

EPM-880 DVT Function Test Report

Initiated by	Luke Chang	Approved by	Shane GH
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Revision History :

Date	Revision	Description	Creator
2022/12/06	V1.0	DVT DQA testing	Luke Chang

Test Results Definition :

Criteria	Definition
PASS	Test result pass and function work perfectly.
Fail	Test fail or can not meet the spec requirement.
Limitation	There are no plans to fix this erratum.
N/A	Spec not support or driver not ready.
Check Next Version	HW modified circuit and solution 3verified, and check the function result has pass. Need to check next version.

Test Results Summary :

Num.	Test Item	Result	Remark
1	EPD Tags		
1.01	EPM-880	PASS	
2	Stability		
2.01	Stability stress Test	PASS	

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Product Specification :

EPD-320 Specifications

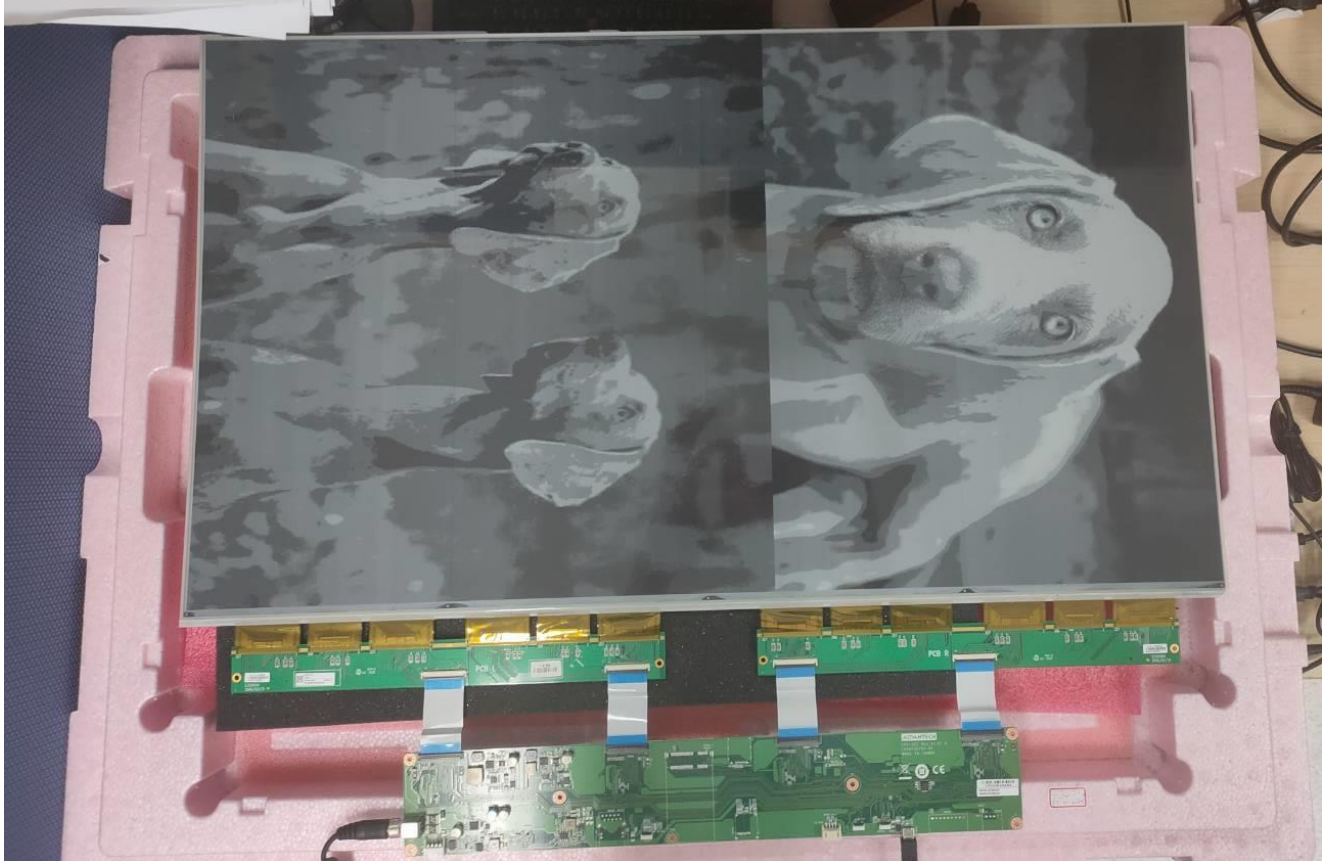
Computing System	MCU	32-bit Arm® Cortex®-M7 480MHz MCUs, 128 KB Flash,	
	Memory	1MB RAM	
Display	Screen Size	697.2(H) × 402.8(V) mm	
	Resolution	2560 x 1440 pixels for 16 gray level 1280 x 720 pixels for 4096 Color filter	
I/O (on-board)	SPI	Factory mode setting	
	Micro USB (CN2)	USB to TCON (Timing Controller)	Interface for data to EPD
	EPD connector	50P for ePaper connector	
Power	DC 12V		
	Power consumption	TBD	
Environment	Operational Temperature	0 – 40 °C (R/B/W) , 0 – 50 °C (B/W)	
	Non-Operational Temp.	-25 – 60 °C (R/B/W) , -25 – 70 °C (B/W)	
	Assembly Temperature	10 – 40 °C	
	Operating Humidity	5 – 85% Relative Humidity, non-condensing	
Housing Mechanical	Material Type	Metal (NCT)	
	Painting Type	SECC+ Painting	
	Dimension	240 x 322 x 60.5 mm/ 240 x 322 x 24 mm	
	Weight	1.3kg	
Physical Characteristics	Dimensions (W x H)	PCBA: 400 x 61mm	
	Weight	TBD	
Operating System		ThreadX v5.6	

EPD-322 Specifications

Processor System	MCU	MIPS OCA 4531 650 MHz Processor	
	RAM	DDR2 128MB	
	Flash	16MB Boot code & 128MB OpenWRT	
Ethernet	WAN	1 x 10/100Mbps for WAN	
	LAN	1 x 10/100Mbps for LAN	
Security		WEP 64 bit, WEP 128bit, WPA, WPA2, WPA+WPA2 (Mixed Mode) Password protected access	
Connectivity	Wifi	IEEE 802.11b/g/n 2T2R	
	4G/LTE		
Expansion	Mini PCIe	1 x full size mini PCIe module	
	I2C	4pin Pin Header	
	USB x2	USB 2.0 & micro USB	
	RJ45 x2	FFC Connector (FFC_GPI0), 10 port GPIO for system expansion	
Power	Power Supply Voltage	12V	
	Power Type	DC-in	
	Power Consumption	2.5 Watt	
Environment	Operational Temperature	0 – 70 °C	
	Non-Operational Temp.	-20– 80 °C	
	Operating Humidity	5% – 95% Relative Humidity, non-condensing	

System Configuration :

Item.	Version	File Name	Description.
ARK-1123	ARK-1123H-U0A2E	ARK-1123H-U0A2E	
OS	Ubuntu 18.04	EPD_ARK1123HA2_U1804_1906	32OSARKE000108
ePaper Manager	v1906	Image build-in	
EPD Portal	1.11.5	ePaper Manager build-in	
EPD Hub	v2.1.2	ePaper Manager build-in	
EPM-880 MCU	E320S00CMV0004	E320S00CMV0004.hex	2080010522



Test Equipment :

Item.	Description.
N/A	N/A

1. EPD Tags

1.01 EPM-880

1.01.01.01 Test Purpose :

To verify the button function is working correctly.

1.01.01.02 Test Tool or Equipment:

1. ARK-1123 as ePaper Manager server
2. EPM-880 as EPD device

1.01.01.03 Testing Configuration:

1. Test environment: Room temperature

1.01.01.04 Test Procedure:

1. Connect tag to ARK-1123
2. Create Template for EPM-880
3. Transmit Image to Tag

1.01.01.05 Test Result:

Item	Criteria	Result	Remark
Tag Refresh-Image Test	No error happened while Tag refresh image	PASS	

2. Stability

2.01 Stability Stress Test

2.01.01.01 Test Purpose :

To verify the TAG function is working properly.

2.01.01.02 Test Tool or Equipment:

1. ARK-1123 as ePaper Manager server
2. EPM-880 as EPD device

2.01.01.03 Testing Configuration:

1. Test environment: Room temperature

2.01.01.04 Test Procedure:

1. Connect tag to ARK-1123
2. Create Template for EPM-880
3. Transmit Image to Tag per hour.

2.01.01.05 Test Result:

Item	Criteria	Result	Remark
Tag Refresh-Image Stress Test	<ol style="list-style-type: none"> 1. Image transfer per hour. 2. Continuous image transmission for 5 days without any abnormal state 	PASS	