

# LVDS-05 Module – Easy Guide for Your Easy Use

Rev 1.0

VIA LVDS-05 is a 24-bit LVDS module designed for the EPIA Mini-iTX series mainboards to support LCD panel displays. Models that comply are EPIA-M, EPIA-MII EPIA-CL, EPIA-TC, EPIA-PD and EPIA-MS.

## ● Specifications

- ✦ LVDS Transmitter Chip: VIA VT1631 - includes programmable dithering to support 24-bit and panel
- ✦ Single channel support, with resolutions up to 1024 x 768
- ✦ Connector pin-definitions and jumper settings

### 1. Signal connector (LVDS\_PANEL) pin definition

PIN	SIGNAL	PIN	SIGNAL
1	A4M (Differential signal)	2	PVDD (+3.3V/+5V)
3	A4P (Differential signal)	4	PVDD (+3.3V/+5V)
5	GND	6	GND
7	A5M (Differential signal)	8	GND
9	A5P (Differential signal)	10	A0M (Differential signal)
11	GND	12	A0P (Differential signal)
13	A6M (Differential signal)	14	GND
15	A6P (Differential signal)	16	A1M (Differential signal)
17	GND	18	A1P (Differential signal)
19	CLK2M (Differential signal)	20	GND
21	CLK2P (Differential signal)	22	A2M (Differential signal)
23	GND	24	A2P (Differential signal)
25	A7M (Differential signal)	26	GND
27	A7P (Differential signal)	28	CLK1M (Differential signal)
29	NC	30	CLK1P (Differential signal)
31	NC	32	GND
33	NC	34	A3M (Differential signal)
35	NC	36	A3P (Differential signal)
37	NC	38	SPCLK
39	NC	40	SPDAT

### 2. Inverter connector (INVERTER\_CONN) pin definition

PIN	SIGNAL	PIN	SIGNAL
1	IVDD (+12V/+5V)	2	IVDD (+12V/+5V)
3	BLON (Backlight ON)	4	NC
5	BLON (Backlight ON)	6	NC
7	GND	8	GND

3. CLE266 FPD pin connection with VT1631 pin list

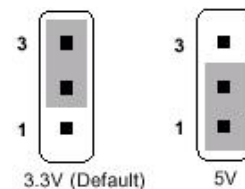
CLE266 PIN	VT1631 LVDS-04	SIGNAL LVDS-05	CLE266 PIN	VT1631 LVDS-04	SIGNAL LVDS-05
FPD0	D0	D2	FPD12	D12	D14
FPD1	D1	D3	FPD13	D13	D15
FPD2	D2	D4	FPD14	D14	D8
FPD3	D3	D5	FPD15	D15	D9
FPD4	D4	D6	FPD16	D16	D18
FPD5	D5	D7	FPD17	D17	D19
FPD6	D6	D0	FPD18	D18	D20
FPD7	D7	D1	FPD19	D19	D21
FPD8	D8	D10	FPD20	D20	D22
FPD9	D9	D11	FPD21	D21	D23
FPD10	D10	D12	FPD22	D22	D16
FPD11	D11	D13	FPD23	D23	D17

Note: LVDS-04 is for LSB 18-bit LVDS panel and LVDS-05 is for 24-bit LVDS panel.

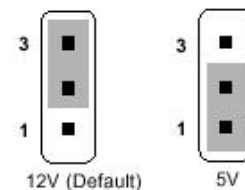
4. Jumper settings

**NOTE: Wrong voltage settings may damage your panel or inverter.**

(1) PVDD\_SEL: Set to 3.3V or 5V to match the voltage required by the LCD



(2) IVDD\_SEL: Set to 5V or 12V to match the voltage required by the inverter



⊕ Approved LCD Panels

- Sanyo 190SX70N01D\_1
- Sanyo TM150XG-26L10C
- LG Philips LM170E01
- LG-Philips LM150X06
- Samsung LTM150XH-L01



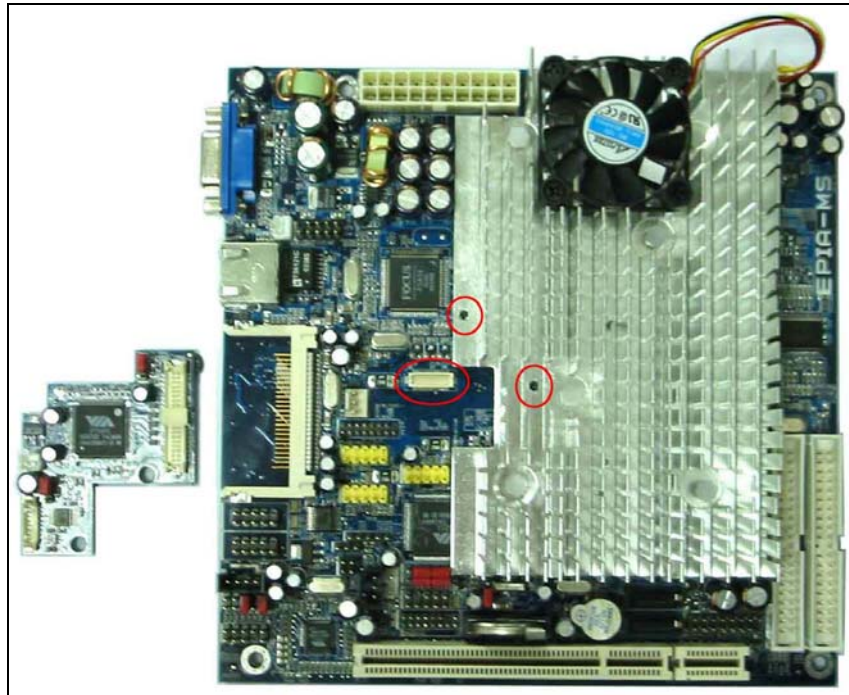
● **Assembly instructions**

✦ In the LVDS-05 package, you will find:

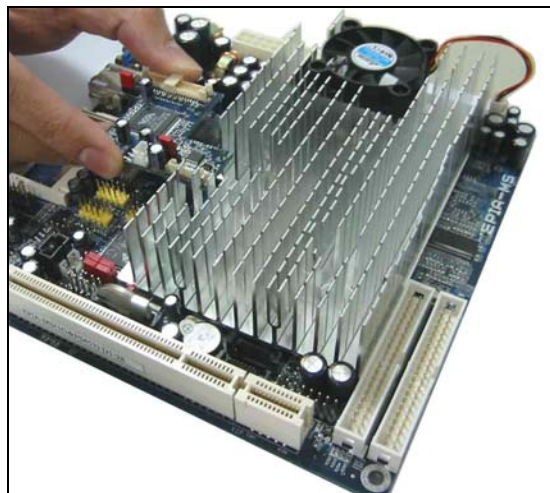
- (1) LVDS-05 module x 1
- (2) Screws x 2
- (3) Washers x 2
- (4) Power cable for panel x 1
- (5) LVDS-05 Easy Guide x 1
- (6) Rubber Footpad on PCB x 1

✦ The following assembly instructions are based on the EPIA-MS Mini-iTX mainboard. For EPIA-M, EPIA-CL, EPIA-TC, EPIA-MII and EPIA-PD, the relative screw positions are the same.

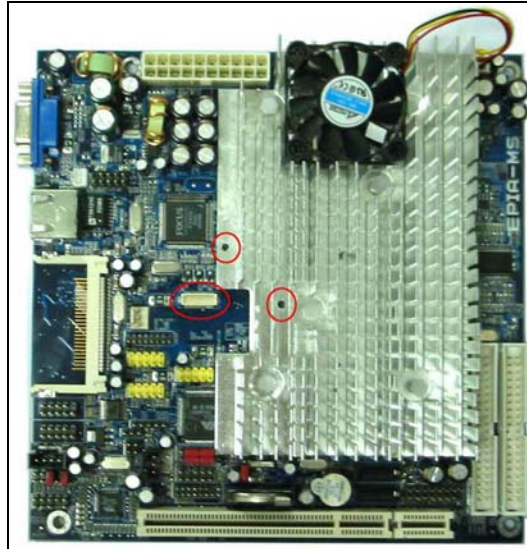
1. EPIA-MS mini-itx motherboard and LVDS-05 module



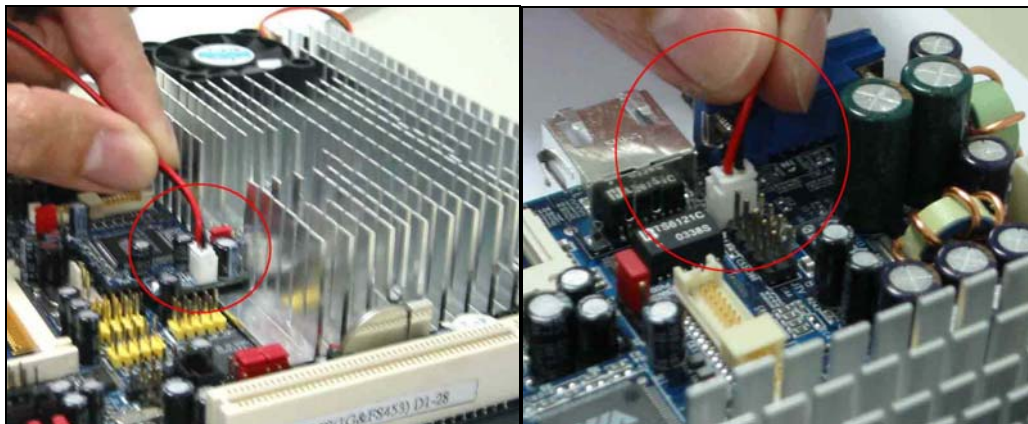
2. Line up the screw-fixing holes of the LVDS-05 module with the screw-fixing holes on the Dual heatsink. The screw-fixing holes and LVDS connector are indicated by red circles above.



3. Fix the screws to the indicated holes. For each hole, add a washer in between the module and the heatsink.



4. Connect the panel power cable, one side onto the LVDS-05 (+12V\_CONN) and the other side onto the PWR FAN connector on the motherboard.



5. Done! Now your EPIA-MS mini-iTX motherboard supports LVDS.

