

## FAQ / Application Note

### Subject : How to confirm LVDS driving signal

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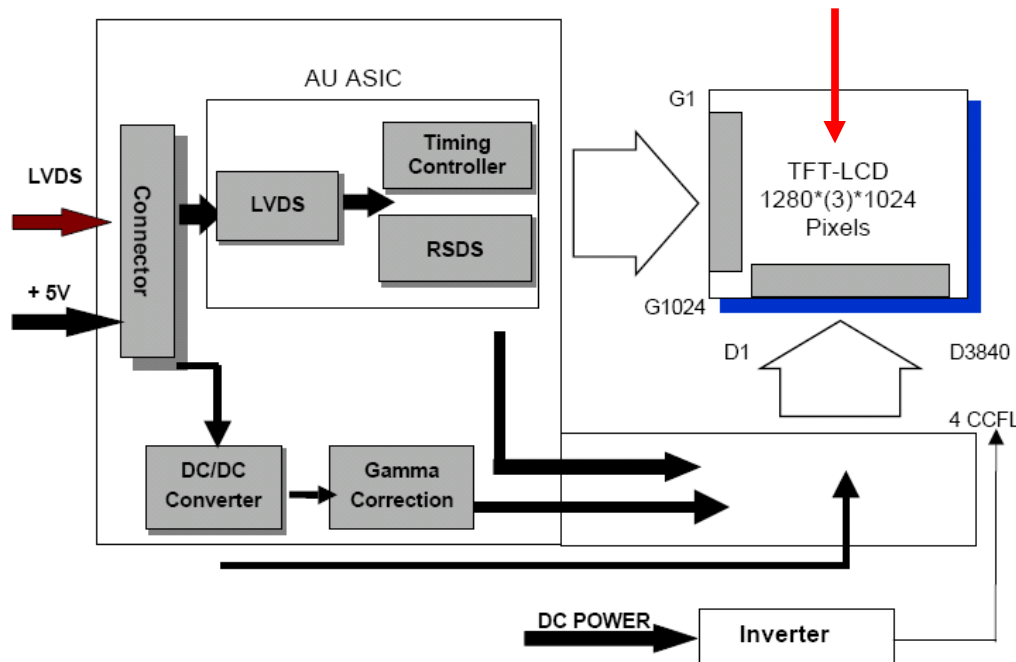
Model Name. ALL

Rev. A1

Category:  General  H/W  S/W  Others, Display

Purpose : Get LCD Resolution and Color depth from LCD datasheet.

### 1. Resolution: Pixels H x V



FI-XB30SRL-HF11 / MDF76LBRW-30S-1H

JST-BHSR-02VS-1

Mating Type: JAE FI-X30C2L / HRS MDF76G-30P-1SD

SM02(4.0)B-BHS-1-TB

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**2. Color Depth : 18bits, 24bits, 36bits (18bits x2), 48bit (24bits x2)**

**2.1 18bits LVDS Pin define: RxIN0+/-, RxIN1+/-, RxIN2+/-, RxCLK+/-**

**(I) Input signal interface**

	<b>Symbol</b>	<b>Function</b>
1	V <sub>CC</sub>	+3.3 V power supply
2	V <sub>CC</sub>	+3.3 V power supply
3	GND	Ground
4	GND	Ground
5	RxIN0-	LVDS receiver signal channel 0
6	RxIN0+	
7	GND	Ground
8	RxIN1-	LVDS receiver signal channel 1
9	RxIN1+	
10	GND	Ground
11	RxIN2-	LVDS receiver signal channel 2
12	RxIN2+	
13	GND	Ground
14	CKIN-	LVDS receiver signal clock
15	CKIN+	
16	GND	Ground
17	NC	No Connection
18	NC	No Connection
19	GND	Ground
20	GND	Ground

CN1 (20P) connector : HRS DF 19K-20P-1H or compatible

## 2.2 24bits LVDS Pin define: RxIN0+/-, RxIN1+/-, RxIN2+/-, RxIN3+/-, RxCLK+/-

- LCD connector (CN1): DF-14H-20P-1.25H (Hirose) or equivalent
- LVDS Transmitter : DS90C385 (N.S.) or THC63LVDM83A (THINE) or equivalent

Pin No.	Symbol	Function
1	VDD	Power Supply +3.3V
2	VDD	Power Supply +3.3V
3	GND	Power Ground
4	GND	Power Ground
5	Rx0-	- LVDS Receiver Signal (R0-R5, G0)
6	Rx0+	+ LVDS Receiver Signal (R0-R5, G0)
7	GND	Ground
8	Rx1-	- LVDS Receiver Signal (G0-G5, B0-B1)
9	Rx1+	+ LVDS Receiver Signal (G0-G5, B0-B1)
10	GND	Ground
11	Rx2-	- LVDS Receiver Signal (B2-B5, HS, VS, DE)
12	Rx2+	+ LVDS Receiver Signal (B2-B5, HS, VS, DE)
13	GND	Ground
14	RxCLK2-	- LVDS Receiver Clock Signal
15	RxCLK2+	+ LVDS Receiver Clock Signal
16	GND	Ground
17	Rx3-	- LVDS Receiver Signal (R6-R7, G6-G7, B6-B7)
18	Rx3+	+ LVDS Receiver Signal (R6-R7, G6-G7, B6-B7)
19	GND	Ground
20	NC	Reserved

### 2.3 36bits (18bits x2) LVDS Pin define:

- RAXIN0+/-, RAXIN1+/-, RAXIN2+/-, RAXCLK+/-
- RBXIN0+/-, RBXIN1+/-, RBXIN2+/-, RBXCLK+/-

Pin	Symbol	Description	Polarity
1	Vss	Ground	
2	Vcc	Power Supply +3.3 V (typical)	
3	Vcc	Power Supply +3.3 V (typical)	
4	V <sub>EDID</sub>	DDC 3.3V Power	
5	Vcc	Power Supply +3.3 V (typical)	
6	CLK <sub>EDID</sub>	DDC Clock	
7	DATA <sub>EDID</sub>	DDC Data	
8	RXO0-	LVDS Differential Data Input (Odd)	Negative
9	RXO0+	LVDS Differential Data Input (Odd)	Positive
10	Vss	Ground	
11	RXO1-	LVDS Differential Data Input (Odd)	Negative
12	RXO1+	LVDS Differential Data Input (Odd)	Positive
13	Vss	Ground	
14	RXO2-	LVDS Differential Data Input (Odd)	Negative
15	RXO2+	LVDS Differential Data Input (Odd)	Positive
16	Vss	Ground	
17	RXOC-	LVDS Clock Data Input (Odd)	Negative
18	RXOC+	LVDS Clock Data Input (Odd)	Positive
19	Vss	Ground	
20	RxE0-	LVDS Differential Data Input (Even)	Negative
21	RxE0+	LVDS Differential Data Input (Even)	Positive
22	Vss	Ground	
23	RxE1-	LVDS Differential Data Input (Even)	Negative
24	RxE1+	LVDS Differential Data Input (Even)	Positive
25	Vss	Ground	
26	RxE2-	LVDS Differential Data Input (Even)	Negative
27	RxE2+	LVDS Differential Data Input (Even)	Positive
28	Vss	Ground	
29	RXEC-	LVDS Clock Data Input (Even)	Negative
30	RXEC+	LVDS Clock Data Input (Even)	Positive
31	VFB1	LED Cathode (Negative)	
32	VFB2	LED Cathode (Negative)	
33	VFB3	LED Cathode (Negative)	
34	VFB4	LED Cathode (Negative)	
35	VFB5	LED Cathode (Negative)	
36	VFB6	LED Cathode (Negative)	
37	NC	Non-Connection	
38	Vdc	LED Annd (Positive)	
39	Vdc	LED Annd (Positive)	
40	Vdc	LED Annd (Positive)	

Note (1) Connector Part No.: FI-JH40S-HF10 or equivalent

## 2.4 48bit (24bits x2) LVDS Pin define:

- RAXIN0+/-, RAXIN1+/-, RAXIN2+/-, RAXIN3+/-, RAXCLK+/-
- RBXIN0+/-, RBXIN1+/-, RBXIN2+/-, RBXIN3+/-, RBXCLK+/-

Pin No.	Symbol	Function	Polarity
0	GND	Ground	
1	RxEIN0-	LVDS Even Channel 0	Negative
2	RxEIN0+	LVDS Even Channel 0	Positive
3	RxEIN1-	LVDS Even Channel 1	Negative
4	RxEIN1+	LVDS Even Channel 1	Positive
5	RxEIN2-	LVDS Even Channel 2	Negative
6	RxEIN2+	LVDS Even Channel 2	Positive
7	GND	Ground	
8	RxECLKIN-	LVDS Even Channel CLK	Negative
9	RxECLKIN+	LVDS Even Channel CLK	Positive
10	RxEIN3-	LVDS Even Channel 3	Negative
11	RxEIN3+	LVDS Even Channel 3	Positive
12	RxOIN0-	LVDS Odd Channel 0	Negative
13	RxOIN0+	LVDS Odd Channel 0	Positive
14	GND	Ground	
15	RxOIN1-	LVDS Odd Channel 1	Negative
16	RxOIN1+	LVDS Odd Channel 1	Positive
17	GND	Ground	
18	RxOIN2-	LVDS Odd Channel 2	Negative
19	RxOIN2+	LVDS Odd Channel 2	Positive
20	RxOCLKIN-	LVDS Odd Channel CLK	Negative
21	RxOCLKIN+	LVDS Odd Channel CLK	Positive
22	RxOIN3-	LVDS Odd Channel 3	Negative
23	RxOIN3+	LVDS Odd Channel 3	Positive
24	GND	Ground	
25	NC	NC	
26	NC	NC	
27	NC	NC	
28	POWER	+12V	
29	POWER	+12V	
30	POWER	+12V	
31	GND	Ground	

-END

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