

➤ **KAB-ADAPT-LVDS to TTL**

Document Revision 1.0



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1. User Information

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Before contacting Kontron Embedded Modules GmbH technical support, please consult our Web site at www.kontron.com/FPC for the latest product documentation, utilities, and drivers. If the information does not help solve the problem, contact us by telephone or email.

Asia	Europe	North/South America
Kontron Asia Inc.	Kontron Embedded Modules GmbH	Kontron America
4F, No.415, Ti-Ding Blvd., NeiHu District, Taipei 114, Taiwan	Brunnwiesenstr. 16 94469 Deggendorf – Germany	14118 Stowe Drive Poway, CA 92064-7147
Tel: +886 2 2799 2789	Tel: +49 (0) 991-37024-0	Tel: +1 (888) 294 4558
Fax: + 886 2 2799 7399	Fax: +49 (0) 991-37024-333	Fax: +1 (858) 677 0898
mailto:sales@kontron.com.tw	mailto:sales-kem@kontron.com	mailto:sales@us-kontron.com

2. Introduction

2.1 KAB-ADAPT-LVDStoTTL

KAB-ADAPT-LVDStoTTL is converter from JILI30 interface to FELX32 System. KAB-ADAPT-LVDStoTTL is used to connect VGA/SVGA panels to Kontron Embedded Modules flat panel controllers (aFLAT-, uFLAT-, new MOPS-Series) with JILI30 interface.

2.2 FLEX32 Family

FLEX32 is a Kontron hardware standard that interfaces the host computer system via TTL (18-Bit) to flat-panel displays.

2.3 JILI30 Family

JILI30 (**J**umpte**c** **I**ntelligent **L**VDS **I**nterface) is a Kontron hardware standard that interfaces the host computer system via LVDS to flat-panel displays. The target displays are usually medium- to high-resolution TFT displays with parallel (CMOS, non-LVDS) interfaces.

3. Specifications

3.1 Mechanical Specifications

3.1.1 Cable lengthens

- 300mm ±10mm

3.1.2 Module Dimensions (PCB)

- 45x 35 mm

3.1.3 Weight

- 20 g

3.2 Electrical Specifications

3.2.1 Supply Voltage

- 5 V DC $\pm 5\%$

3.2.2 Supply Voltage

- 500 mV peak to peak 0 – 20 MHz

3.2.3 Supply Current

- See Datasheet from Panel

3.2.4 Panel Current

- Maximum current: 600mA

3.3 Environmental Specifications

3.3.1 Temperature

4. Operating (with appropriate airflow):

- Maximum operating temperature: 0 to +60 °C (*)

5. Non operating: -10 to +85 °C

Note:

(*) The maximum operating temperature is the maximum measurable temperature on any spot on a module's surface. You must maintain the temperature according to the above specification.

5.1.1 Humidity

- Operating: 10% to 90% (non condensing)
- Non operating: 5% to 95% (non condensing)

6. Connector

6.1 FLEX32 Contacts.

Flatfoil connector, Right Angle, Bottom Contact, 0.5 mm pitch, 32 contacts.

Pin	Signal Name	Function
1	GND	Power Gound
2	DCLK	Data Clock
3	LP	Latch Pulse
4	FLM	First Line Marker
5	GND	Power Gound
6	R0	Panel Data R0
7	R1	Panel Data R1
8	R2	Panel Data R2
9	R3	Panel Data R3
10	R4	Panel Data R4
11	R5	Panel Data R5
12	GND	Power Gound
13	G0	Panel Data G0
14	G1	Panel Data G1
15	G2	Panel Data G2
16	G3	Panel Data G3
17	G4	Panel Data G4
18	G5	Panel Data G5
19	GND	Power Gound
20	B0	Panel Data B0
21	B1	Panel Data B1
22	B2	Panel Data B2
23	B3	Panel Data B3
24	B4	Panel Data B4
25	B5	Panel Data B5
26	GND	Power Gound
27	DE	Data Enable
28	PANELVCC	Panel Power
29	PANELVCC	Panel Power
30	R/L	Not connected
31	U/D	Not connected
32	VGA/QVGA	Not connected

6.2 JILI30 Connector

Connector single row, 1.00mm pitch, 30 contacts (JAE, FI-X30S-HF or equivalent).

Pin	Signal Name	Function
1	FTX0-	First Transmitter Signal 0-
2	FTX0+	First Transmitter Signal 0+
3	FTX1-	First Transmitter Signal 1-
4	FTX1+	First Transmitter Signal 1+
5	FTX2-	First Transmitter Signal 2-
6	FTX2+	First Transmitter Signal 2+
7	GND	Power Gound
8	FTXC-	First Transmitter Clock Signal
9	FTXC+	First Transmitter Clock Signal
10	NC	Not connected
11	NC	Not connected
12	NC	Not connected
13	NC	Not connected
14	GND	Power Gound
15	NC	Not connected
16	NC	Not connected
17	GND	Power Gound
18	NC	Not connected
19	NC	Not connected
20	NC	Not connected
21	NC	Not connected
22	NC	Not connected
23	NC	Not connected
24	GND	Power Gound
25	NC	Not connected
26	PPWR	Data Enable
27	NC	Not connected
28	VCC	+5V Power Input
29	VCC	+5V Power Input
30	VCC	+5V Power Input

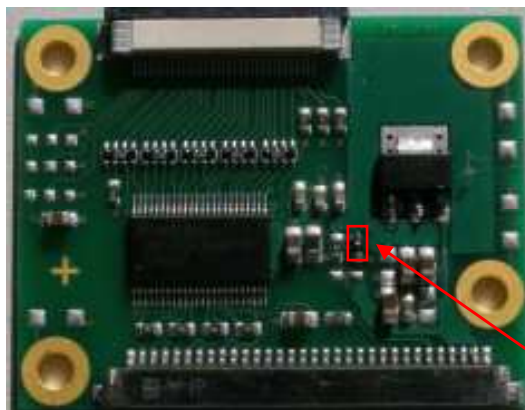
7. Configuration

Caution! The supply voltage (+5V) of the KAB-ADAPT-LVDS to TTL must be configured on the flat panel controller. See the technical manual of the specific controller.

7.1 3,3V Panel Power

R3 open, R4 short

Caution! Never short R3 and R4 at the same time! This will cause damage to the system!

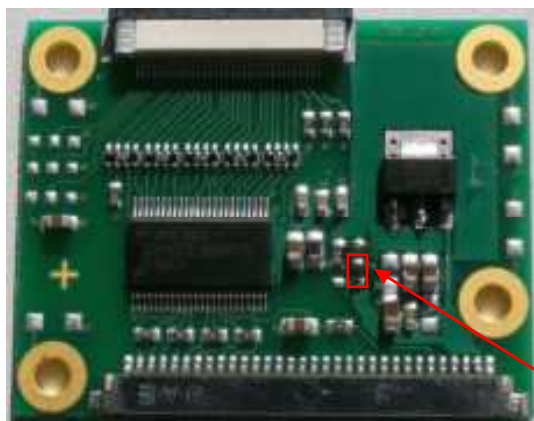


R4 short

7.2 5,0V Panel Power

R3 short, R4 open

Caution! Never short R3 and R4 at the same time! This will cause damage to the system!



R3 short

APPENDIX A: REVISION HISTORY

Revision	Date	Edited by	Changes
1.0	04/17/2007	S.Leuchtenberger	First revision