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## Short Form Manual

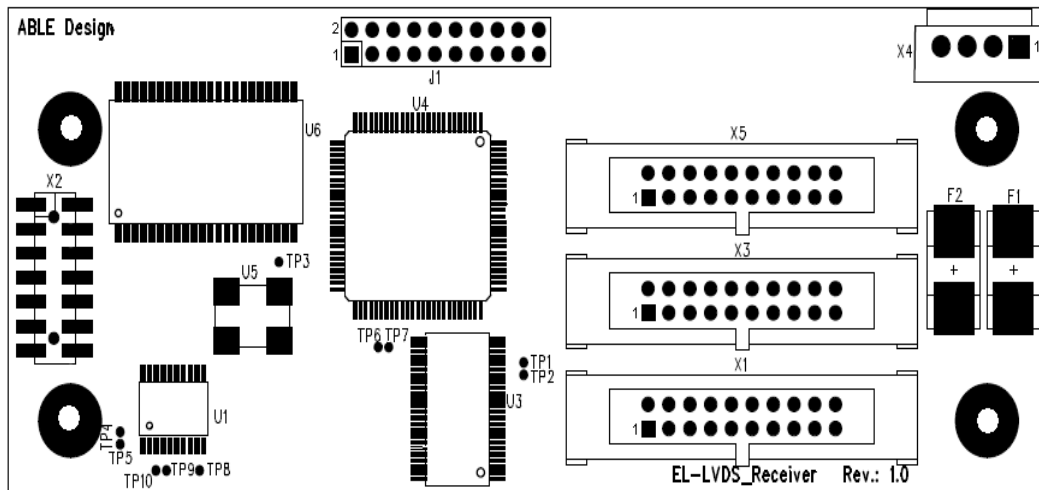
### EL-LVDS Receiver

*Rev. 1.0*

Release: 0  
Revision: 1.0  
Date: 25.07.07  
Name: Jörg Bühse

	<b>Name</b>	<b>Date</b>	<b>Signature</b>
<b>Composed:</b>	Jörg Bühse	27.07.2007	
<b>Approved:</b>			
<b>Released:</b>			

# 1. Hardware



## Connector:

- X1: EL640.480 connector
- X2: for internal use
- X3: EL320.240 connector
- X4: Power supply
- X5: LVDS input
- J1: Jumper for configuration

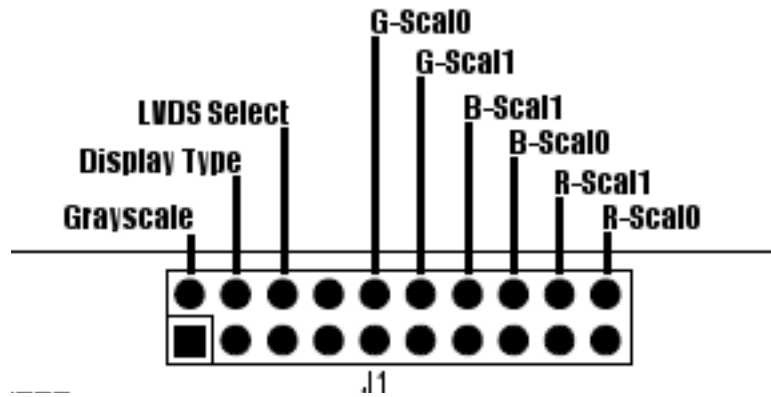
## Test Pin:

- TP1: Link with TP2 = test picture for EL320.240.36
- TP2: +5V for EL320.240 test picture
- TP3: internal use
- TP4: Link with TP5 = internal generated test picture
- TP5: GND
- TP6: Link with TP7 = reset Xilinx FPGA
- TP7: GND
- TP8: internal use
- TP9: Link with TP10 = reprogramming Xilinx
- TP10: GND

## Fuse

- F1: 12V protection 4A (Littelfuse 0452004.MRL)
- F2: 5V protection 4A (Littelfuse 0452004.MRL)

## Configuration (Jumper)



	open	close
<b>Grayscale</b>	4 steps	<b>5 steps (default)</b>
<b>Display Type</b>	320x240	<b>640x480 (default)</b>
<b>LVDS Select</b>	Jeda standard	<b>Vesa standard (default)</b>

### Colour Scaling:

Red	<b>R-scal0 open; R-scal1 open (default)</b>	<b>No colour scaling for red</b>
	R-scal0 close; R-scal1 open	Colour value = 1/2
	R-scal0 open; R-scal1 close	Colour value = 1/4
	R-scal0 close; R-scal1 close	Colour value = 1/8
Green	<b>G-scal0 open; G-scal1 open (default)</b>	<b>No colour scaling for green</b>
	G-scal0 close; G-scal1 open	Colour value = 1/2
	G-scal0 open; G-scal1 close	Colour value = 1/4
	G-scal0 close; G-scal1 close	Colour value = 1/8
Blue	<b>B-scal0 open; B-scal1 open (default)</b>	<b>No colour scaling for blue</b>
	B-scal0 close; B-scal1 open	Colour value = 1/2
	B-scal0 open; B-scal1 close	Colour value = 1/4
	B-scal0 close; B-scal1 close	Colour value = 1/8

## 2. Pin-Out

### ***X1: E640.480 Displayconnector***

Samtec EHT-110-01-S-D

Video Data UD1	1	2	Video Data UD0
Video Data UD3	3	4	Video Data UD2
Video Data LD1	5	6	Video Data LD0
Video DataLD3	7	8	Video Data LD2
Data input Clock CP2	9	10	Ground
Input data latch CP1	11	12	Ground
Scan Start-up signal	13	14	Ground
Ground	15	16	Ground
+5V	17	18	+5V
+12V	19	20	+12V

### ***X3: EL320.240.36 Displayconnector***

Samtec EHT-110-01-S-D

+12V	1	2	+12V
Selftest input	3	4	Reserved
+5V	5	6	Ground
Vertical Sync	7	8	Ground
Horizontal Sync	9	10	Ground
Video Clock	11	12	Ground
Video data VID0	13	14	Ground
Video data VID1	15	16	Ground
Video data VID2	17	18	Ground
Video data VID3	19	20	Ground

### ***X4: Power connector***

Hirose DF1-4P-2,5DSA

+5V	1
GND	2
GND	3
+12V	4

## ***X5: LVDS input***

Samtec EHT-110-01-S-D

LVDS Data 0-	1	2	LVDS Data 0+
GND	3	4	LVDS Data 1-
LVDS Data 1+	5	6	GND
LVDS Data 2-	7	8	LVDS Data 2+
GND	9	10	LVDS Clk-
LVDS Clk+	11	12	GND
LVDS Data 3-	13	14	LVDS Data 3+
GND	15	16	GND
+5V	17	18	+5V
+12V	19	20	+12V

### ***Input timing***

640x480 timing with 60Hz like the NEC n16448bc33 in Fixed mode.