中鉴检测
CCTI TESTING

Test Report

Applicant	:	Barix AG
Address	:	Limmatstrasse 21, 8005 Zürich, Switzerland
The submitted sample and sample information was/were submitted and identified by/on the behalf of the client		
Sample name	:	HD Screen Controller
Testing type /model	:	Barix MPV500
Additional type /model	:	Barix NPV500,Barix MPV501,Barix NPV501,Barix MPV510,Barix NPV510, Barix MPV511,Barix NPV511,Barix MPV520,Barix NPV520,Barix MPV521, Barix NPV521
Trademark	:	BARIX
Manufacturer name	:	Shenzhen CYX Industrial Co., Ltd
Address	:	Building A, Corrent Low Carbon Industrial Park, Dalang Street, Longhua District, Shenzhen, China
Sample received date	:	Jul. 25, 2022
Testing period	:	Jul. 25, 2022 to Aug. 05, 2022
Test requested	:	As specified by client, to test the Lead(Pb), Cadmium(Cd), Mercury(Hg), Hexavalent Chromium(Cr(VI)), Polybrominated Biphenyl(PBBs), Polybrominated Diphenyl Ethers (PBDEs), Diisobutyl phthalate (DIBP), Dibutyl phthalate(DBP), Benzyl butyl phthalate(BBP), Di-2-ethylhexyl phthalate(DEHP) in the submitted sample in accordance with the RoHS Directive 2011/65/EU and amendment Commission Delegated Directive (EU) 2015/863 with effective from 22 July 2019.
Test Method	:	Please refer to the following page(s)
Test Result(s)	:	Please refer to the following page(s)
Conclusion	:	The test results comply with the limits of RoHS 2.0 Directive (EU) 2015/863 and (EU)2017/2102 amending Annex II to Directive 2011/65/EU.

******FOR FURTHER DETAILS, PLEASE REFER TO THE FOLLOWING PAGE(S)******

Producer By : (Betty Liang / Engineer)

Date: Aug. 05, 2022

Authorized Signer : (Corey Mao / Manager)

Date: Aug. 05, 2022

SHENZHEN CCTI TECHNOLOGY CO., LTD. APPROVED

Test Report

Test Method:

A. Screening test by XRF spectroscopy

XRF screening limits in mg/kg for regulated elements according to IEC 62321-3-1:2013.

Element	Limit of IEC 62321-3-1:2013. Unit (mg/kg)		MDL	
	Polymers and Metals	Composite Material	Polymers	Other material
Pb	BL≤(700-3σ) <X <(1300+3σ) ≤OL	BL≤(500-3σ)<X <(1500+3σ) ≤OL	10 mg/kg	50 mg/kg
Cd	BL≤(70-3σ)<X <(130+3σ) ≤OL	LOD≤(50-3σ)<X <(150+3σ) ≤OL	10 mg/kg	50 mg/kg
Hg	BL≤(700-3σ)<X <(1300+3σ) ≤OL	BL≤(500-3σ)<X <(1500+3σ) ≤OL	10 mg/kg	50 mg/kg
Cr	BL≤(700-3σ)< X	BL≤(500-3σ)< X	10 mg/kg	50 mg/kg
Br	BL≤(300-3σ)< X	BL≤(250-3σ)< X	10 mg/kg	50 mg/kg

Note:

-BL = Under the XRF screening limit

-OL = Further chemical test will be conducted while result is above the screening limit

-X= The symbol “X” marks the region where further investigation is necessary

-3σ= The reproducibility of analytical instruments

-LOD= Detection limit

B. Chemical Test

Test Item	Test Method	Test Equipment	MDL	Limit
Lead (Pb)	IEC 62321-5:2013	ICP-OES	2 mg/kg	1000 mg/kg
Cadmium (Cd)	IEC 62321-5:2013	ICP-OES	2 mg/kg	100 mg/kg
Mercury (Hg)	IEC 62321-4:2013+AMD1:2017	ICP-OES	2 mg/kg	1000 mg/kg
Hexavalent Chromium Cr (VI) (Metal)	IEC 62321-7-1:2015	UV-VIS	0.1 μg/cm^2	0.13 μg/cm^2
Hexavalent Chromium Cr (VI) (Nonmetal)	IEC 62321-7-2:2017	UV-VIS	8 mg/kg	1000 mg/kg
Polybrominated Biphenyls (PBBs)	IEC 62321-6:2015	GC-MS	5 mg/kg	1000 mg/kg
Polybrominated Diphenyl Ethers (PBDEs)	IEC 62321-6:2015	GC-MS	5 mg/kg	1000 mg/kg
Phthalates （DBP, BBP, DEHP, DIBP）	IEC 62321-8:2017	GC-MS	50mg/kg	1000 mg/kg

Test Report

Test Result(s):

Sample No.	Sample Description	Tested Items	XRF Screening Test Unit (mg/kg)	Chemical Test Unit (mg/kg)	Conclusion
1	Silver color Metal housing	Pb	BL	/	PASS
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	/	/	
2	Metal Screw	Pb	BL	/	PASS
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	/	/	
3	Silver metal baffle	Pb	BL	/	PASS
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	/	/	
4	Metal insertion hole	Pb	BL	/	PASS
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	/	/	
5	LED light	Pb	BL	/	PASS
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	BL	/	
6	PCB	Pb	BL	/	PASS
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	BL	/	
7	Tin	Pb	BL	/	PASS
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	/	/	

Test Report

Sample No.	Sample Description	Tested Items	XRF Screening Test Unit (mg/kg)	Chemical Test Unit (mg/kg)	Conclusion
8	Chip resistor	Pb	BL	/	PASS
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	BL	/	
9	IC	Pb	BL	/	PASS
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	BL	/	
10	Chip capacitors	Pb	BL	/	PASS
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	BL	/	
11	Capacitance	Pb	BL	/	PASS
		Cd	BL	/	
		Hg	BL	/	
		Cr(Cr(VI))	BL	/	
		Br(PBBs&PBDEs)	BL	/	

Tested Item(s)	Result Unit (mg/kg)					Acceptable Limit Unit (mg/kg)
	1	2	3	4	5	
Di-isobutyl phthalate(DIBP) CAS #:84-69-5	/	/	/	/	N.D.	1000
Dibutyl phthalate(DBP) CAS #:84-74-2	/	/	/	/	N.D.	1000
Benzylbutyl phthalate(BBP) CAS #:85-68-7	/	/	/	/	N.D.	1000
Di-2-ethylhexyl phthalate(DEHP) CAS #:117-81-7	/	/	/	/	N.D.	1000

Test Report

Tested Item(s)	Result Unit (mg/kg)						Acceptable Limit Unit (mg/kg)
	6	7	8	9	10	11	
Di-isobutyl phthalate(DIBP) CAS #:84-69-5	N.D.	/	N.D.	N.D.	N.D.	N.D.	1000
Dibutyl phthalate(DBP) CAS #:84-74-2	N.D.	/	N.D.	N.D.	N.D.	N.D.	1000
Benzylbutyl phthalate(BBP) CAS #:85-68-7	N.D.	/	N.D.	N.D.	N.D.	N.D.	1000
Di-2-ethylhexyl phthalate(DEHP) CAS #:117-81-7	N.D.	/	N.D.	N.D.	N.D.	N.D.	1000

Note:

-MDL = Method Detection Limit

-N.D. = Not Detected (<MDL)

-mg/kg = ppm = parts per million

-Negative = Absence of Cr(VI) , the detected Cr(VI) concentration in the boiling water extraction solution is less than 0.02 mg/kg with 50cm^2 sample surface area used.

-Positive = Presence of Cr(VI), the detected Cr(VI) concentration in the boiling water extraction solution is equal to or greater than 0.02 mg/kg with 50cm^2 sample surface area used.

-#=According to the directive (2011/65/ EU), Lead is exempted as copper alloy containing up to 4% lead by weight.

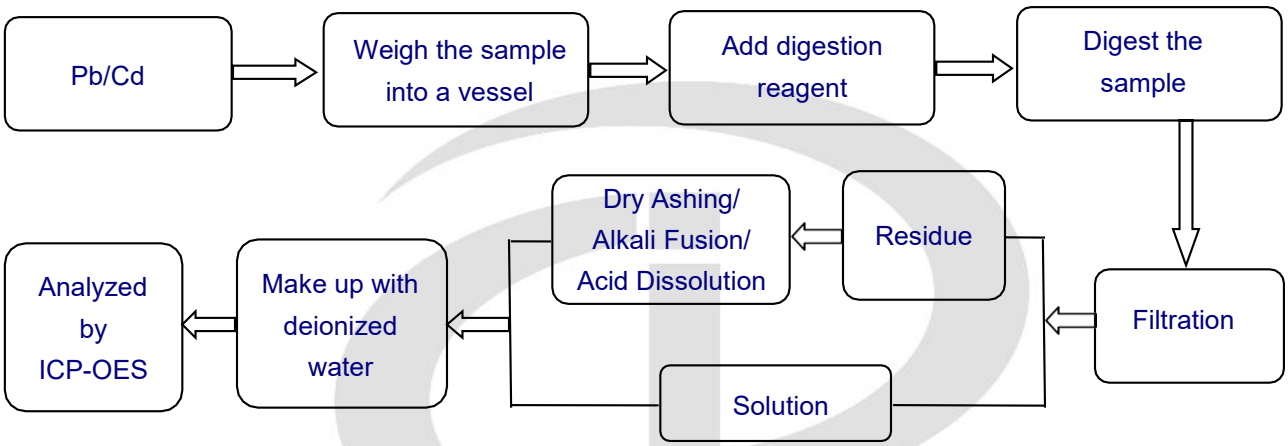
Remark:

- The screening results are only used for reference.
- When conducting the test for PBBs & PBDEs, XRF was introduced to screen Br Exclusively;
- When conducting the test for Hexavalent Chromium, XRF was introduced to screen Chromium exclusively.

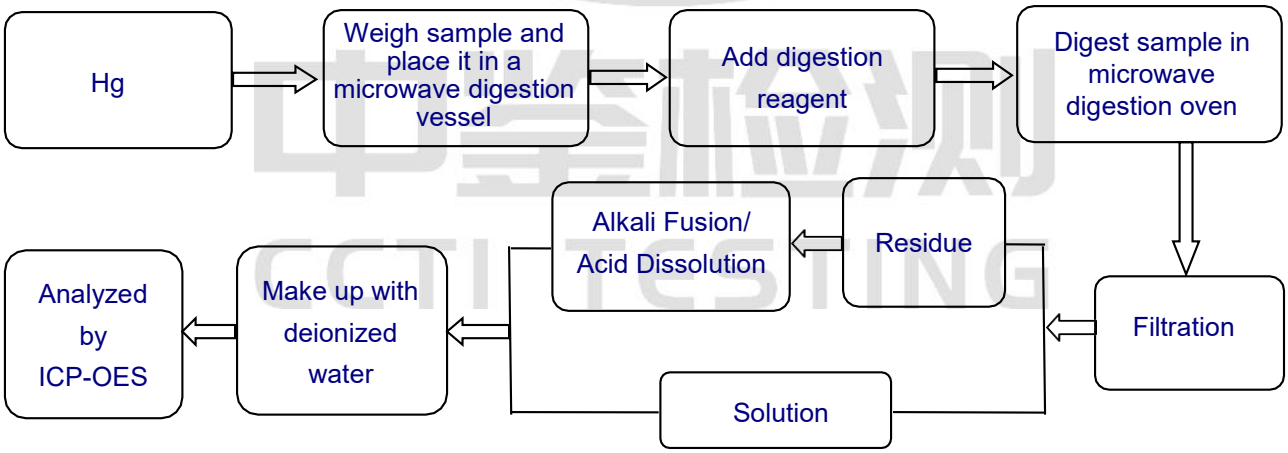
Test Process:

The sample(s) had been dissolved totally tested for Lead, Cadmium, Mercury.

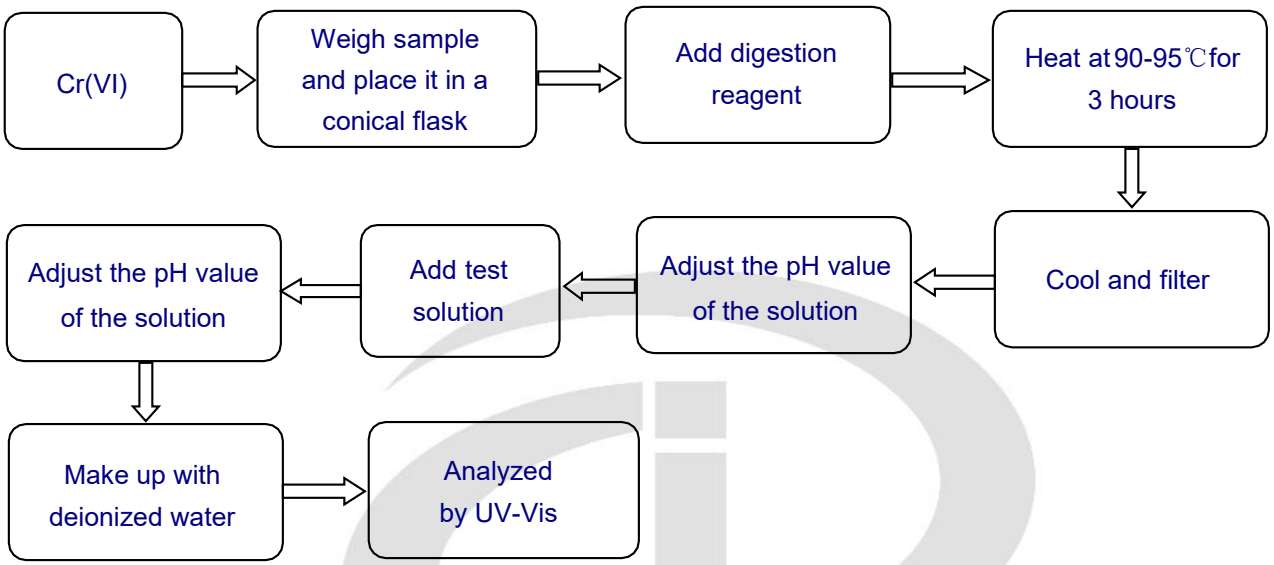
◆ **IEC 62321-5:2013 Ed.1.0**



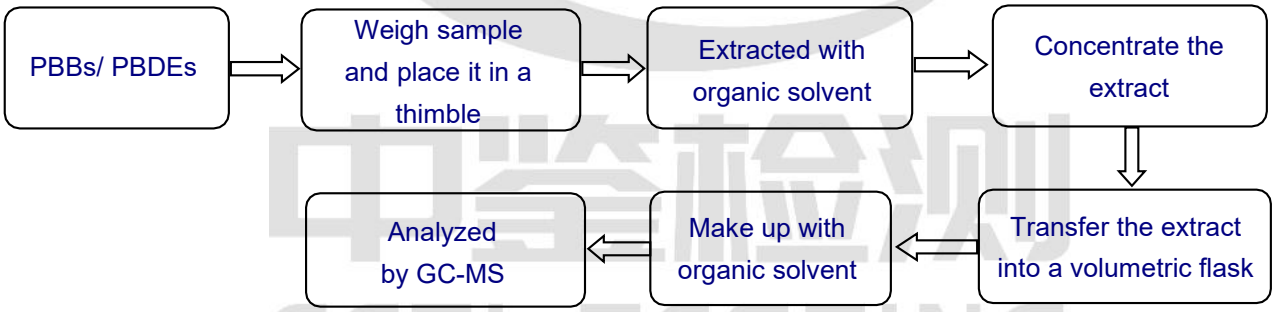
◆ **IEC 62321-4:2013+AMD1:2017 Ed.1.0**



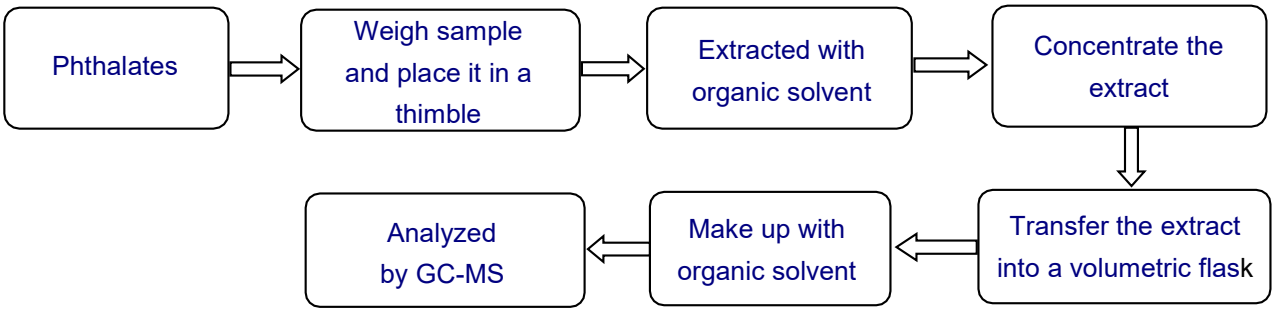
◆ **IEC 62321-7-2:2017 Ed.1.0**



◆ **IEC 62321-6:2015 Ed.1.0**



◆ **IEC 62321-8:2017 Ed.1.0**



Photograph of Sample

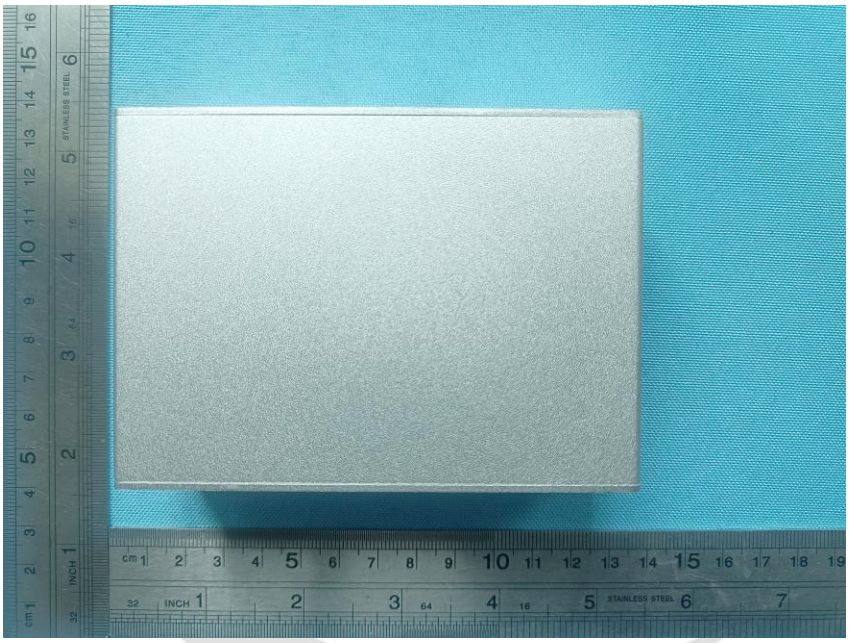


Figure 1

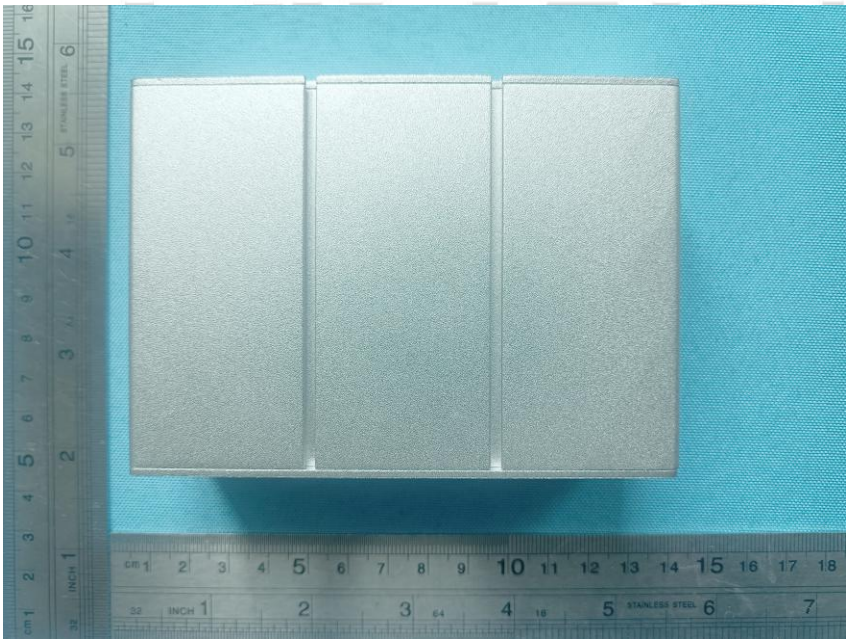


Figure 2

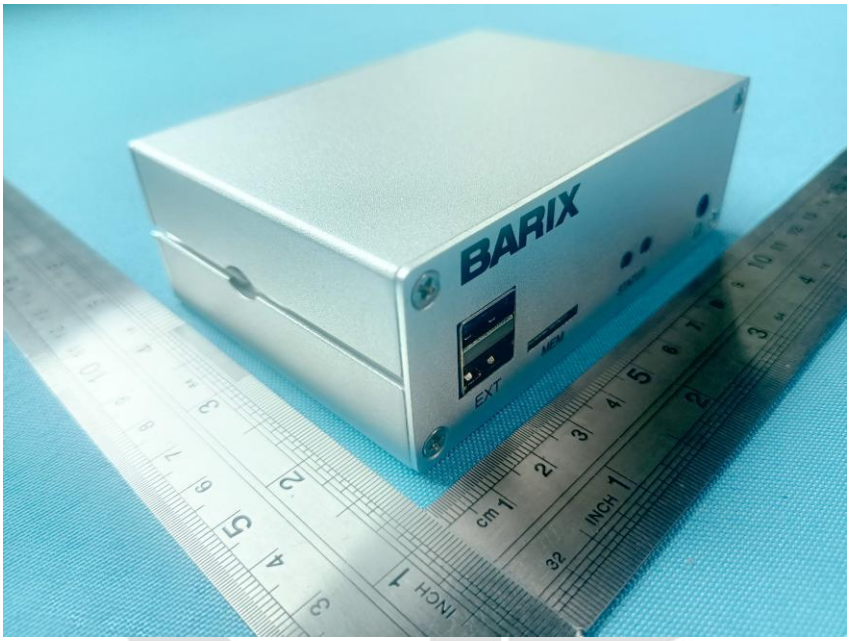


Figure 3

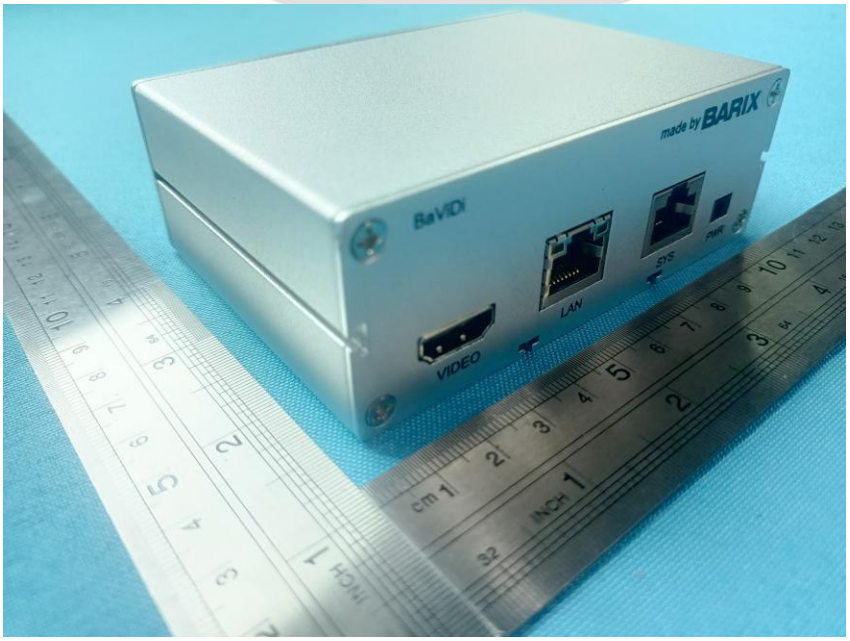


Figure 4

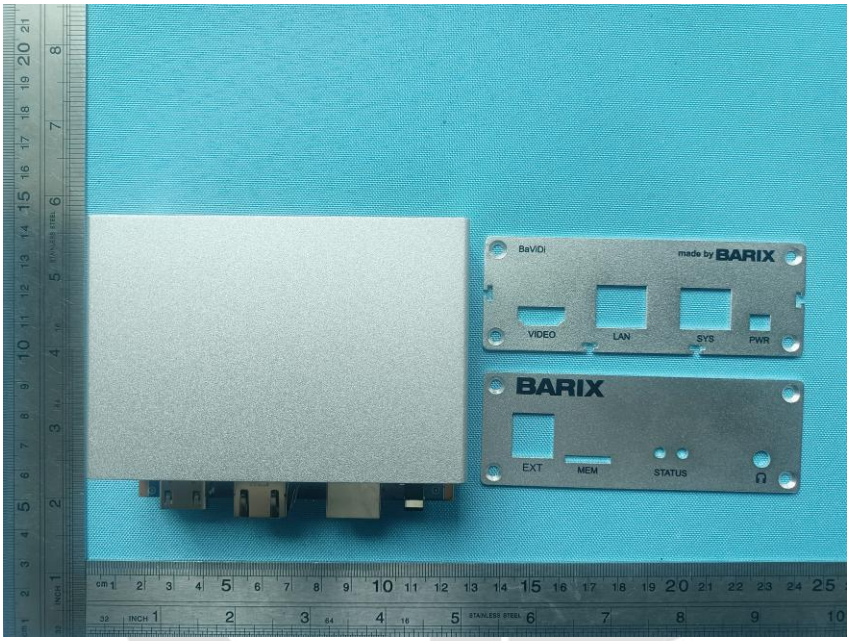


Figure 5

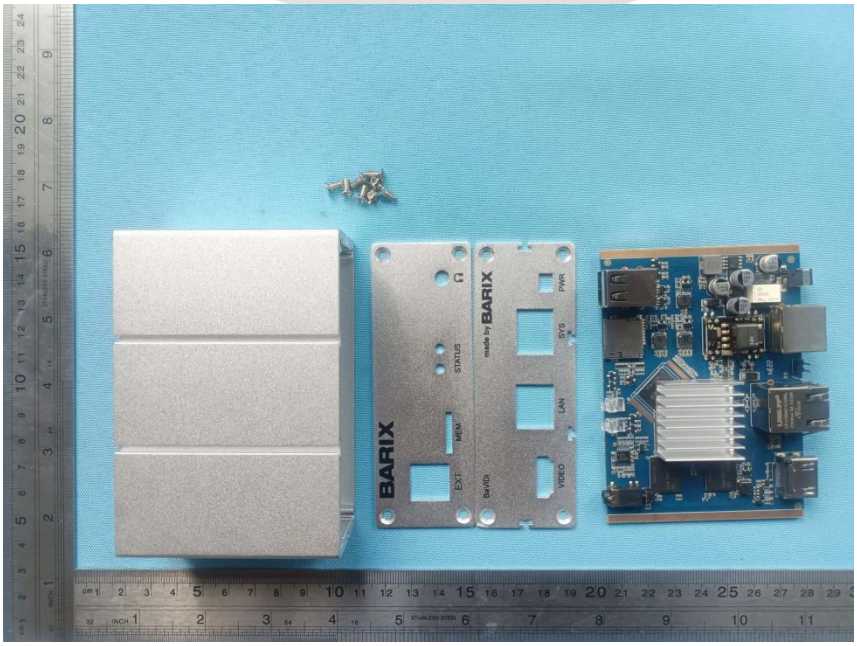


Figure 6

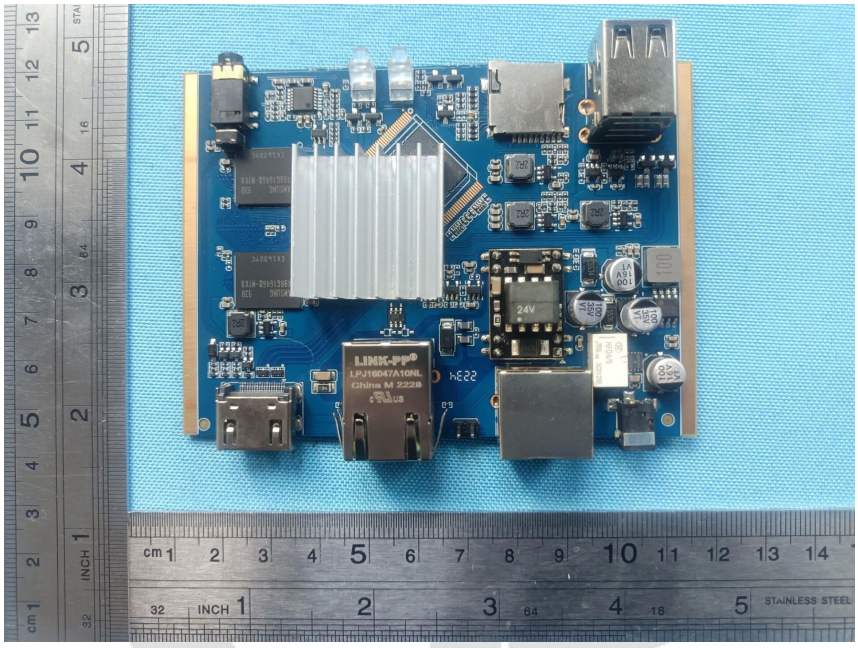


Figure 7

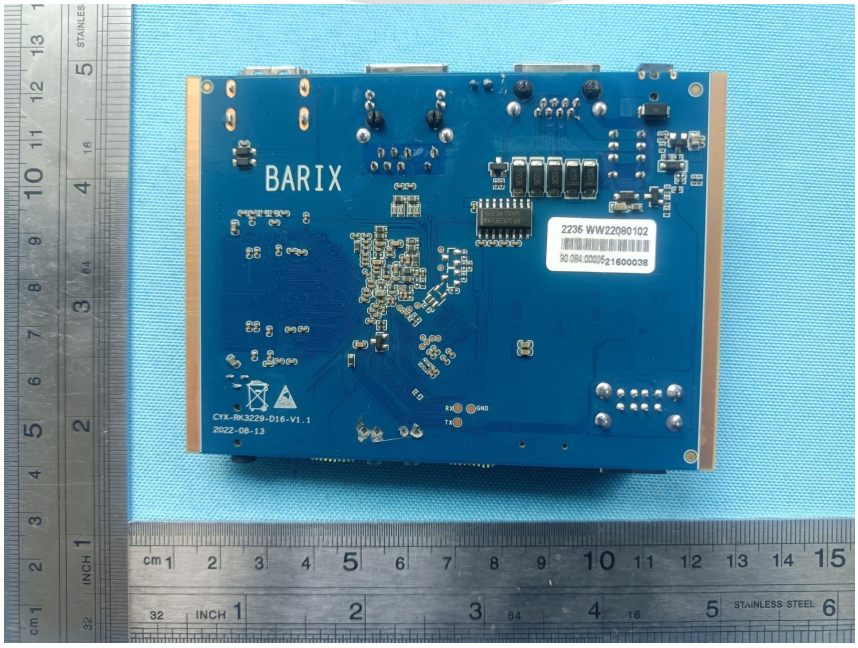


Figure 8

***** End of Report *****