

FR-E2L

(eDP to LVDS dualCH CONN.)

Quick Install Guide (QIG) Preliminary

Feature:

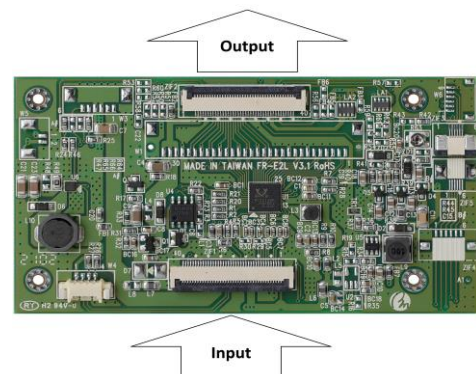
- (Input): eDP (2Lane) signals with ZIF-30/40P connector.
- (Output): LVDS (Single/Dual Port) with DF14-30S/ZIF-40P connector.
- 2-Lane DisplayPort™ receiver speed up to 1.62/2.7Gbps per Lane.
 - Support AUX channel and HPD detection.
 - Support LVDS VESA format, DE mode, Res. up to 1920x1080 via dual port.
 - Support LVDS Spread-Spectrum clock to reduce EMI.
 - Optional AVDD,VGH,VGL,VCOM circuit within the ZIF output connector.
 - Optional Inner backlight driver.

Ordering Information: Part Number: FR-e2Lxyabmn

- X : Define Main Power(PWR-IN), Backlight Power (BL-VCC) and Panel Power (PNL-VDD).

<u>X</u>	PWR-IN	BL-VCC	PNL-VDD
0	3.3V	5V	2.8V
1	3.3V	5V	3.3V
2	5V	12V	5V
3	5V	12V	12V

- Y : The Input Connector Selection
 - 3 Input Connector (ZIF-30P).
 - 4 Input Connector (ZIF-40P).
- a : The LVDS Output Connector Selection
 - W DF14-30P.
 - Z ZIF-40P/0.5mm/Down contact.
 - D ZIF-40P/0.5mm/Dual contact.



- b : The LVDS Output Pin Assignment Version
 - A A version.
 - B B version.
- mn : The BL and Touch Connector.

Pin Assignment:

1 . Input Interface

eDP Input Connector(ZIF1): ZIF-30P/40P			
Pin num	Description	Pin num	Description
Pin1 (*)	PWR-IN (3.3V/5V)	Pin2	GND
Pin3	EDP_TX1N	Pin4	EDP_TX1P
Pin5	GND	Pin6	EDP_TX0N
Pin7	EDP_TX0P	Pin8	GND
Pin9	EDPAUXP	Pin10	EDPAUXN
Pin11	GND	Pin12 (*)	PWR-IN (3.3V/5V)
Pin13 (*)	PWR-IN (3.3V/5V)	Pin14 (*)	PWR-IN (3.3V/5V)
Pin15	GND	Pin16	GND
Pin17	HPD	Pin18	GND
Pin19	GND	Pin20	GND
Pin21	GND	Pin22	NC
Pin23	BL-PWM-In (logical 3.3V)	Pin24	NC
Pin25	NC	Pin26 (*)	BL-VCC (input)
Pin27 (*)	BL-VCC (input)	Pin28 (*)	BL-VCC (input)
Pin29 (*)	BL-VCC (input)	Pin30	NC
Pin31(**)	NC	Pin32(**)	NC
Pin33(**)	Touch_GND	Pin34(**)	NC
Pin35(**)	Reserved for Touch_PWR_IN	Pin36(**)	NC
Pin37(**)	Reserved for Touch_SCL/(D+)	Pin38(**)	Reserved for Touch_SDA/(D-)
Pin39(**)	Reserved for Touch_INT(3.3V)	Pin40(**)	Reserved for Touch_RST(3.3V)

(*). The power source of PWR-IN and BL-VCC, definition refer to *Table-1*.

(**).These pins only available for ZIF-40P model (FR-e2Lx4Zxx).

2 . Backlight Control Signals Output Interface

Backlight Output Connector(W3): Wafer-6P-1.25mm			
Pin num	Description	Pin num	Description
Pin1,2	BL-VCC, wired to pin26,27,28,29 of the eDP input connector(ZIF1)		
Pin3	GND	Pin4	GND
Pin5	BL-EN (active high,3.3V)	Pin6	BL-PWM-Out (3.3V)

3 . Touch Signals Extension Connectors

Over the touch signals extension connectors to make a connection between touch panel and HOST.

Touch Signals Extension Connector (ZIF3/W6) Option: (ZIF3): ZIF-6P-0.5mm (W6): Wafer-6P-1.25mm			
Pin num	Description	Pin num	Description
Pin1	(PWR)Wired to pin35 of ZIF1	Pin2	(RST)Wired to pin40 of ZIF1
Pin3	(INT)Wired to pin39 of ZIF1	Pin4(***)	(SCL/D+)Wired to pin37 of ZIF1
Pin5(***)	(SDA/D-)Wired to pin38 of ZIF1	Pin6	GND

(***) .These pins can be I2C(SCL/SDA) or USB(D+/D-).

4 . The LVDS output Interface(W1):

LVDS Output Connector(W1): DF14-30P			
Pin num	Description	Pin num	Description
Pin1	TXE3+	Pin2	TXE3-
Pin3	TXEC+	Pin4	TXEC-
Pin5	TXE2+	Pin6	TXE2-
Pin7	GND	Pin8	TXE1+
Pin9	TXE1-	Pin10	GND
Pin11	TXE0+	Pin12	TXE0-
Pin13	TXO3+	Pin14	TXO3-
Pin15	GND	Pin16	TXOC+
Pin17	TXOC-	Pin18	GND
Pin19	TXO2+	Pin20	TXO2-
Pin21	GND	Pin22	TXO1+
Pin23	TXO1-	Pin24	GND
Pin25	TXO0+	Pin26	TXO0-
Pin27	GND	Pin28 (***)	PNL-VDD
Pin29 (***)	PNL-VDD	Pin30 (***)	PNL-VDD

(***) . The PNL-VDD power source setting, refer to *Table-1*.

5 . The optional LVDS output interface(ZIF2) with pin multiplexing:

(Available FR-e2Lx"4Z"xx only)

To know detail about the most of pin multiplexing within ZIF2, don't hesitate to contact your sales person, asking a help to check if ZIF2 is suitable with customer's LCM panel interface.

LVDS Output Connector(ZIF2): ZIF-40P/0.5mm/Down contact			
Pin num	Description	Pin num	Description
Pin1	Vcom/ NC	Pin2	PNL-VDD
Pin3	PNL-VDD	Pin4	PNL-VDD/ NC
Pin5	Reset/ NC	Pin6	NC
Pin7	NC	Pin8	TX0-
Pin9	TX0+	Pin10	GND
Pin11	TX1-	Pin12	TX1+
Pin13	GND	Pin14	TX2-
Pin15	TX2+	Pin16	GND
Pin17	TXCLK-	Pin18	TXCLK+
Pin19	GND	Pin20	TX3-
Pin21	TX3+	Pin22	GND
Pin23	GND	Pin24	GND
Pin25	GND	Pin26	NC
Pin27	BL_PWM_IN/ NC	Pin28	68 SEL/ BL-EN/ NC
Pin29	AVDD/ BL_EN/ GND/ NC	Pin30	PNL-VDD
Pin31	LED_Cathode/_Anode/NC	Pin32	LED_Cathode/_Anode/NC
Pin33	LED_Cathode/_Anode/NC	Pin34	GND/ NC
Pin35	VGL/ PULL_H/ BL_PWM/ NC	Pin36	BL_EN/ NC
Pin37	GND	Pin38	VGH/ LED_Anode/ NC
Pin39	LED_Anode/ NC	Pin40	LED_Anode/ NC

6 . Inner Backlight Driver Output Interface (Option)

The (max.) driving capability of inner Backlight driver is 3.5W and only available while the BL-VCC power is DC-5V as well.

The output of backlight driver is reserved on connectors W5 and ZIF1-40p.

Backlight Output Connector(W5): Wafer-2P-1.25mm			
Pin num	Description	Pin num	Description
Pin1	LED_Cathode	Pin2	LED_Anode

Dimension: 51.5mm (w) x 93.5mm(L) x 5.3mm(H)

