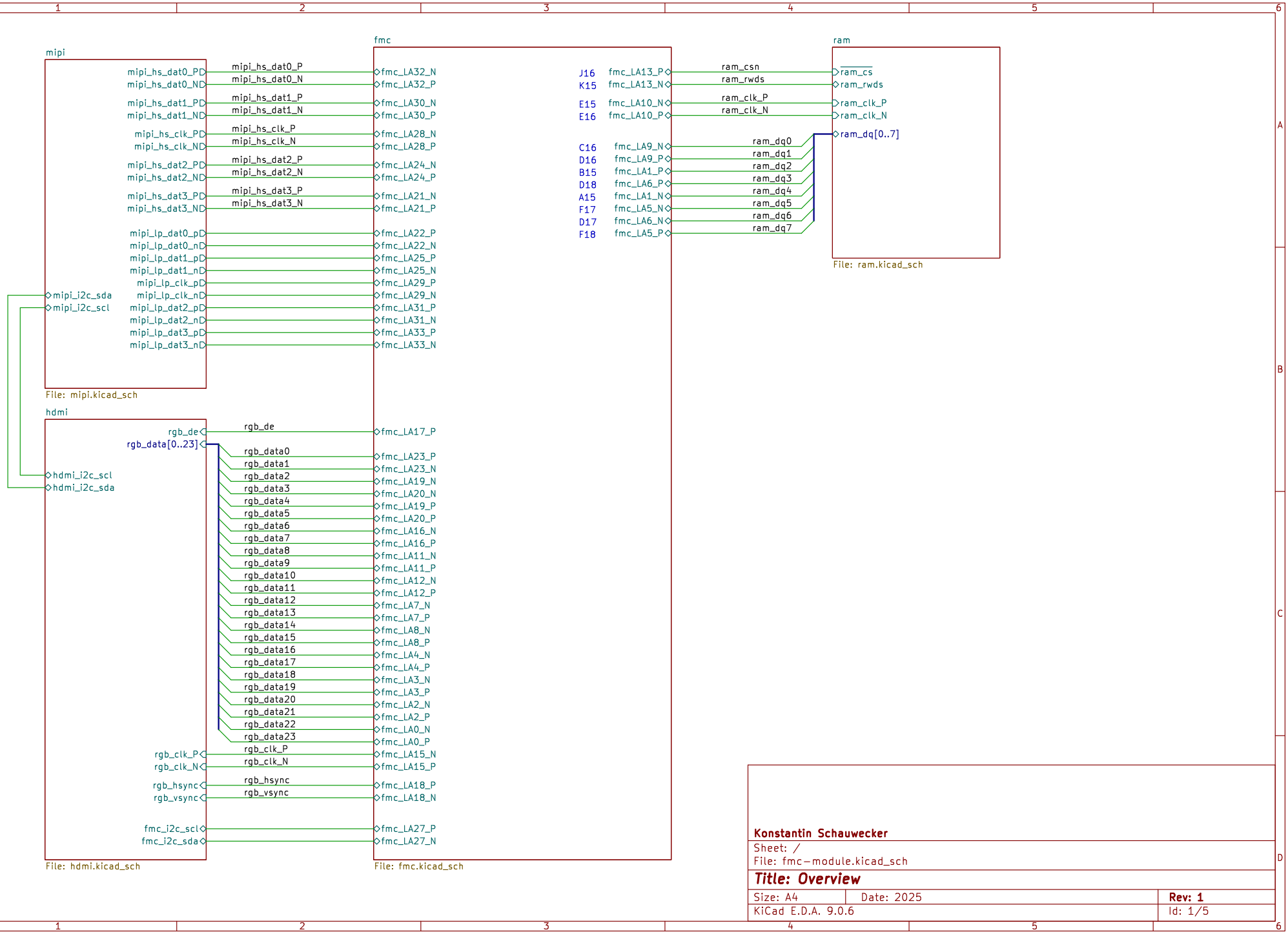
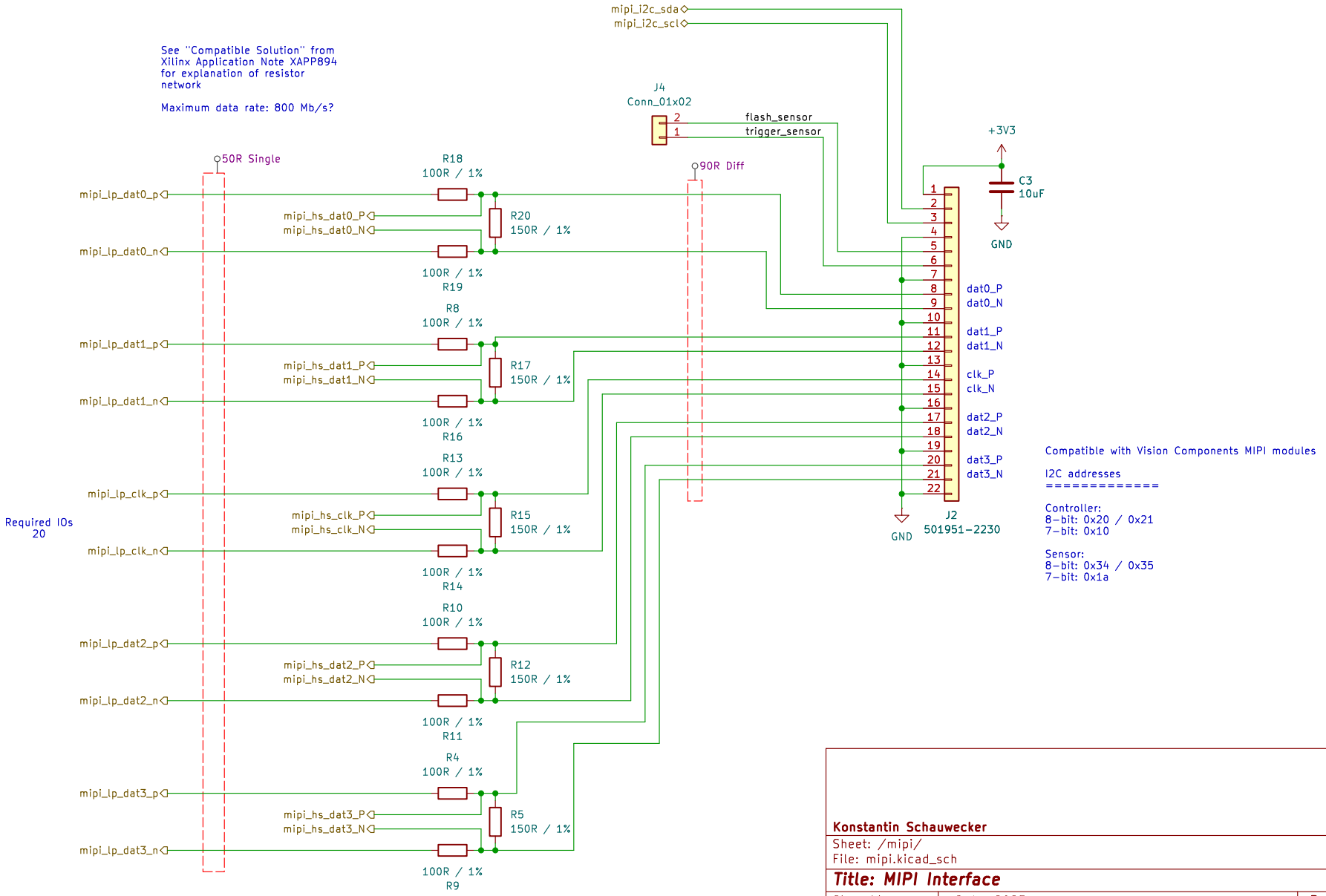
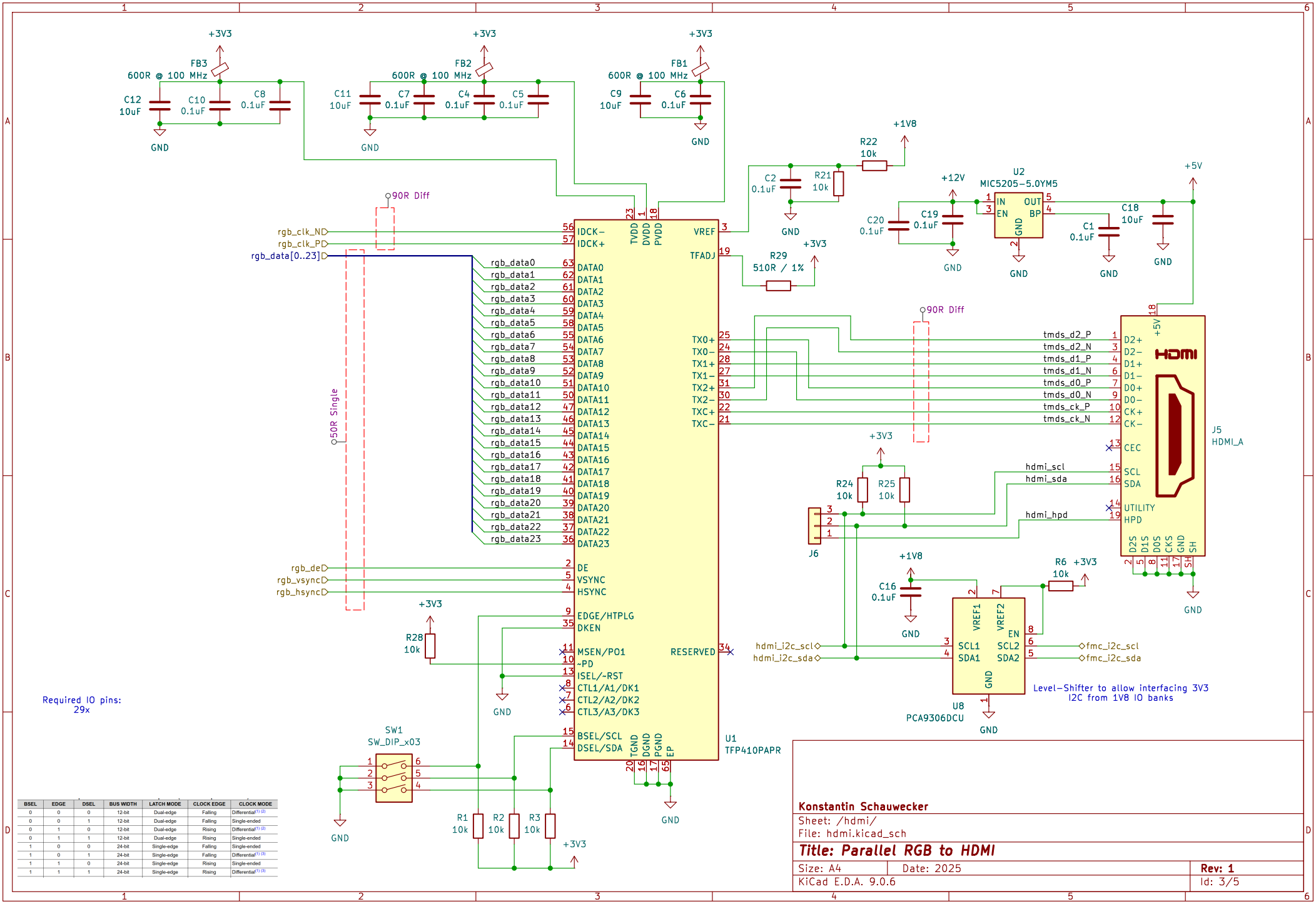
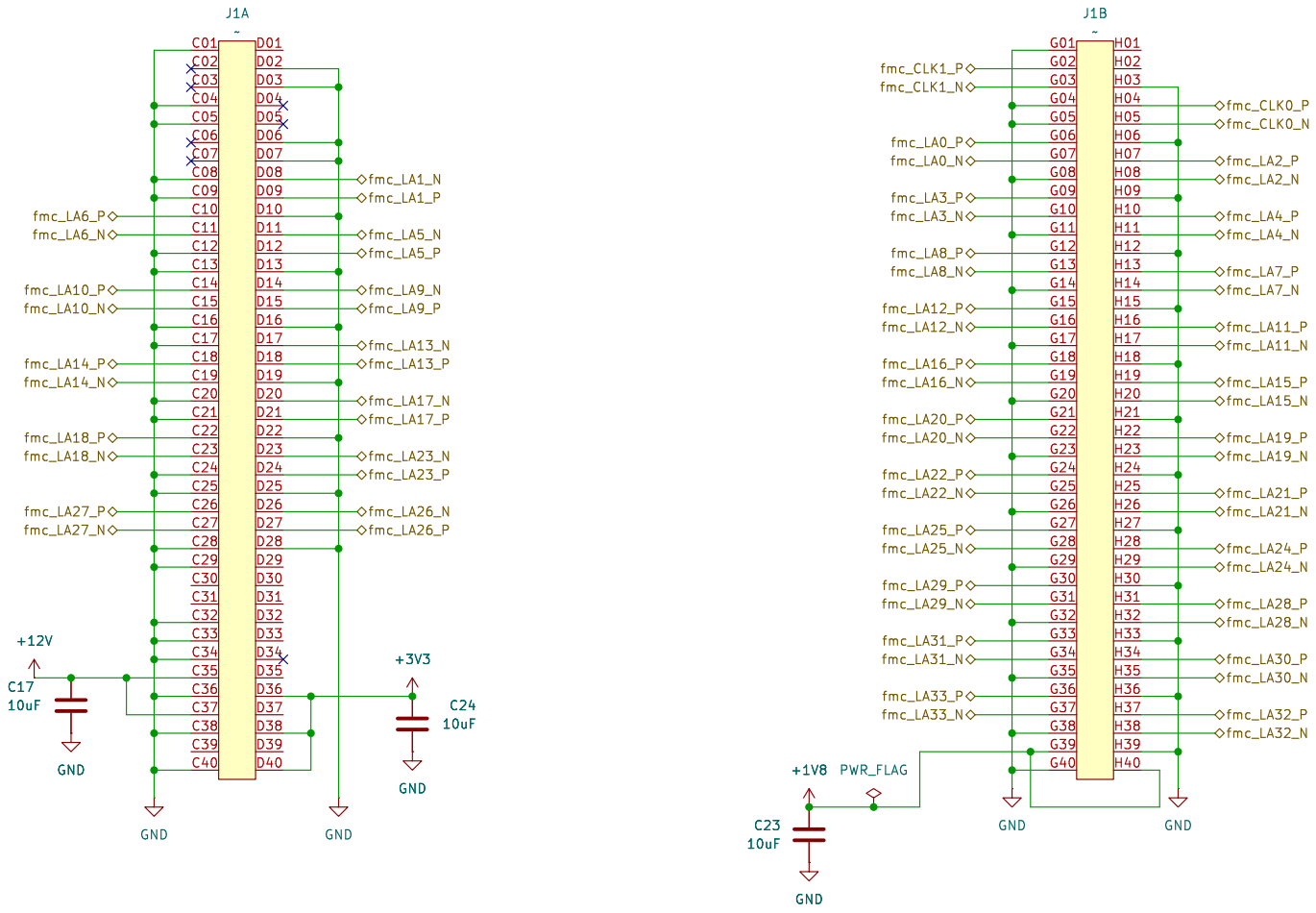

mipi
mipi_hs_dat0_P
mipi_hs_dat0_N
mipi_hs_dat1_P
mipi_hs_dat1_N
mipi_hs_clk_P
mipi_hs_clk_N
mipi_hs_dat2_P
mipi_hs_dat2_N
mipi_hs_dat3_P
mipi_hs_dat3_N
mipi_lp_dat0_p
mipi_lp_dat0_n
mipi_lp_dat1_p
mipi_lp_dat1_n
mipi_lp_clk_p
mipi_lp_clk_n
mipi_lp_dat2_p
mipi_lp_dat2_n
mipi_lp_dat3_p
mipi_lp_dat3_n
mipi_i2c_sda
mipi_i2c_scl
File: mipi.kicad_sch
fmc
fmc_LA32_N
fmc_LA32_P
fmc_LA30_N
fmc_LA30_P
fmc_LA28_N
fmc_LA28_P
fmc_LA24_N
fmc_LA24_P
fmc_LA21_N
fmc_LA21_P
fmc_LA22_P
fmc_LA22_N
fmc_LA25_P
fmc_LA25_N
fmc_LA29_P
fmc_LA29_N
fmc_LA31_P
fmc_LA31_N
fmc_LA33_P
fmc_LA33_N
J16 fmc_LA13_P
K15 fmc_LA13_N
E15 fmc_LA10_N
E16 fmc_LA10_P
C16 fmc_LA9_N
D16 fmc_LA9_P
B15 fmc_LA1_P
D18 fmc_LA6_P
A15 fmc_LA1_N
F17 fmc_LA5_N
D17 fmc_LA6_N
F18 fmc_LA5_P
fmc_LA17_P
fmc_LA23_P
fmc_LA23_N
fmc_LA19_N
fmc_LA20_N
fmc_LA19_P
fmc_LA20_P
fmc_LA16_N
fmc_LA16_P
fmc_LA11_N
fmc_LA11_P
fmc_LA12_N
fmc_LA12_P
fmc_LA7_N
fmc_LA7_P
fmc_LA8_N
fmc_LA8_P
fmc_LA4_N
fmc_LA4_P
fmc_LA3_N
fmc_LA3_P
fmc_LA2_N
fmc_LA2_P
fmc_LA0_N
fmc_LA0_P
fmc_LA15_N
fmc_LA15_P
fmc_LA18_P
fmc_LA18_N
fmc_LA27_P
fmc_LA27_N
File: fmc.kicad_sch
ram
ram_csn
ram_rwds
ram_clk_P
ram_clk_N
ram_dq[0..7]
ram_dq0
ram_dq1
ram_dq2
ram_dq3
ram_dq4
ram_dq5
ram_dq6
ram_dq7
ram_cs
ram_rwds
ram_clk_P
ram_clk_N
File: ram.kicad_sch
hdmi
rgb_de
rgb_data[0..23]
rgb_data0
rgb_data1
rgb_data2
rgb_data3
rgb_data4
rgb_data5
rgb_data6
rgb_data7
rgb_data8
rgb_data9
rgb_data10
rgb_data11
rgb_data12
rgb_data13
rgb_data14
rgb_data15
rgb_data16
rgb_data17
rgb_data18
rgb_data19
rgb_data20
rgb_data21
rgb_data22
rgb_data23
rgb_clk_P
rgb_clk_N
rgb_hsync
rgb_vsync
fmc_i2c_scl
fmc_i2c_sda
hdmi_i2c_scl
hdmi_i2c_sda
File: hdmi.kicad_sch
Konstantin Schauwecker
Sheet: /
File: fmc-module.kicad_sch
Title: Overview
Size: A4
Date: 2025
Rev: 1
KiCad E.D.A. 9.0.6
Id: 1/5



Konstantin Schauwecker		
Sheet: /mipi/		
File: mipi.kicad_sch		
Title: MIPI Interface		
Size: A4	Date: 2025	**Rev: 1**
KiCad E.D.A. 9.0.6		Id: 2/5


+3V3
FB3
600R @ 100 MHz
C12
10uF
C10
0.1uF
C8
0.1uF
GND
FB2
C11
10uF
C7
0.1uF
C4
0.1uF
C5
0.1uF
FB1
C9
10uF
C6
0.1uF
+1V8
R22
10k
C2
0.1uF
R21
10k
+12V
U2
MIC5205-5.0YM5
IN
EN
OUT
BP
GND
C20
0.1uF
C19
0.1uF
C1
0.1uF
C18
10uF
+5V
90R Diff
rgb_clk_N
rgb_clk_P
rgb_data[0..23]
50R Single
IDCK-
IDCK+
TVDD
DVDD
PVDD
VREF
TFADJ
R29
510R / 1%
DATA0
DATA1
DATA2
DATA3
DATA4
DATA5
DATA6
DATA7
DATA8
DATA9
DATA10
DATA11
DATA12
DATA13
DATA14
DATA15
DATA16
DATA17
DATA18
DATA19
DATA20
DATA21
DATA22
DATA23
TX0+
TX0-
TX1+
TX1-
TX2+
TX2-
TXC+
TXC-
tmds_d2_P
tmds_d2_N
tmds_d1_P
tmds_d1_N
tmds_d0_P
tmds_d0_N
tmds_ck_P
tmds_ck_N
J5
HDMI_A
HDMI
D2+
D2-
D1+
D1-
D0+
D0-
CK+
CK-
CEC
SCL
SDA
UTILITY
HPD
rgb_de
rgb_vsync
rgb_hsync
DE
VSYNC
HSYNC
R24
10k
R25
10k
hdmi_scl
hdmi_sda
hdmi_hpd
J6
R28
10k
EDGE/HTPLG
DKEN
MSEN/PO1
~PD
ISEL/~RST
CTL1/A1/DK1
CTL2/A2/DK2
CTL3/A3/DK3
RESERVED
C16
0.1uF
R6
10k
VREF1
VREF2
EN
SCL1
SDA1
SCL2
SDA2
hdmi_i2c_scl
hdmi_i2c_sda
fmc_i2c_scl
fmc_i2c_sda
U8
PCA9306DCU
Level-Shifter to allow interfacing 3V3 I2C from 1V8 IO banks
SW1
SW_DIP_x03
BSEL/SCL
DSEL/SDA
TGND
DGND
PGND
EP
U1
TFP410PAPR
R1
10k
R2
10k
R3
10k
Required IO pins:
29x
BSEL
EDGE
DSEL
BUS WIDTH
LATCH MODE
CLOCK EDGE
CLOCK MODE
0 0 0 12-bit Dual-edge Falling Differential(1) (2)
0 0 1 12-bit Dual-edge Falling Single-ended
0 1 0 12-bit Dual-edge Rising Differential(1) (2)
0 1 1 12-bit Dual-edge Rising Single-ended
1 0 0 24-bit Single-edge Falling Single-ended
1 0 1 24-bit Single-edge Falling Differential(1) (3)
1 1 0 24-bit Single-edge Rising Single-ended
1 1 1 24-bit Single-edge Rising Differential(1) (3)
Konstantin Schauwecker
Sheet: /hdmi/
File: hdmi.kicad_sch
Title: Parallel RGB to HDMI
Size: A4
Date: 2025
Rev: 1
KiCad E.D.A. 9.0.6
Id: 3/5



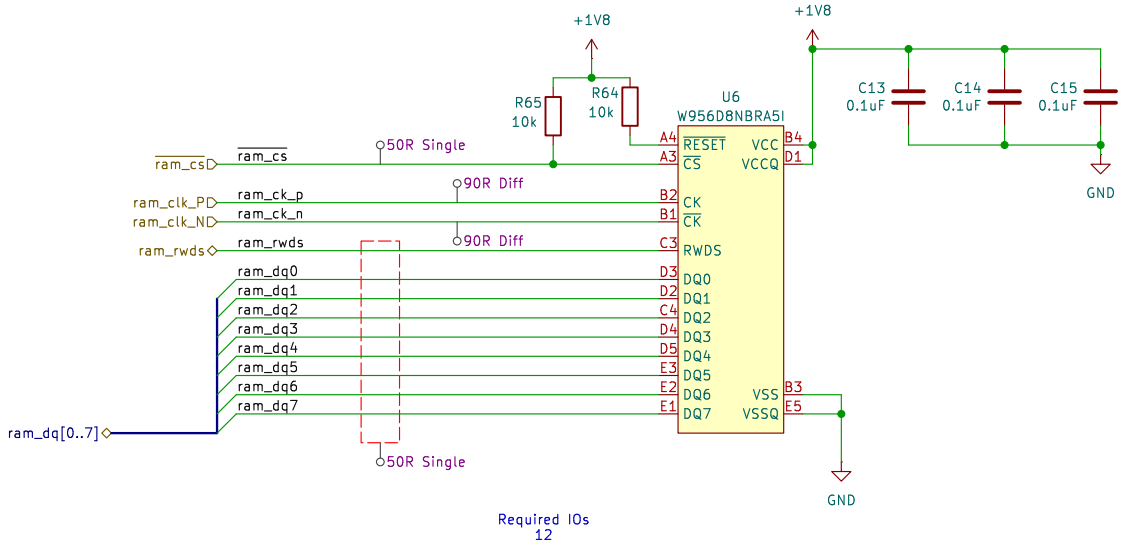
Konstantin Schauwecker

Sheet: /fmc/

File: fmc.kicad_sch

Title: FMC Connector

Size: A4	Date: 2025	**Rev: 1**
KiCad E.D.A. 9.0.6		Id: 5/5



Konstantin Schauwecker

Sheet: /ram/
File: ram.kicad_sch

Title: Hyper RAM

Size: A4	Date: 2025	**Rev: 1**
KiCad E.D.A. 9.0.6		Id: 6/5