ePoster T-CON Board
EJ8951E-4
Product Specification

Issue Date : 2024/7/18

Record of Revision

Version	Date	Page	Desciption
1.00	2021/9/28		First Release
1.01	2021/11/4	9, 10	Add detail connector information for item 3.3/3.4/3.5/3.7
1.02	2024/7/18	4	Add a new feature: wide input voltage range
1.03	2025/12/18	5	Add more power consumption items

INDEX

1. General Information....4
1.1. Introduction....4
1.2. Electrical Characteristics....4
1.3. Power Consumption....5
2. Mechanical Drawing....6
3. Electrical Definition....7
3.1. Panel Data Out [CON6/CON7/CON8/CON9], P-TWO 196033-50041 compatible(50)....7
3.2. USB [CON1], Micro USB....9
3.3. USB [J12], Wafer 5P Pitch=2.0mm, JST S5B-PH-K-S compatible....9
3.4. SPI [J7], Wafer 9P Pitch=2.0mm, JST S9B-PH-K-S compatible....9
3.5. Power Control [J9], Wafer 3P Pitch=2.0mm, JST S3B-PH-K-S compatible....10
3.6. DC-In 12V [DC_12V_J1], DC Jack 5.5mm/2.5mm....10
3.7. DC-In 12V [J1], Wafer 4P Pitch=2.0mm, JST S4B-PH-K-S compatible....10
4. Packing Information....11

1. General Information

1.1. Introduction

EJ8951E-4 is designed for driving Electrical Paper Display with the following features:

- Support EPD panel modules:
  - EINK ED312TT2/ED312TT3
  - EINK EC312TT2
- Two Adjustable LDOs for Source Driver Supply
  - LDO1: 15V, 2000mV at VIN=12V (VPOS)
  - LDO2: -15V, 800mV at VIN=12V (VNEG)
- Adjustable VCOM Driver for Accurate Panel Backplane Biasing 0V to -5.11V
- External IO
  - Micro USB x 1
  - USB (Wafer 5P, Pitch=2.0mm) x 1
  - Power Control (Wafer 3P, Pitch=2.0mm) x 1
  - SPI (Wafer 6P, Pitch=2.0mm) x 1
  - DC-in 12V x 1
  - DC-in 12V (Wafer 4P, Pitch=2.0mm) x1
- Wide Input Voltage Range: 9V-14.0V (Type. 12V)
- Working Temperature: -15°C-70°C
- Dimension: 400mm x 65 mm
- Weight: 120 g

1.2. Electrical Characteristics

Item	Symbol	Min	Max	I
Power Supply	Vs	9V	14V	
Panel Power	LDO1	+14.25V	+15.0V	2000mA
	LDO2	-15.0V	-14.25V	800mA
	VCOM	-3.0V	0V	1700mA
	CP1	+21.0V	+23.0V	2000mA
	CP2	-21.0V	-19.0V	600mA

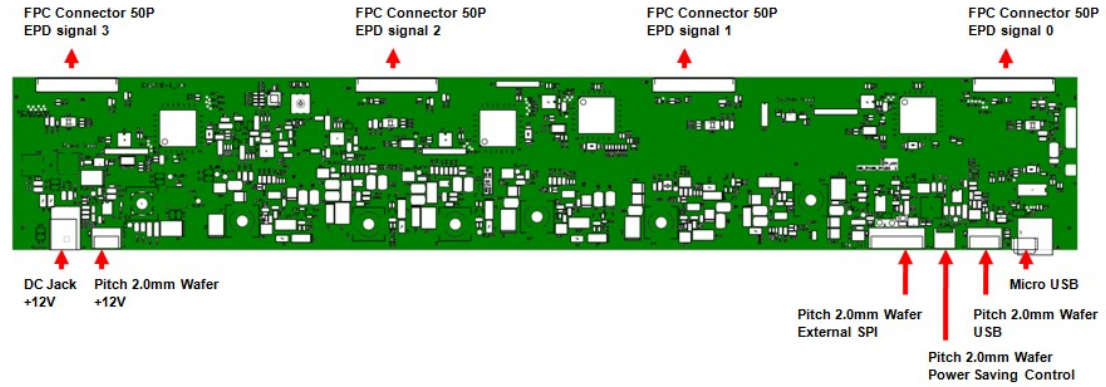
1.3. Power Consumption

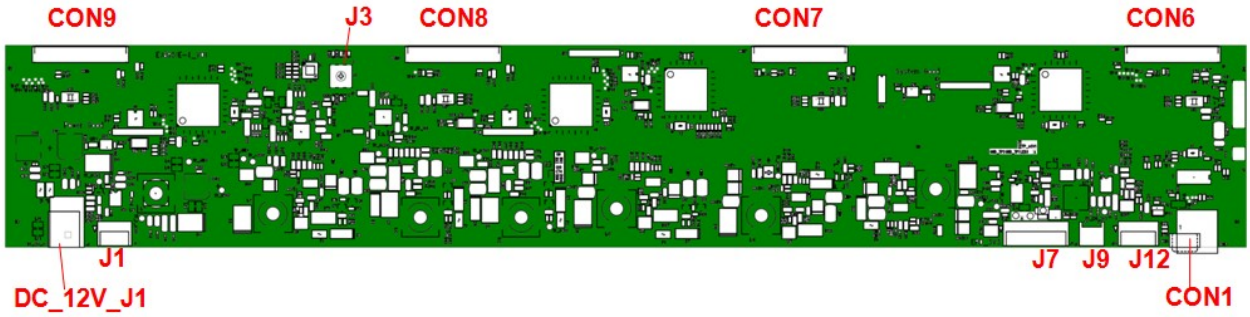
Item	Typ.	Unit	Remark
Operation	2.2	W	12V
Standby (PMIC ON)	2.1	W	12V
Standby (PMIC OFF)	1.8	W	12V
POWER OFF(*)	7.5	mW	12V

* 'POWER OFF' happens when PIN1 of Power Control Connector[J9] is enabled. (find the definition of J9 here)

2. Mechanical Drawing

EJ8951E-4





3. Electrical Definition

3.1. Panel Data Out [CON6/CON7/CON8/CON9], P-TWO 196033-50041 compatible(50)

PIN	SIGNAL	DESCRIPTION
1	VGL	Negative power supply gate driver
2	NC	-
3	VGH	Positive power supply gate driver
4	MODE2	Output mode selection gate driver
5	VDD	Digital power supply driver
6	MODE1	Output mode selection gate driver
7	CKV	Clock gate driver
8	STV	Start pulse gate driver
9	VSS	Ground
10	VCOM_TFT	Common voltage
11	VDD	Digital power supply driver
12	VSS	Ground
13	XCL	Clock source driver
14	D0	Data signal source driver
15	D1	Data signal source driver
16	D2	Data signal source driver
17	D3	Data signal source driver
18	D4	Data signal source driver
19	D5	Data signal source driver
20	D6	Data signal source driver
21	D7	Data signal source driver
22	VSS	Ground
23	D8	Data signal source driver
24	D9	Data signal source driver
25	D10	Data signal source driver
26	D11	Data signal source driver
27	D12	Data signal source driver
28	D13	Data signal source driver
29	D14	Data signal source driver
30	D15	Data signal source driver

31	XSLT	Start pulse source driver
32	XLE	Latch enable source driver
33	XOE	Output enable source driver
34	ISEL	L: Input data bus width is 8-bit i.e. D0-D7 are enabled
35	NC	-
36	VPOS	Positive power supply source driver
37	NC	-
38	VNEG	Negative power supply source driver
39	VCOM_FPL	Common voltage
40	NC	-
41	STV2	Start pulse gate driver
42	G640	Detect IC function
43	S400	Detect IC function
44	S320	Detect IC function
45	NC	-
46	G640	Detect IC function
47	S400	Detect IC function
48	S320	Detect IC function
49	NC	-
50	STL2	Data shift start pulse

3.2. USB [CON1], Micro USB

PIN	FUNCTION
1	+5V
2	D+
3	D-
4	GND

3.3. USB [J12], Wafer 5P Pitch=2.0mm, JST S5B-PH-K-S compatible

PIN	FUNCTION
1	+5V
2	D+
3	D-
4	GND
5	NC

3.4. SPI [J7], Wafer 9P Pitch=2.0mm, JST S9B-PH-K-S compatible

PIN	FUNCTION
1	SPI_CS0#
2	SPI_CS1#
3	SPI_CS2#
4	SPI_CS3#
5	SCK
6	MOSI
7	MISO
8	HRDY
9	GND

3.5. Power Control [J9], Wafer 3P Pitch=2.0mm, JST S3B-PH-K-S compatible

PIN	FUNCTION
1	5V_SW (HIGH: Power OFF, LOW: Power ON)
2	RESET
3	GND

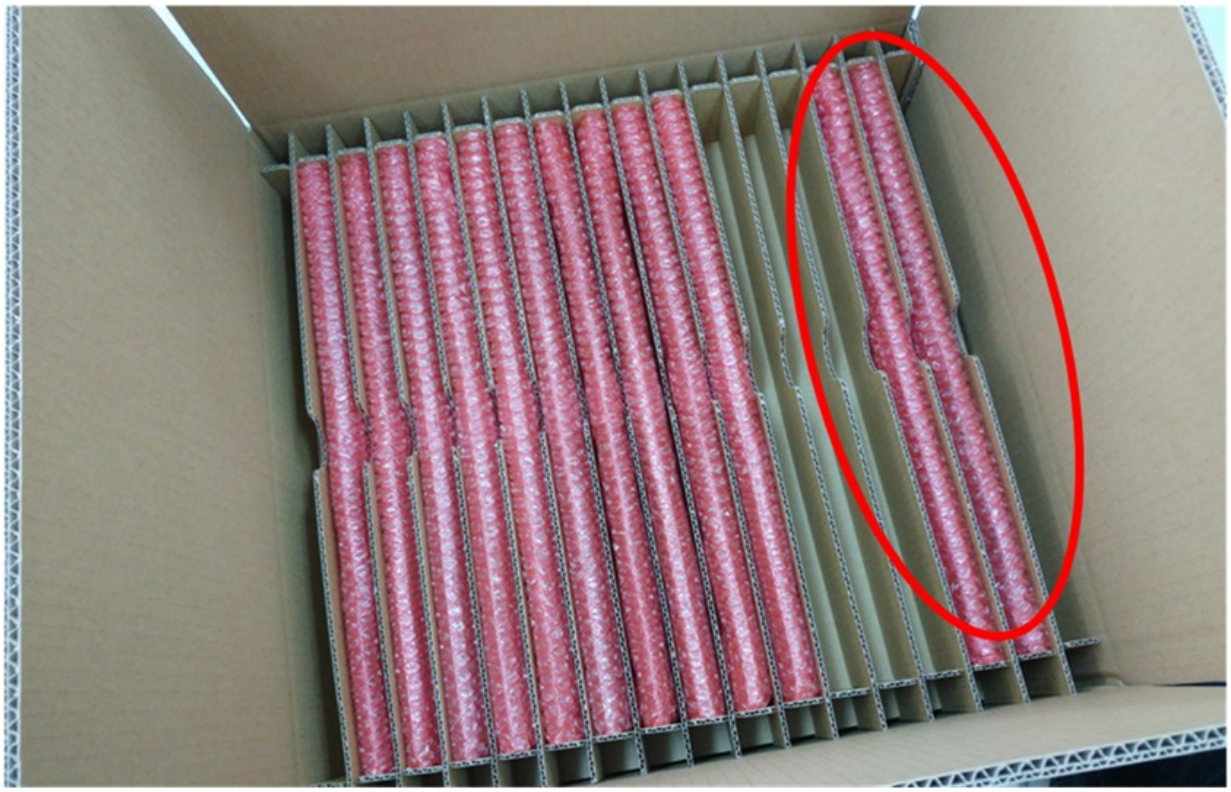
3.6. DC-In 12V [DC_12V_J1], DC Jack 5.5mm/2.5mm

PIN	FUNCTION
1	DC 12V
2	GND

3.7. DC-In 12V [J1], Wafer 4P Pitch=2.0mm, JST S4B-PH-K-S compatible

PIN	FUNCTION
1	DC 12V
2	DC 12V
3	GND
4	GND

4. Packing Information

Packing Size: 54cm(L)x54cm(W)x20cm(H)/Box

Q'ty: 30 pcs. (15 pcs./Layer, 2 Layer/Box)