:

Lita Kaufman

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Name: Lita Kaufman

Company Name: Trax Technology Solutions Pte. Ltd