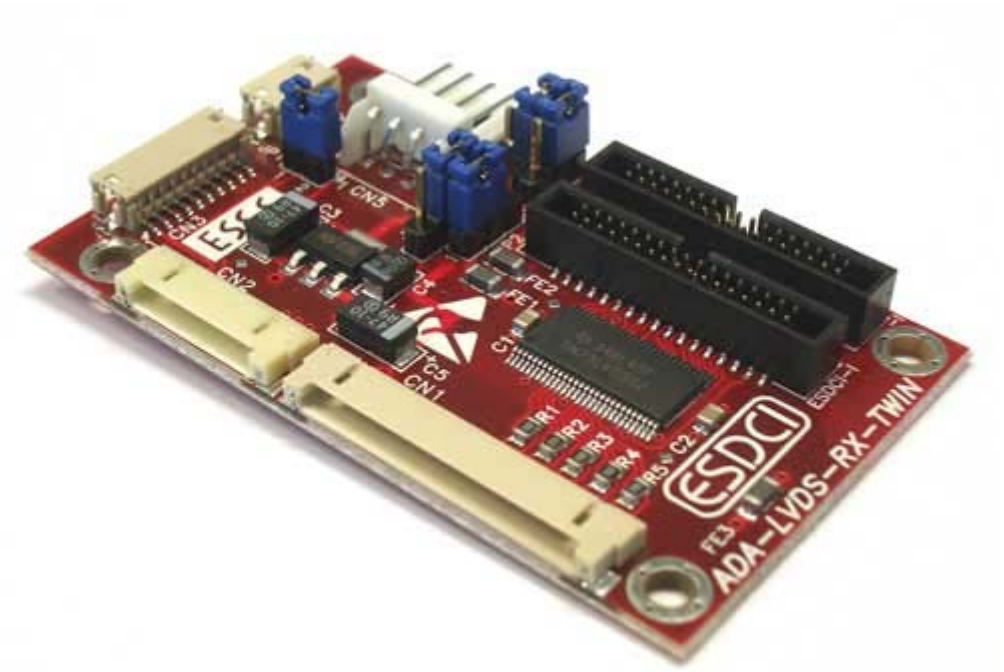
ADA-LVDS-RX-TWIN

Receiver board LVDS18/24 to TTL18

with



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1. functional description

This LVDS Receiver decodes a LVDS 18 or 24 BIT signal to a 18 BIT TTL-digital output. To connect the TTL-display it uses the ES&S standard connector ESDCI for different 18 BIT TTL display´s from several manufacturers. Please refer to ESDCI® adapter's.

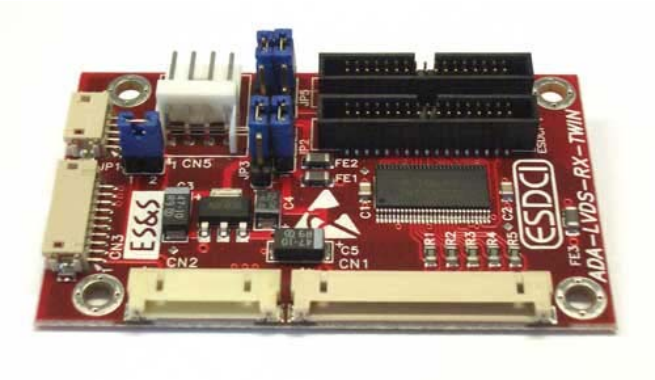
The power source for the receiver and the display may be switched (depending from the available source) by jumpers JP2-JP5 to different standard values. The jumper settings are explained in app B.

To be compatible with both LVDS standards 18 and 24 Bit there are two ESDCI® connectors mounted. One is used if the input is 18 Bit LVDS, the other one is used while using 24 Bit LVDS. The binary structure is different (MSB´s and LSB´s) so please check.

Additional there are several ways of loop-through-wires to ease up connection with inverter and optional hardware like USB or TOUCH-screens. Please refer to app. A.

The BRT-control may also be influenced by an external custom made regulator (JP1/CN4) which may be connected to CN4

2. adapter pictures



ESDCI® cable and adapters like shown are separate order parts !

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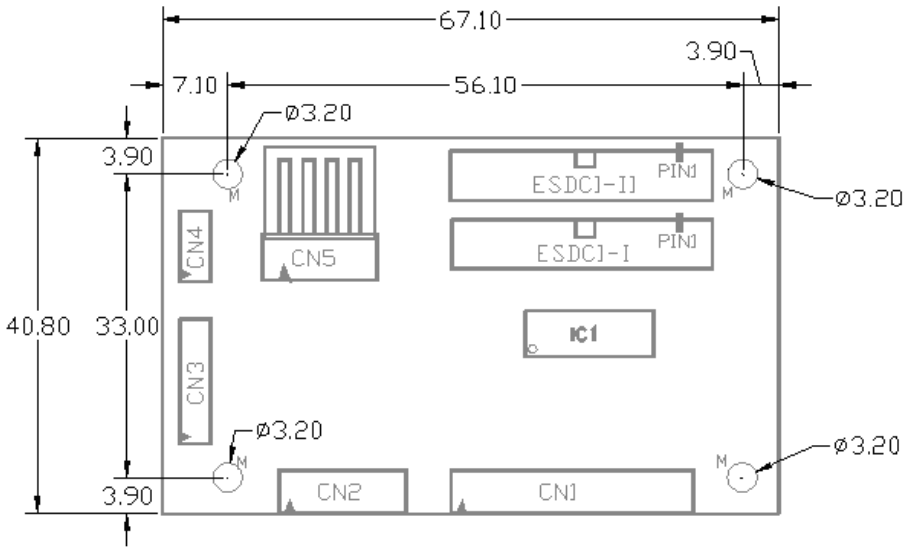
3. material definition

used material:

	mounted	corresponding	UL-Style
ESDCI-I/II	STE-C44-34-B-S-1	STE-A32-34	UL94V0
CN1	DF14-20P-1.25H	DF14-20S-1.25C	UL94V0
CN2	DF14-10P-1.25H	DF14-10S-1.25C	UL94V0
CN3	DF13-10P-1.25H	DF13-10S-1.25C	UL94V0
CN4	DF13-05P-1.25H	DF13-05S-1.25C	UL94V0
CN5	1x4 2.54mm male	various	UL94V0

4. dimension

Module size: 67.10 (H) x 40.80 (V) x 9.0 (D)



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5. electrical connection

ADA-LVDS-RX-TWIN

CN1: LVDS Input		ESDCI-I/II: to display		CN3: Power Output	
pin	signal	pin	signal	pin	signal
1	Vcc 3.3V	1		1	BLEN
2	Vcc 3.3V	2		2	BRT
3	GND	3	GND	3	Vcc 5V
4	GND	4	CLK	4	Vcc 5V
5	Vcc 5V	5	HSYNC	5	GND
6	Vcc 5V	6	VSYNC	6	GND
7	OPT1	7	GND	7	GND
8	OPT2	8	R0	8	Vcc 12V
9	OPT3	9	R1	9	Vcc 12V
10	OPT4	10	R2	10	Vcc 12V
11	RX0-	11	R3	CN4: optional BRT	
12	RX0+	12	R4	pin	signal
13	RX1-	13	R5	1	BRT out
14	RX1+	14	GND	2	BRT in
15	RX2-	15	G0	3	Vcc 5V
16	RX2+	16	G1	4	GND
17	RXCLK-	17	G2	5	Vcc 12V
18	RXCLK+	18	G3	CN5: loop through	
19	RX3-	19	G4	pin	signal
20	RX3+	20	G5	1	OPT1
CN2: Power Input		21	GND	2	OPT2
pin	signal	22	B0	3	OPT3
1	BLEN	23	B1	4	OPT4
2	BRT	24	B2		
3	Vcc 5V	25	B3		
4	Vcc 5V	26	B4		
5	GND	27	B5		
6	GND	28	GND		
7	GND	29	ENAB		
8	Vcc 12V	30	Vcc		
9	Vcc 12V	31	Vcc		
10	Vcc 12V	32	R/L		
		33	U/D		

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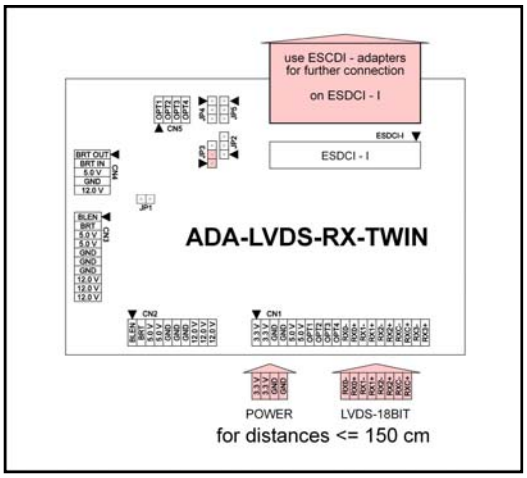
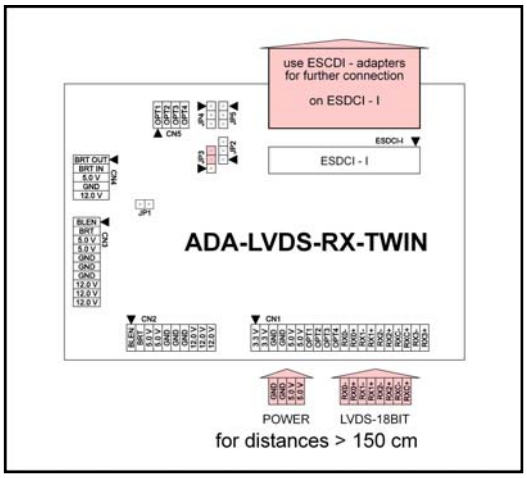
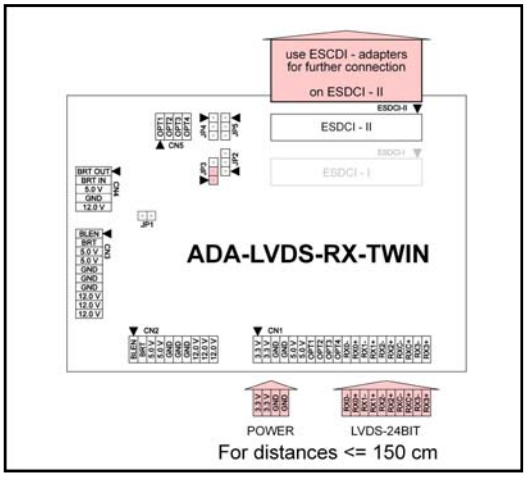
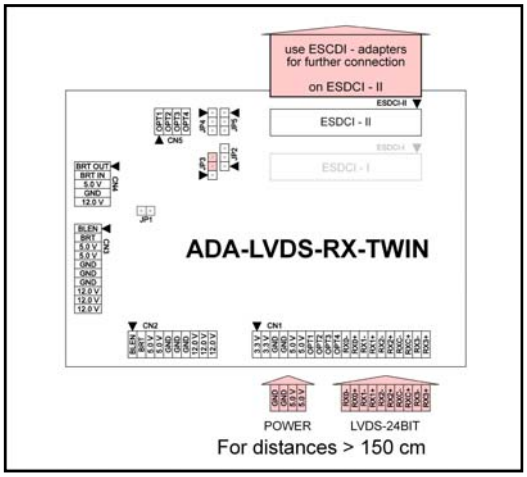
A. connection diagram's









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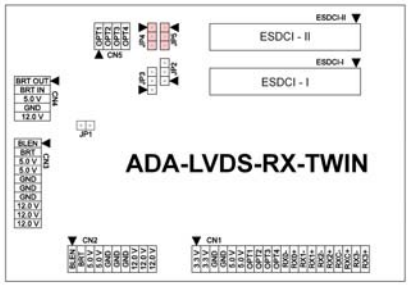
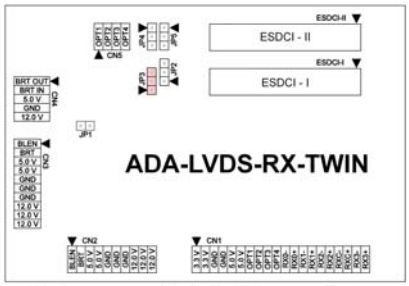
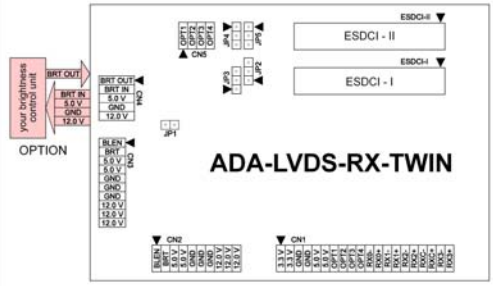


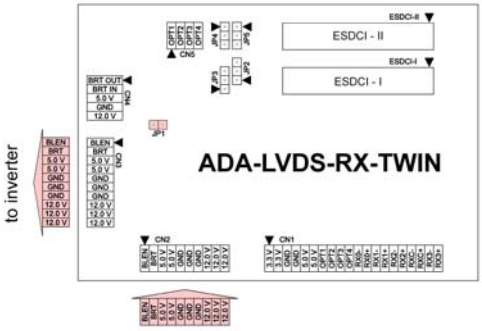
optional display settings (refer to display manual):
JP4 - ESDCI (32) == **(1-2)** = GND / **(2-3)** = VCC
JP5 - ESDCI (33) == **(1-2)** = GND / **(2-3)** = VCC



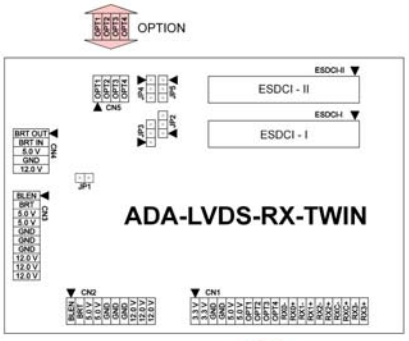
display power supply (refer to display manual):
JP3 == **(1-2)** = 3.3 V / **(2-3)** = 5.0 V
display supply 5.0 V only possible if connected to CN1 or CN2



JP1 must be open during operation



power supply for inverter



4-wire loop through, for
equipement like USB, Touch, etc...

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B. jumper settings

ADA-LVDS-RX-TWIN configuration settings	
JP1	BRT-control
1-2 closed	external via CN5
1-2 open	loop through CN3/CN4
JP2	DISPLAY Vcc
1-2 closed	Vcc 3.3 V
2-3 closed	Vcc 5.0 V
JP3	LVDS Vcc source
1-2 closed	external 3.3 V via CN1
2-3 closed	generated 3.3 V on board
JP4	option pin 31
1-2 closed	GND
2-3 closed	Vcc
JP5	option pin 30
1-2 closed	GND
2-3 closed	Vcc

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