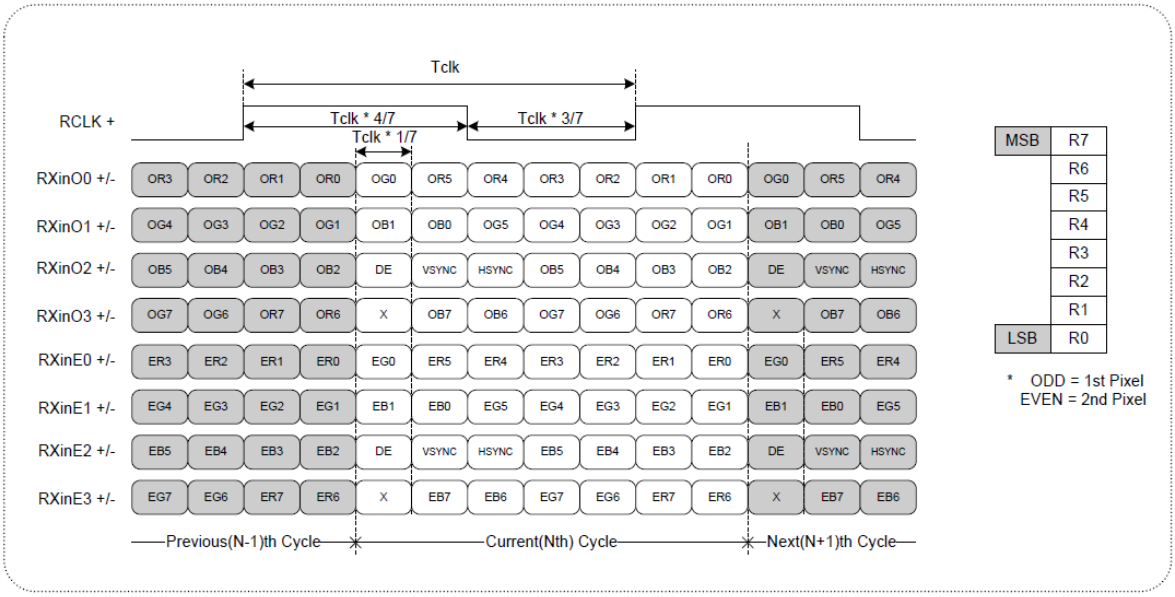
TFP403/DS90C387A configuration (old mode snlu036)

PLLSEL	High
DUAL	High
!PD	High
R_FDE	High
DFO	LOW
OCK_INV	High
PIXS	High
R_FB	LOW
PRE	LOW

3. Data Format

1) LVDS 2 Port



< LVDS Data Format >

Successfully checked

- Supply voltage = 3.29V, no swing
- All soldered pins are checked
- EEPROM works fine and PC detects bridge with correct values
- GND plane shows only a small offset voltage

Connection between TFP401, DS90C387A and adapter pcb

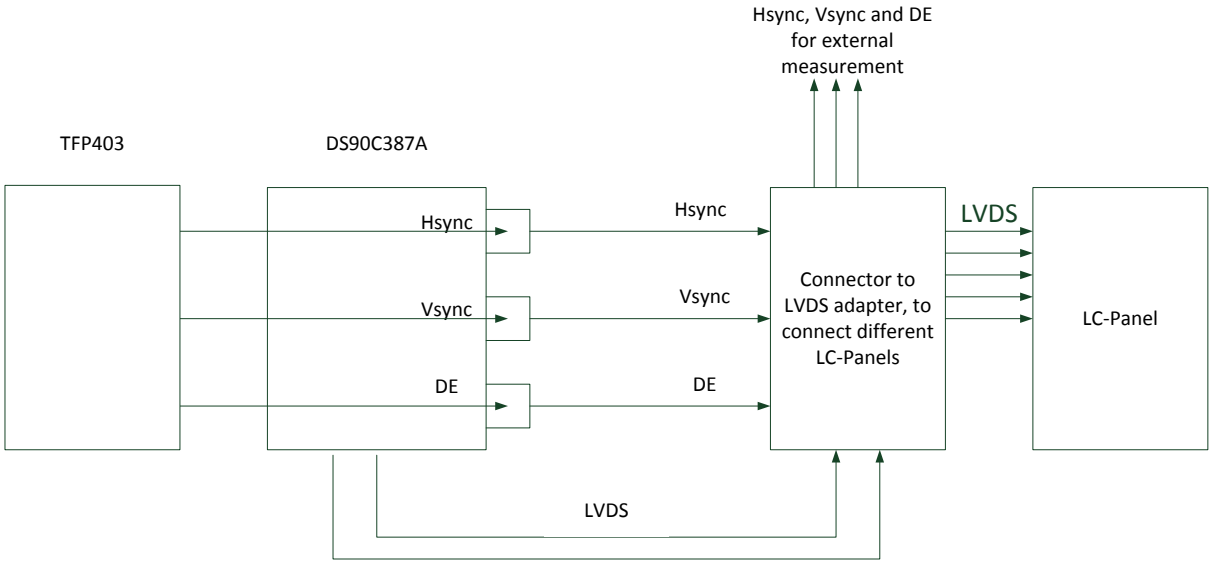


Abbildung 1 Connection schematic

The above picture shows the signal way of Hsync, Vsync and DE. The signals come from TFP403 and goes to the input of DS90C387A. After that Hsync, Vsync and DE goes to an adapter pcb where an OP amplified the signal for external measurement (unfortunately I got no signal on OP output). I tapped the signals to use in future with an FPGA or other microprocessor. I decided to use an OP to prevent changing impedance of these 3 signal lines. I used 50 ohm termination on OP's input. See next picture. I attached the whole schematic on the last pages.

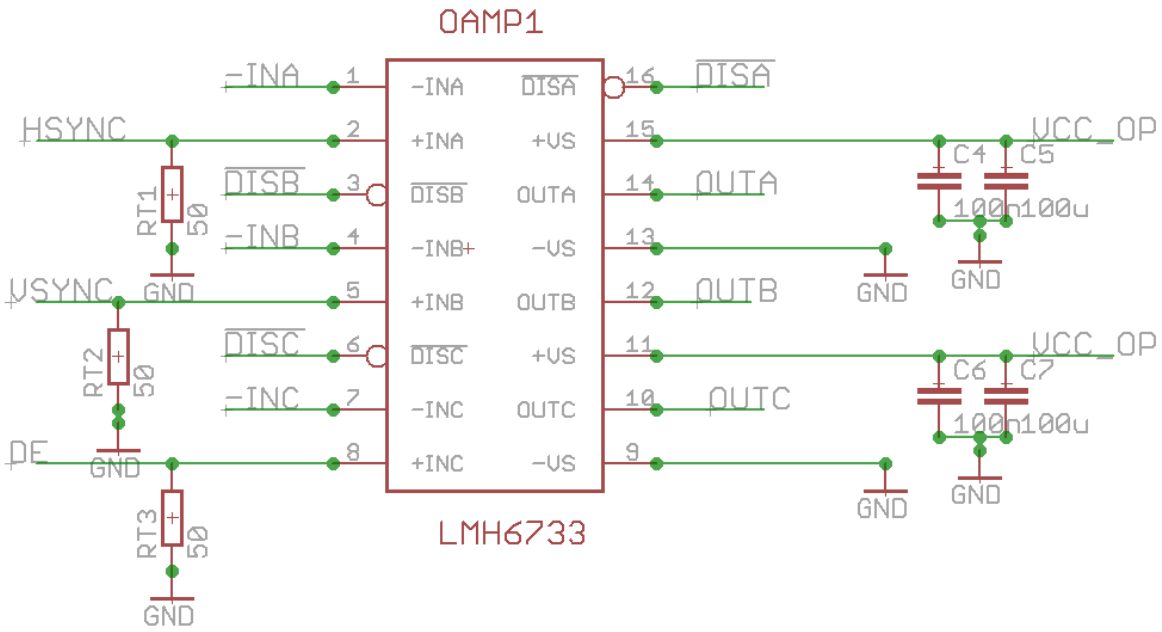


Abbildung 2 Hsync, Vsync, DE amplifying

Measured signals

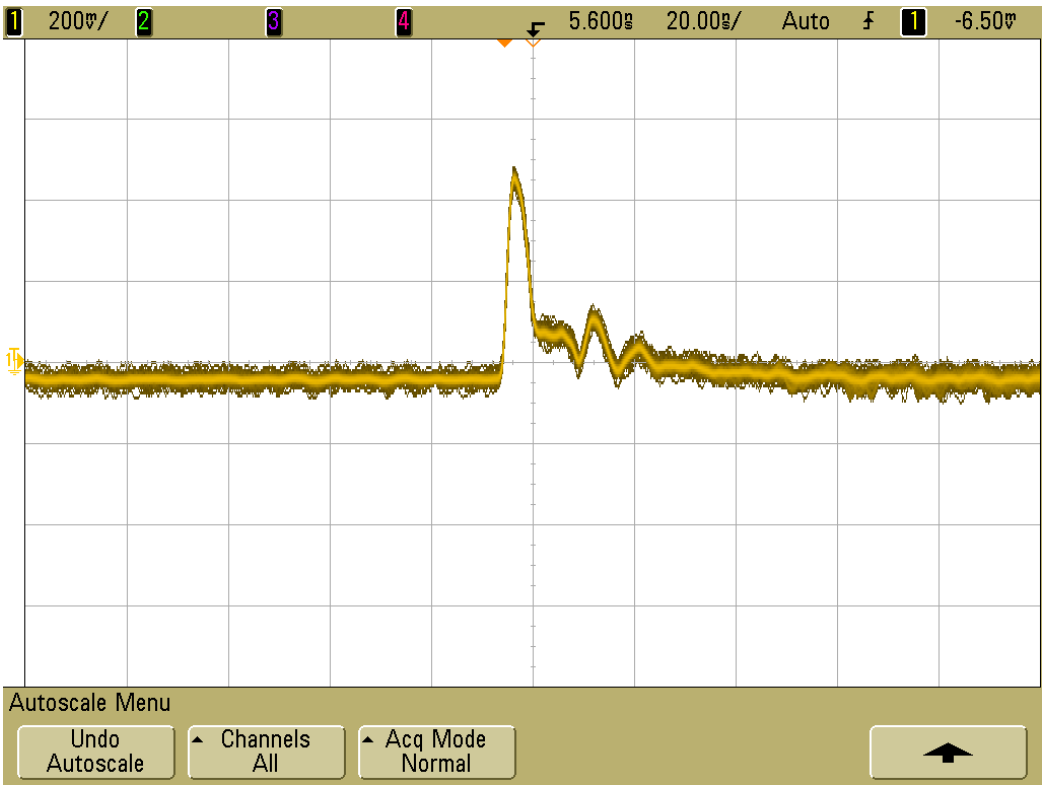


Abbildung 3 Signal: DE

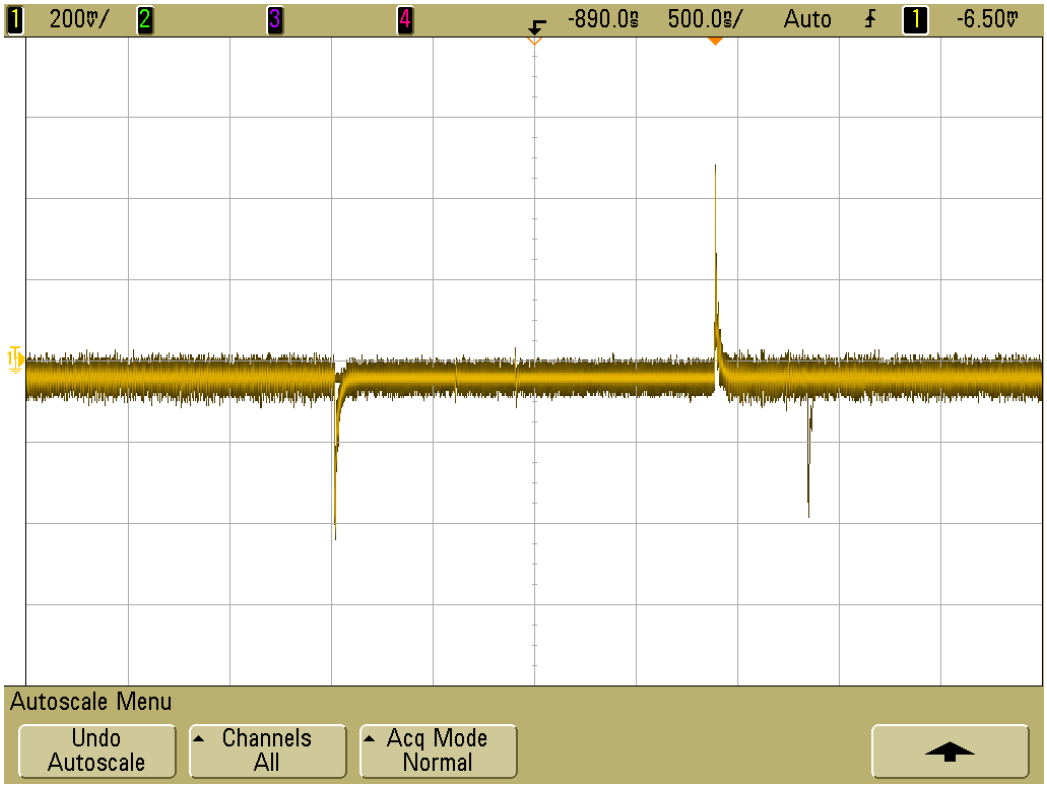


Abbildung 4 Signal: DE

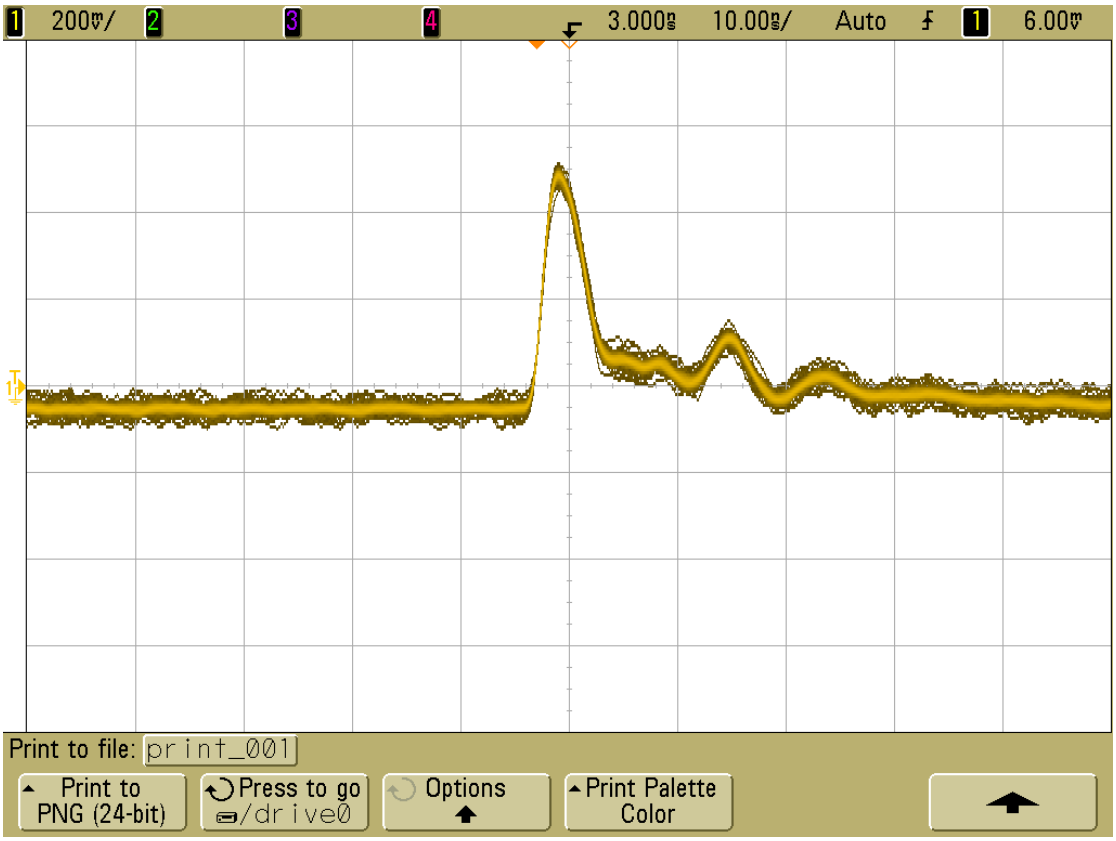


Abbildung 5 Signal: Hsync

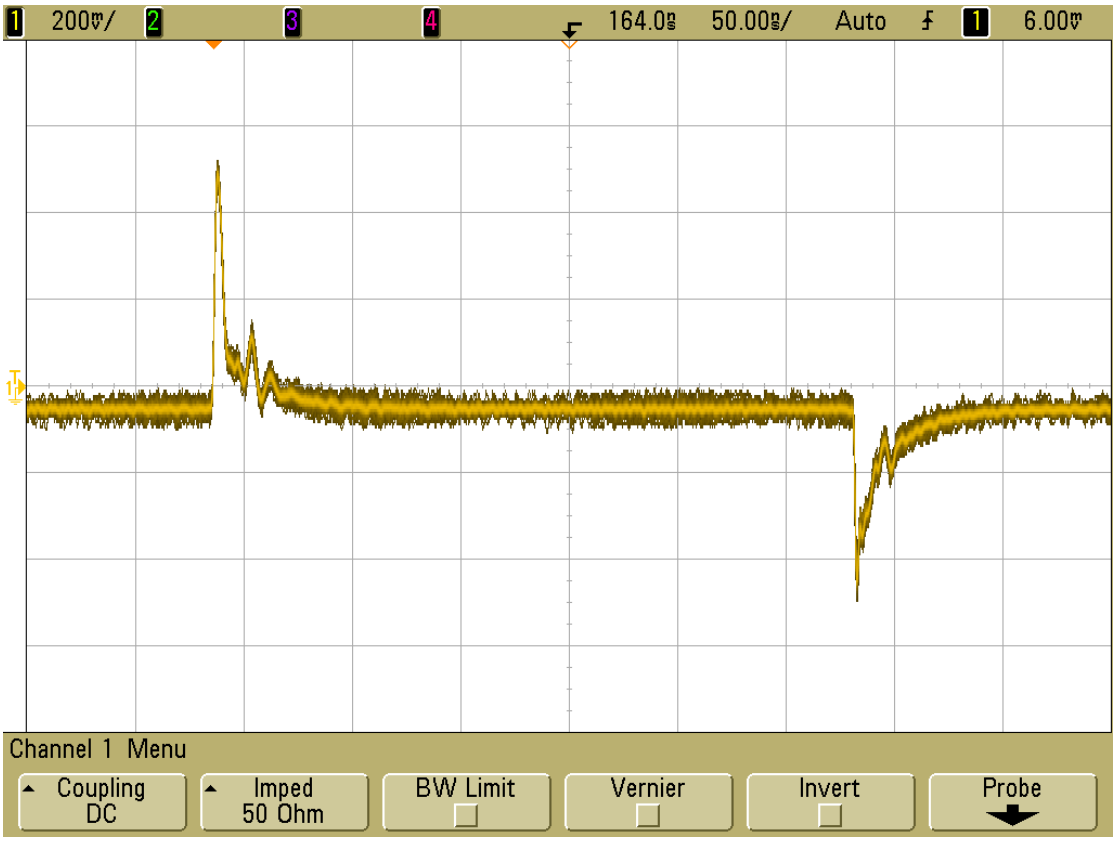


Abbildung 6 Signal: Hsync

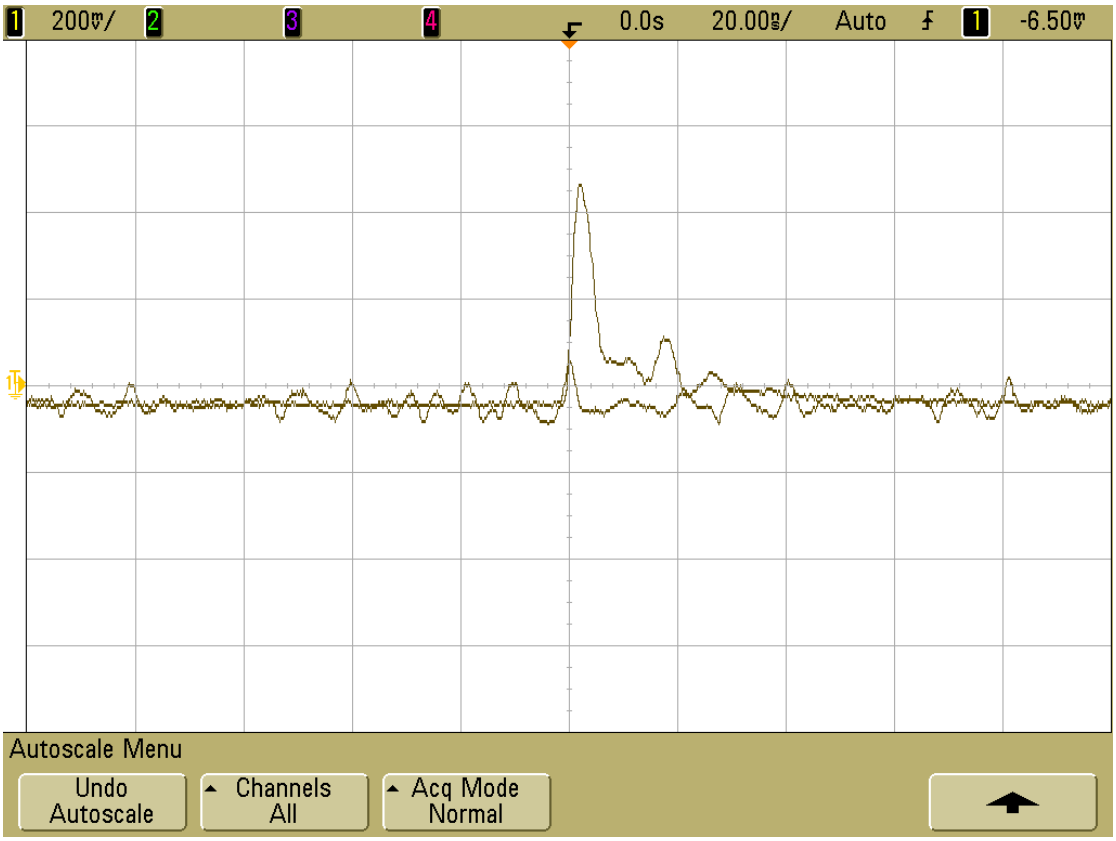


Abbildung 7 Signal: Vsync

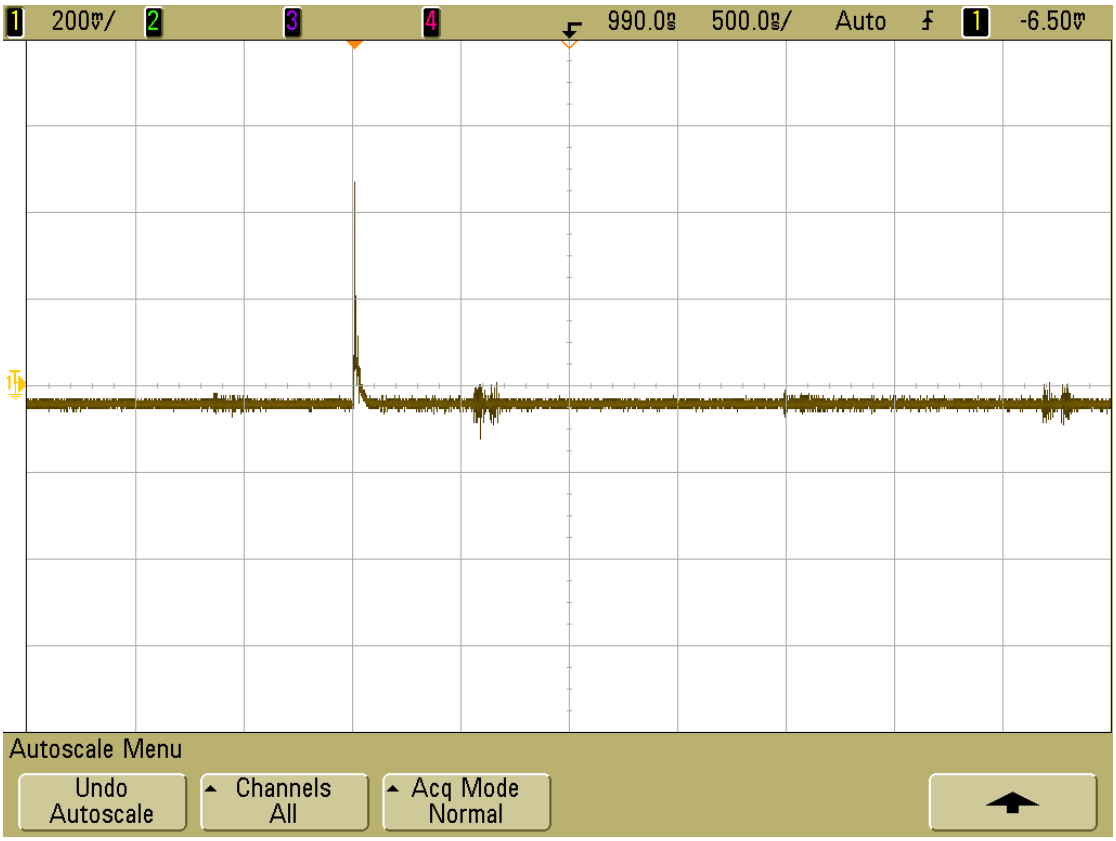


Abbildung 8 Signal: Vsync

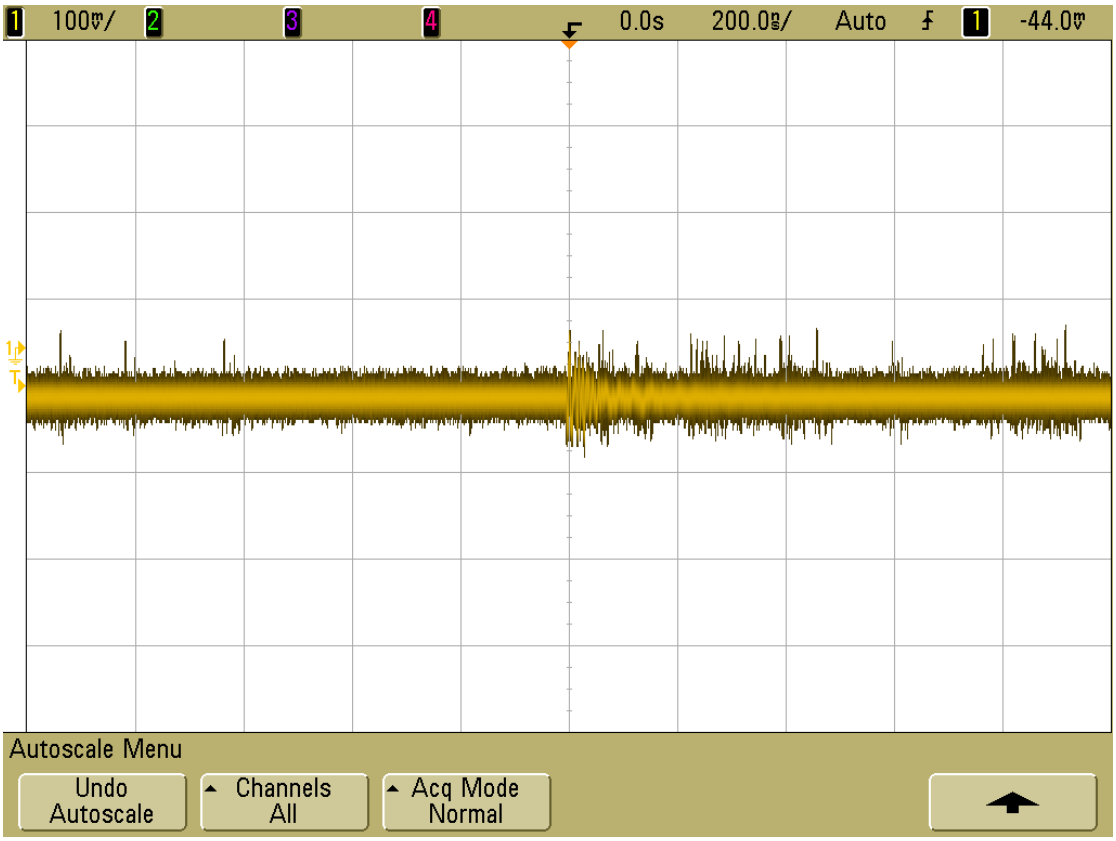
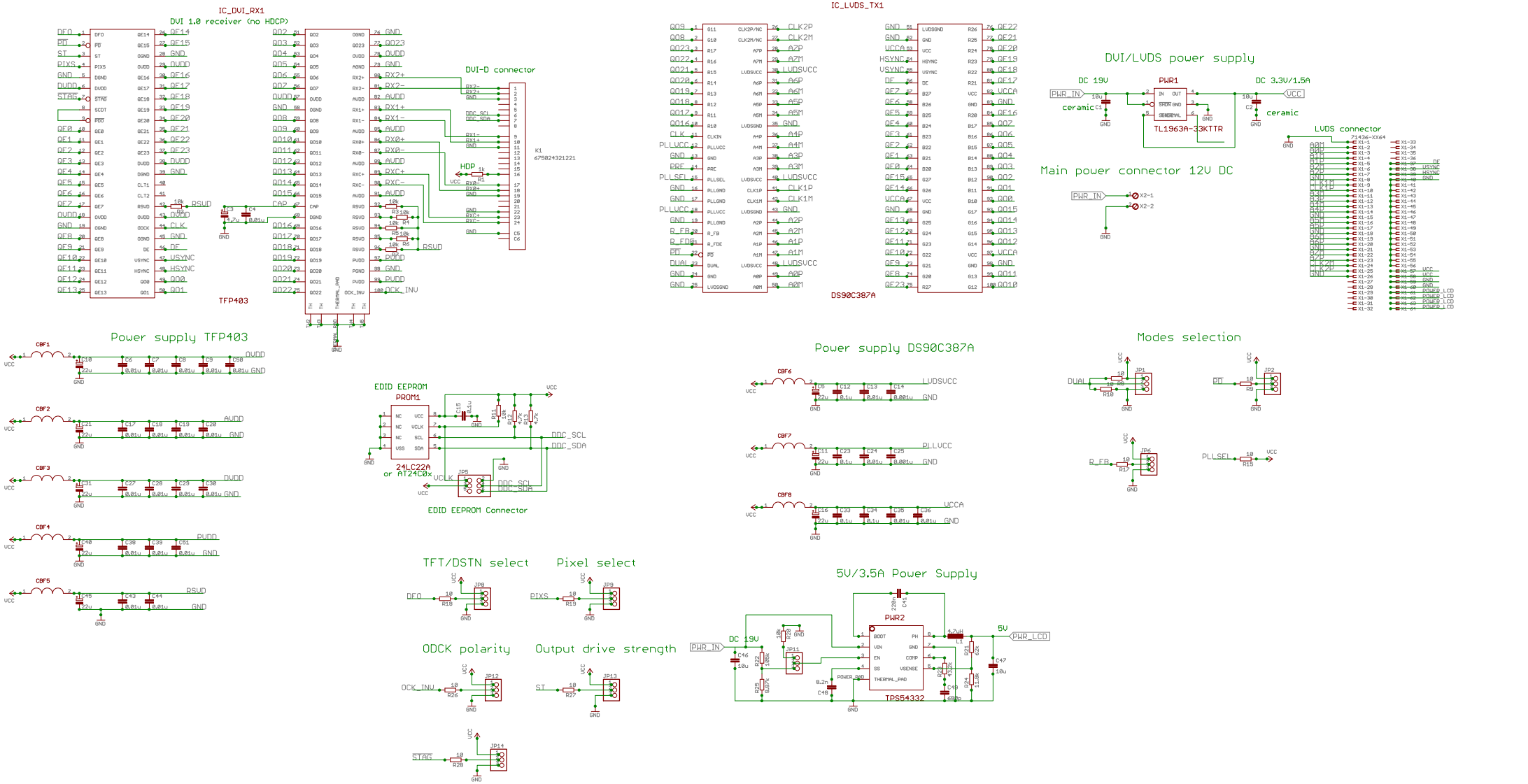
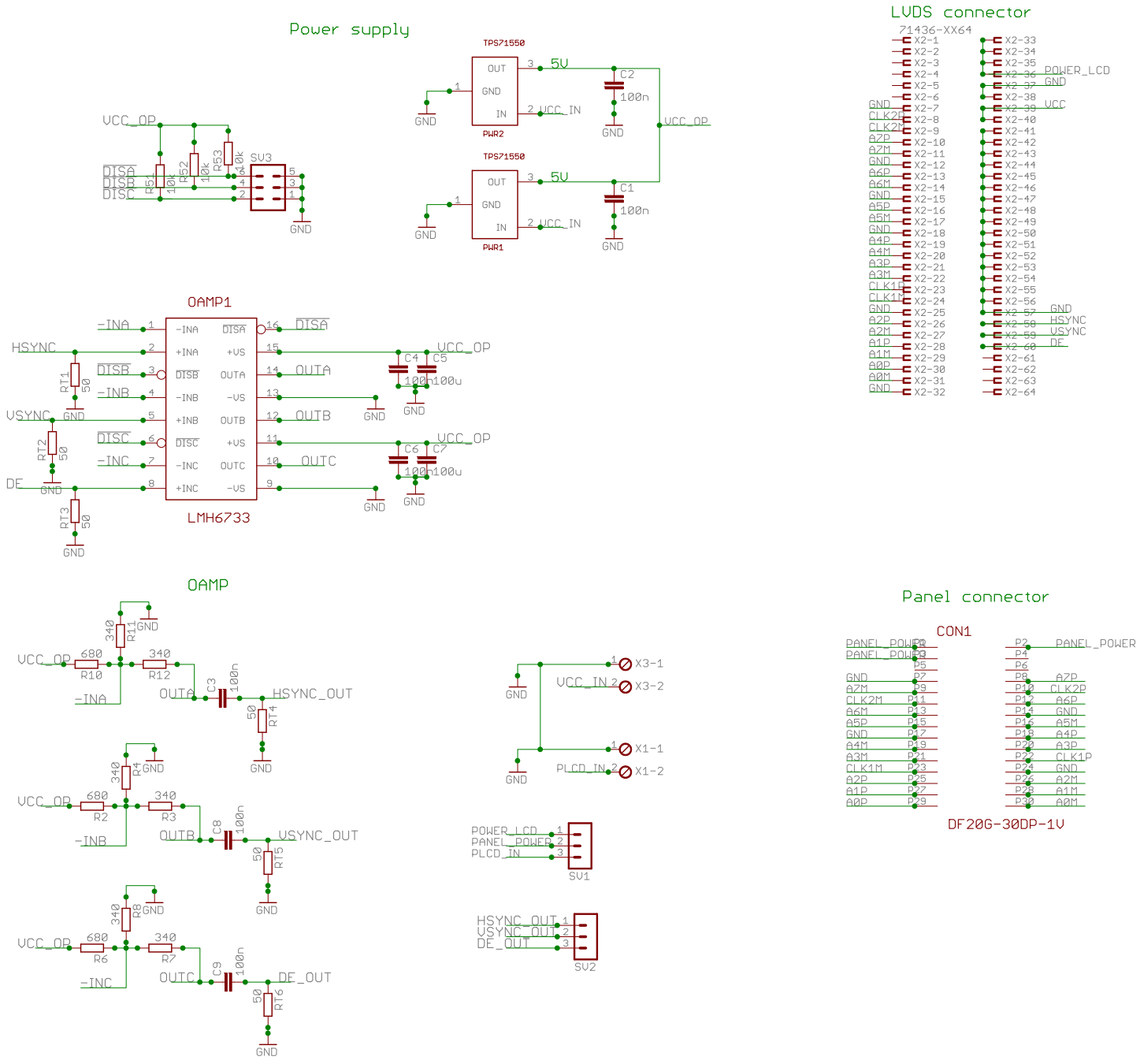


Abbildung 9 Signal: GND

The following two pages show the schematics for DVItoLVDS bride and the adapter schematic.


IC_DVI_RX1
DVI 1.0 receiver (no HDCP)
TFP403
DVI-D connector
K1
67804321221
IC_LVDS_TX1
DS90C387A
DVI/LVDS power supply
DC 19V
PWR1
DC 3.3V/1.5A
TL1963A-33KTTR
ceramic
LVDS connector
Main power connector 12V DC
Power supply TFP403
Power supply DS90C387A
Modes selection
EDID EEPROM
PROM1
24LC22A
or AT24C0x
EDID EEPROM Connector
TFT/DSTN select
Pixel select
ODCK polarity
Output drive strength
5V/3.5A Power Supply
TPS54332


Power supply
TPS71550
OUT
GND
IN
5V
VCC_IN
PWR2
PWR1
C1
C2
100n
VCC_OP
LVDS connector
71436-XX64
POWER_LCD
VCC
GND
HSYNC
VSYNC
DE
OAMP1
LMH6733
OAMP
HSYNC_OUT
VSYNC_OUT
DE_OUT
Panel connector
CON1
DF20G-30DP-1V
SV1
SV2
SV3