FPC40   LCD_BOT
GND   GND   GND

LCD_TOP
ER-TFT050-3
TFT043-3 - 4.3" 480x272 BL:20mA
TFT050-3 - 5" 800x480 BL:40mA
TFT070-4 - 7" 800x480 BL:40mA

VCC   GND   PWM/NC   A   C   X+   X-   Y+   Y-
DISP   DE   CLK   HSYNC   VSYNC
R0 R1 R2 R3 R4 R5 R6 R7
G0 G1 G2 G3 G4 G5 G6 G7
B0 B1 B2 B3 B4 B5 B6 B7

PDO DE CLK HSYNC VSYNC
R0 R1 R2 R3 R4 R5 R6 R7
G0 G1 G2 G3 G4 G5 G6 G7
B0 B1 B2 B3 B4 B5 B6 B7

LED+   LED-
TP_BOT   FPC04
TP_SDA   TP_SCL   TP_INT
R11 nc

LV_SDA/2.5A   LV_SCL/2.5A   LV_GPIO/2.5B
X+/2.3C   X-/2.3C   Y+/2.3C   Y-/2.3C
+3V3
C6 4u7   GND
LV_PWM2/2.5B

IC1   TFP401A-PAD
RXC+ RXC- RX0+ RX0- RX1+ RX1- RX2+ RX2-
EXT_RES RSVD DFO OCK_INV PIXS ST STAG PD PDO SCDT
OE0 OE1 OE2 OE3 OE4 OE5 OE6 OE7
OE8 OE9 OE10 OE11 OE12 OE13 OE14 OE15
OE16 OE17 OE18 OE19 OE20 OE21 OE22 OE23
QO0 QO1 QO2 QO3 QO4 QO5 QO6 QO7
QO8 QO9 QO10 QO11 QO12 QO13 QO14 QO15
QO16 QO17 QO18 QO19 QO20 QO21 QO22 QO23
HSYNC VSYNC DE ODCK CTL1 CTL2 CTL3
PVDD OVDD DVDD AVDD
PGND OGND DGND AGND

HSYNC VSYNC DE CLK
R10 22

IC3 IS31BL3506A-TTLS2
LX OUT FB VIN GND EN
L1 10u@500mA Digikey 490-5340-6-ND
D6 DIODE-SOD106
LED+   LED-
C9 1u @ 40V
RS1 RS2 RS3 RS4 RS5
15 15 15 10
J20_1 J20_2 J30_1 J30_2
I = 0.3V / RS
RE1 100k   RE2 100k
PWM1/2.3A
C8 2u   GND
C7 +5V   100n

IC2   24LC02B   I²C
EEPROM Array
VCC SDA SCL WP GND
DDC_SDA   DDC_SCL
SDA   SCL
SDA/2.3B   SCL/2.3B
DDC_SDA DDC_SCL

HDMI   HDMI-A
D2+ D2S D2- D1+ D1S D1- D0+ D0S D0- CLK+ CLKS CLK- SDA SCL +5V GND CEC HDP NC
SHLD1 SHLD2 SHLD3 SHLD4
R1 0   GND

HPWR
R2 1k   R3 10K   R4 10K   C23 100n
+5V

R5 R6 R7 R8 10K
OCK PIXS ST STAG
R9 1k
+3V3   PDO   GND

+3V3
C1 C2 C3 C4 C5
100n 100n 100n 100n 4u7
GND

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HDMI-Display_v11

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Sheet: 2/2

4-pin touchpanel connector

close for EDID EEPROM programming

LED backlight:
L+/L- > on-board regulator
5V > +5V voltage

all jumpers open: 20mA
+20mA +20mA +30mA +30mA

close for I2C capacitive touchcontroller on 40-pin
display connector and set VCCIO to 3.3V
SDA+SCL from EEPROM have to be open

first 10 pins are RPi compatible

Jumper	LED+	LED-	VCCIO	TP_SDA	TP_SCL	TP_INT
Displays with resistive Touchpanel (no Backlight Boost Regulator)	LED+	LED-	3.3V or 5V	open	open	open
Displays with capacitive Touchpanel (on-board Backlight Boost Regulator)	5V	5V	3.3V	closed	closed	closed

To program EDID data into the EEPROM the jumpers SDA + SCL have to be closed and no Display with capacitive Touchpanel (FT5x06) can be connected during the programming.

The backlight brightness of the Displays with capacitive Touchpanel can be controlled via Pin 35 (AVR PB6).

Displays with resistive Touchpanel: TFT043-3, TFT050-3, TFT070-4

Displays with capacitive Touchpanel: HY050CTP-HD, HY070CTP, HY070CTP-HD, HY101CTP