FRC BOARD

HI-FRC CN

Specifications

Approval

Rev. 02

Issue Date. 2018. 07. 05

Doc No. FRC CN BOARD 01

Note | Specification is subject to change without notice.
Conseuently it is better to contact to our company before proceeding with the design of your product incorporating this board

Prepared	Checked Ⅰ	Checked Ⅱ	Approved
			
KB. PARK			YH. HAN

DISPLAY
High Quality Display Solution
(주)하이디스플레이 | 경기도 군포시 공단로140번길 52, 610/611호 (당정동, 에이스하이테크시티군포)
HIDISPLAY Co., Ltd. #610/611, ACE-Gunpo, 52, Gongdan-ro140beon-gil, Gunpo-si, Gyeonggi-do, Korea
T +82. 31. 478. 8142 F +82. 31. 601. 9081 E pys1538@hi-display.co.kr H www.hidisplay.co.kr

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Revision History

Rev.	ECN No.	Description of Changes	Date	Prepared
0		Initial Release	2017.11. 15	KB. PARK
1		BOARD Release	2018.01.10	KB. PARK
2		BOARD Release	2018.07.05	KB. PARK

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1. General Specification

No.	Item	Description		
1	Model Name	HI-FRC CN		
2	LCD Module	LVDS 1920x1080 @120Hz		
3	Input	FULL HD 1920X1080		
4	Resolution Support	H: 31 ~ 80kH		
		V: 55 ~ 76Hz		
6	Power Consumption	Supply Voltage	12Vdc	
		Power	4.0 Watt	Board Only
7	Board Size	W x H x D(mm)	90 x 85 x 13	

2. ELECTRICAL SPECIFICATION

2.1. Input characteristic

Description	Signal	Unit	Min	Typical	Max	Remarks
Power In (12Vdc)						
	Input	12VDC	11.4	12	12.6	
	Consumption	Watt		4.0 Wat		Board Only
LVDS Input						
	Differential Input	Vp-p (mV)	250	350	450	Differential +/-

2.2. Output characteristic

Description	Signal	Unit	Min	Typical	Max	Remarks
LVDS Interface						
	Differential output	Vp-p (mV)	250	350	450	Differential +/-

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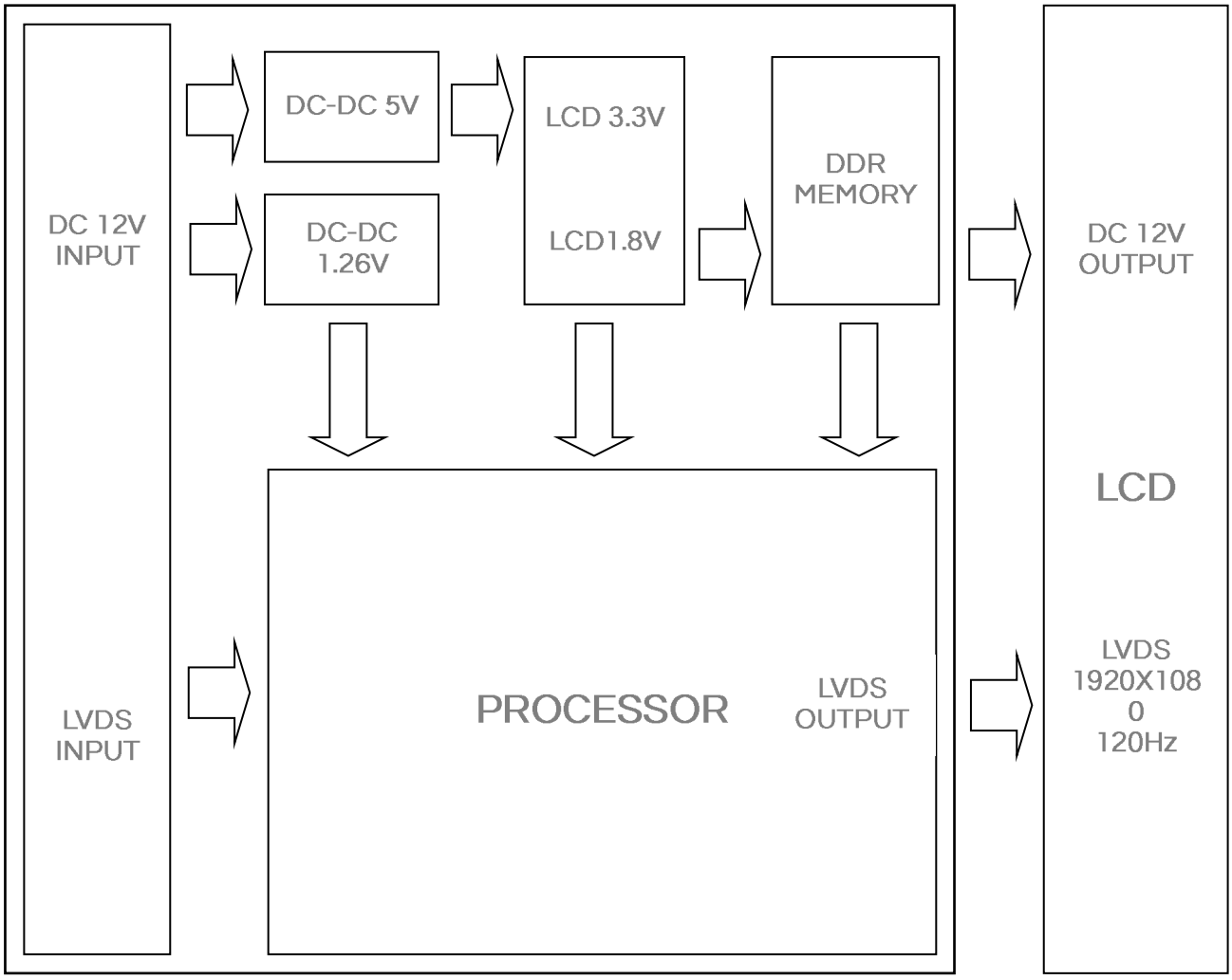
3. FUNCTIONAL BLOCK DIAGRAM



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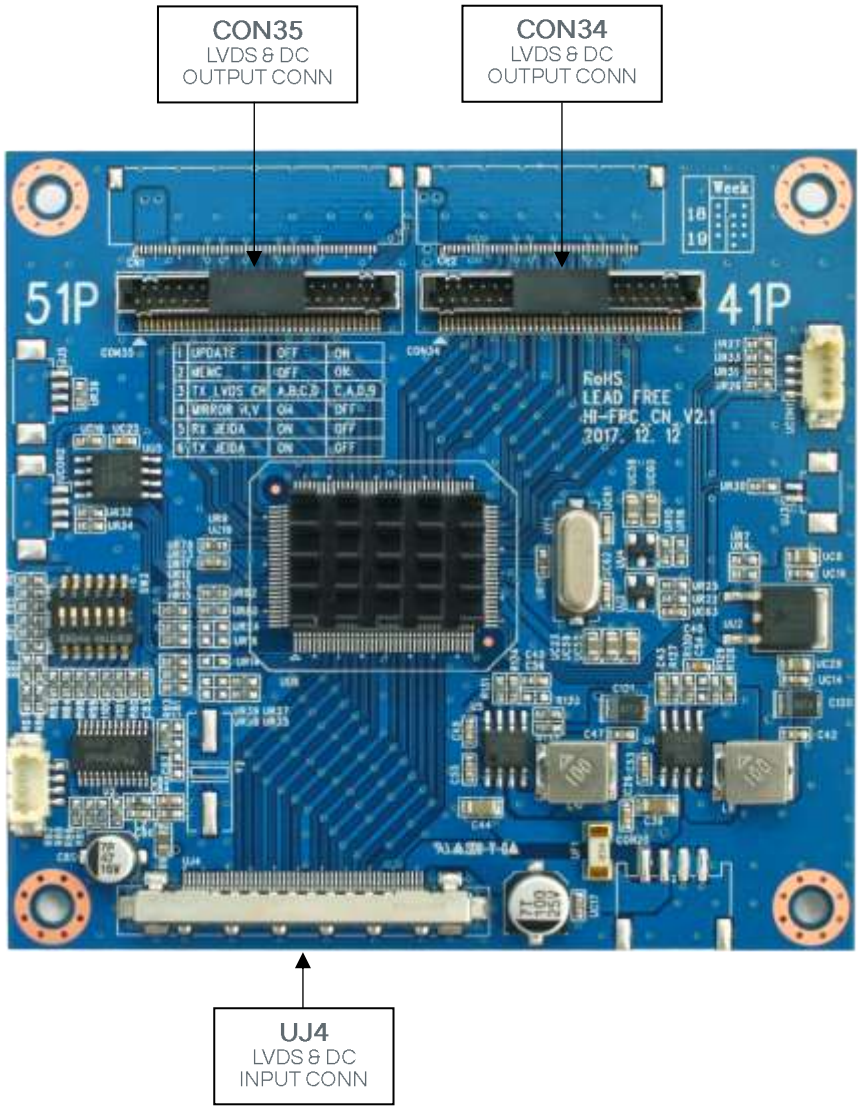
4. CONNECTOR, PINOUT & JUMPERS

The various connectors are:



Summary:

Reference	Item	Description	Type	Manufacture
UJ4	Connector	LVDS & DC INPUT CONNECTOR	FI-RE51S-HF	-
CON34	Connector	LVDS & DC OUTPUT CONNECTOR	FW12501-41A	FOOSUNG-
CON35	Connector	LVDS & DC OUTPUT CONNECTOR	FW12501-41A	FOOSUNG-

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UJ4: LVDS & DC INPUT CONNECTOR

Pin No.	Symbol	Description
1	GND	Ground
2,3	NC	No connector
4,5	NC	No connector
6,7	NC	No connector
8,9	NC	No connector
10	NC	No connector
11	GND	Ground
12	RXO0-	RX ODD 0 N
13	RXO0+	RX ODD 0 P
14	RXO1-	RX ODD 1 N
15	RXO1+	RX ODD 1 P
16	RXO2-	RX ODD 2 N
17	RXO2+	RX ODD 2 P
18	GND	Ground
19	RXOC-	RX ODD CLK N
20	RXOC+	RX ODD CLK P
21	GND	Ground
22	RXO3-	RX ODD 3 N
23	RXO3+	RX ODD 3 P
24	RXO4-	RX ODD 4 N
25	RXO4+	RX ODD 4 P
26	GND	Ground
27	OPTIN	Option Input
28	RXE0-	RX EVEN 0 N
29	RXE0+	RX EVEN 0 P
30	RXE1-	RX EVEN 1 N
31	RXE1+	RX EVEN 1 P
32	RXE2-	RX EVEN 2 N
33	RXE2+	RX EVEN 2 P
34	GND	Ground
35	RXEC-	RX EVEN CLK N
36	RXEC+	RX EVEN CLK P
37	GND	Ground
38	RXE1-	RX EVEN 3 N
39	RXE1+	RX EVEN 3 P
40	RXE2-	RX EVEN 4 N
41	RXE2+	RX EVEN 4 P
42	GND	Ground
43,44	NC	No connector
45,46	NC	No connector
47	NC	No connector
48,49	12V	POWER INPUT 12V
50,51	12V	POWER INPUT 12V

CON34: LVDS & DC OUTPUT CONNECTOR

Pin No.	Symbol	Description
1,2	NC	No connector
3	NC	No connector
4	C0M	C Channel 0 Minus
5	C0P	C Channel 0 Plus
6	C1M	C Channel 1 Minus
7	C1P	C Channel 1 Plus
8	C2M	C Channel 2 Minus
9	C2P	C Channel 2 Plus
10	GND	Ground
11	CCKM	C Channel CLK Minus
12	CCKP	C Channel CLK Plus
13	GND	Ground
14	C3M	C Channel 3 Minus
15	C3P	C Channel 3 Plus
16	C4M	C Channel 4 Minus
17	C4P	C Channel 4 Plus
18	GND	Ground
19	GND	Ground
20	D0M	D Channel 0 Minus
21	D0P	D Channel 0 Plus
22	D1M	D Channel 1 Minus
23	D1P	D Channel 1 Plus
24	D2M	D Channel 2 Minus
26	GND	Ground
27	DCKM	D Channel CLK Minus
28	DCKP	D Channel CLK Plus
29	GND	Ground
30	D3M	D Channel 3 Minus
31	D3P	D Channel 3 Plus
32	D4M	D Channel 4 Minus
33	D4P	D Channel 4 Plus
34	GND	Ground
35	GND	Ground
36	VCC3.3V	VCC3.3V
37	OPTION	OPTION
38,39	12V	POWER OUTPUT 12V
40,41	12V	POWER OUTPUT 12V

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CON35: LVDS & DC OUTPUT CONNECTOR

Pin No.	Symbol	Description
1,2	NC	No connector
3	NC	No connector
4	A0M	A Channel 0 Minus
5	A0P	A Channel 0 Plus
6	A1M	A Channel 1 Minus
7	A1P	A Channel 1 Plus
8	A2M	A Channel 2 Minus
9	A2P	A Channel 2 Plus
10	GND	Ground
11	ACKM	A Channel CLK Minus
12	ACKP	A Channel CLK Plus
13	GND	Ground
14	A3M	A Channel 3 Minus
15	A3P	A Channel 3 Plus
16	A4M	A Channel 4 Minus
17	A4P	A Channel 4 Plus
18	GND	Ground
19	GND	Ground
20	B0M	B Channel 0 Minus
21	B0P	B Channel 0 Plus
22	B1M	B Channel 1 Minus
23	B1P	B Channel 1 Plus
24	B2M	B Channel 2 Minus
26	GND	Ground
27	BCKM	B Channel CLK Minus
28	BCKP	B Channel CLK Plus
29	GND	Ground
30	B3M	B Channel 3 Minus
31	B3P	B Channel 3 Plus
32	B4M	B Channel 4 Minus
33	B4P	B Channel 4 Plus
34	GND	Ground
35	GND	Ground
36	VCC3.3V	VCC3.3V
37	OPTION	OPTION
38,39	12V	POWER OUTPUT 12V
40,41	12V	POWER OUTPUT 12V

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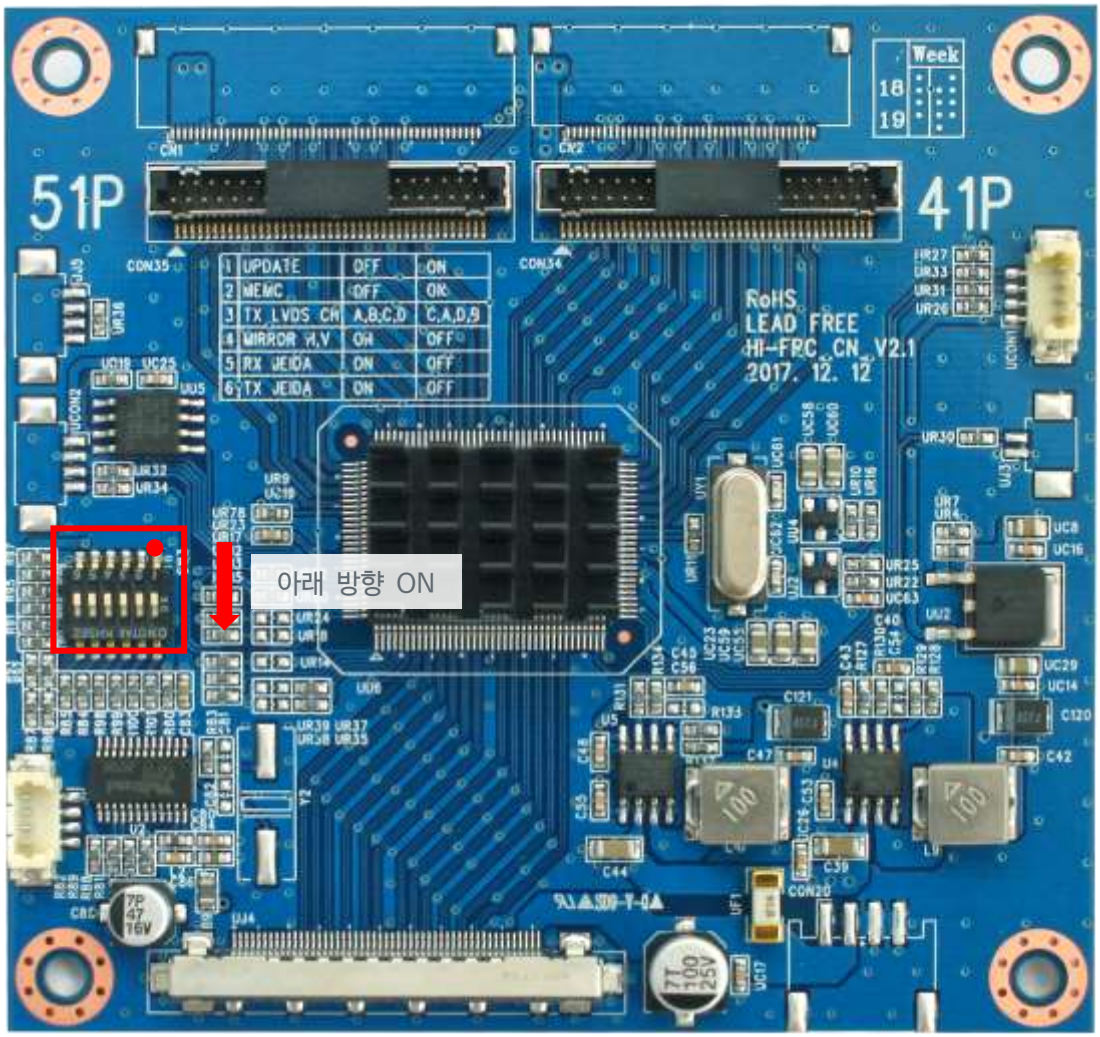
5. FRC CN PIN Control



※ 빨간 점 표기 부분이 1 PIN

Pin No.	Symbol	Description	
1	UPDATE	ON	Main IC UPDATE 시 사용 관리자 모드 핀
2	MEMC		화면 모션 기능 ON/OFF 시 사용
3	TX LVDS CH	OFF	A, B, C, D (신형 삼성, LG PANEL 사용)
		ON	C, A, D,B (구형 삼성 PANEL 사용)
4	MIRROR	ON	화면 180도 회전
5	RX JEIDA	ON	LVDS FORMAT 삼성 JEIDA 입력
		OFF	LVDS FORMAT 삼성 외 TI 입력
6	TX JEIDA	ON	LVDS FORMAT 삼성 JEIDA 출력
		OFF	LVDS FORMAT 삼성 외 TI 출력

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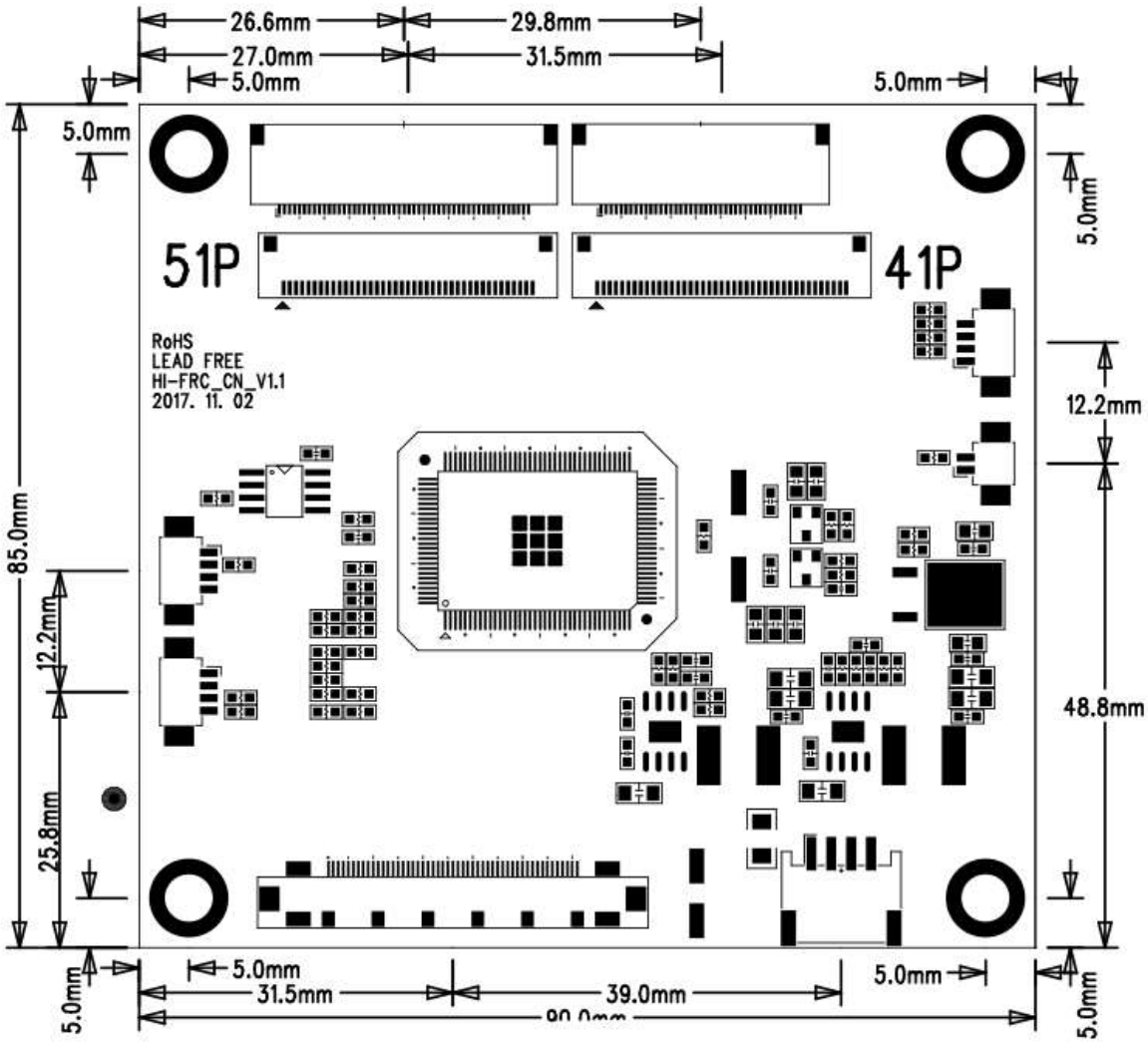
5. CONTROLLER DIMENSIONS



DIMENSION DOWNLOAD