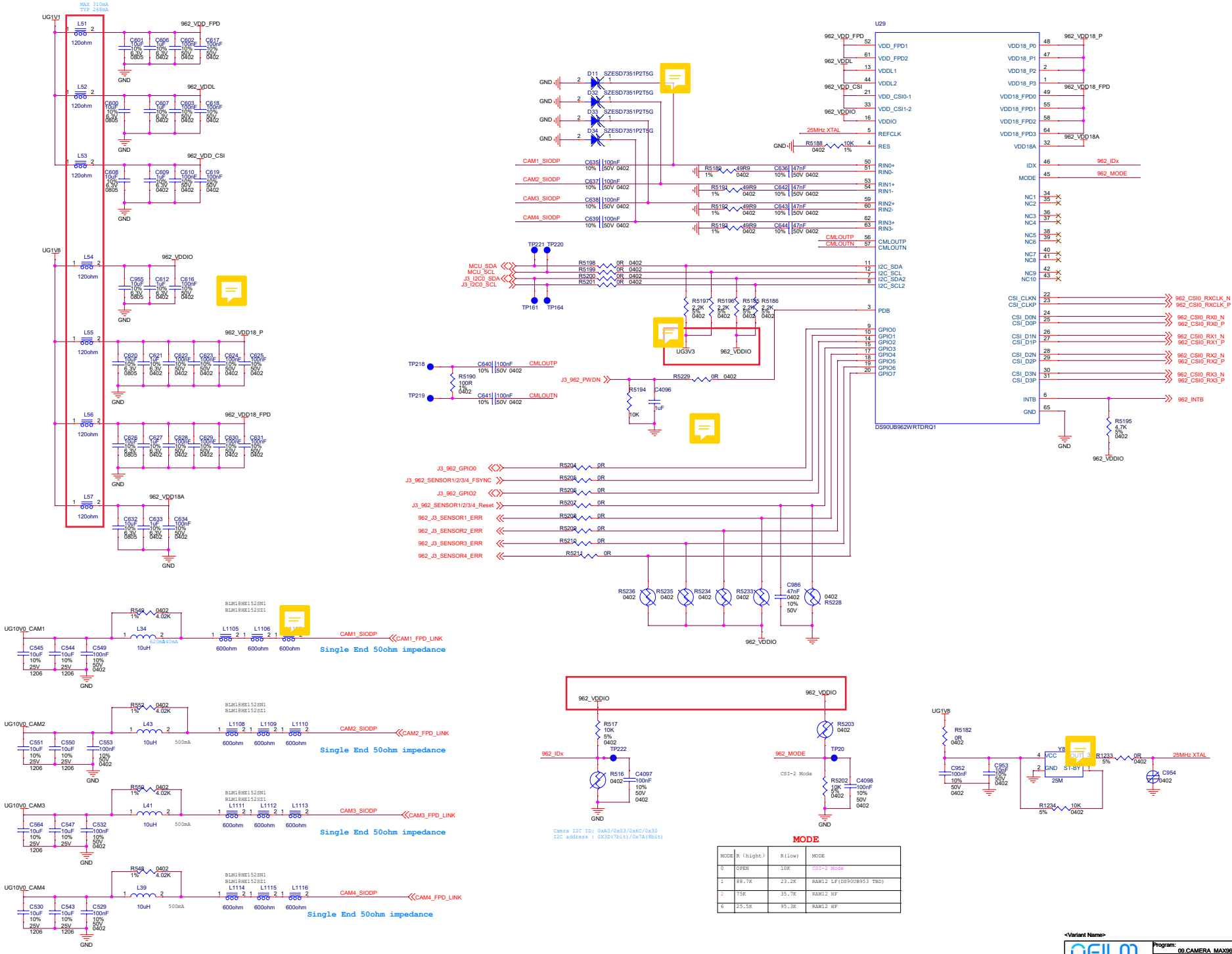
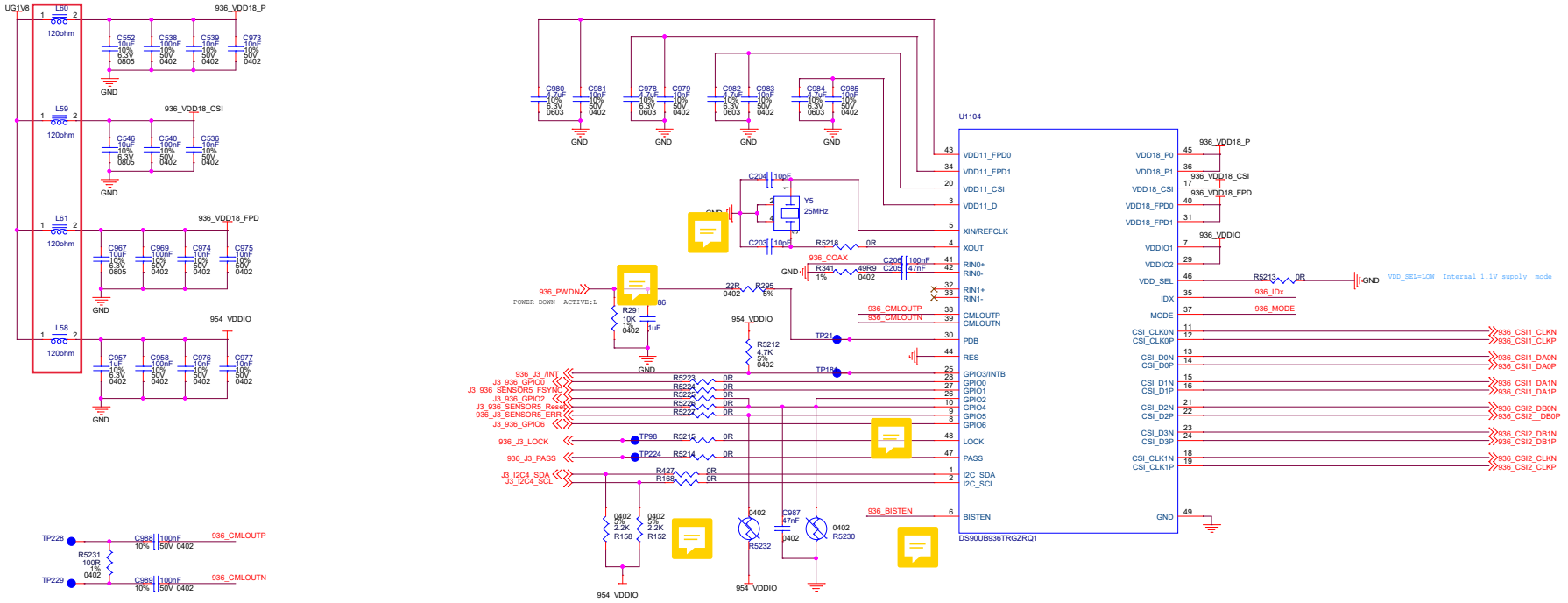
Camera_Des: DS90UB962 (Camera_Ser:DS90UB935)

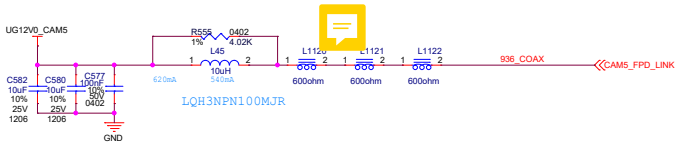


<Variant Name>

OFILM	Program: 09.CAMERA_MAX96722	
	Program No: C385	Rev: V001
Thursday, June 16, 2022	Block Title: CAMERA_MAX96722	Sheet: 09 of 24

Camera_Des: DS90UB936 (Camera_Ser:DS90UB935)

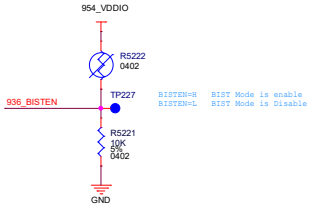




Single End 50ohm impedance

MODE

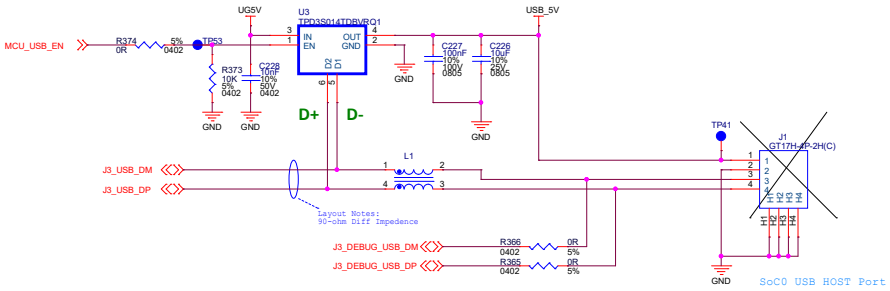
MODE	R (hight)	R(low)	MODE
0	OPEN	10K	CSI-2 Non-synchronous Back channel Mode
1	88.7K	23.2K	RAW12 LF(DS90UB953 TBD)
2	10K	OPEN	RAW10
6	78.7K	97.6K	CSI-2 Synchronous Back channel Mode



<Variant Name>

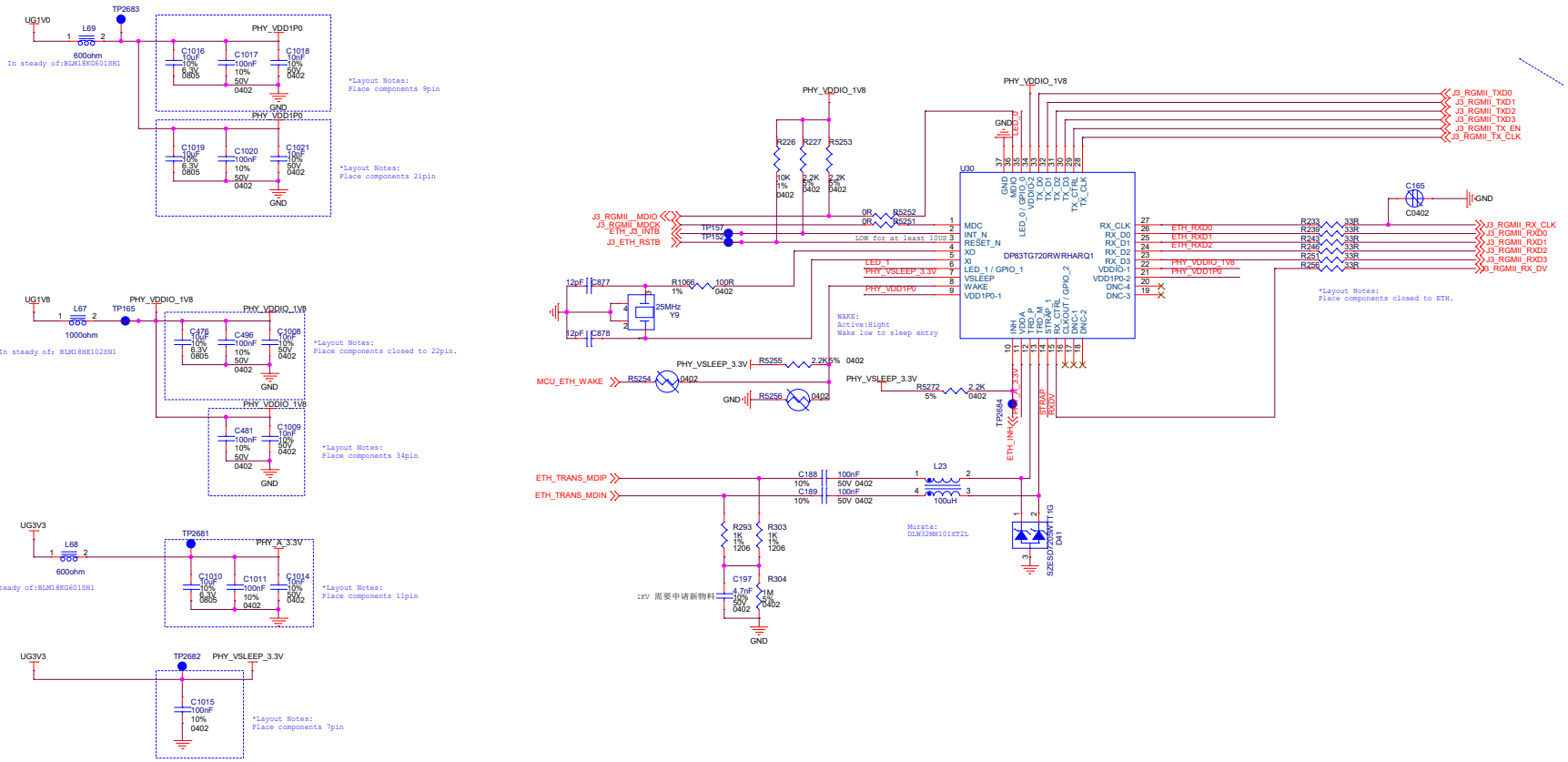
OFILM	Program: 10_CAMERA_MAX96716	
	Program No: C385	Rev: V001
Thursday, June 16, 2022	Block Title: CAMERA_MAX96716	Sheet: 10 of 24

USB 2.0



<Variant Name>

OFILM	Program: 11.USB_DEBUG	
	Program No: C673	Rev: V001
Thursday, June 16, 2022	Block Title: USB_DEBUG	Sheet: 11 of 24

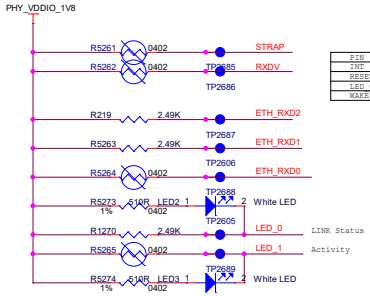


STRAP CONFIG

MODE	COMAND	IDEAL RH(kohm) for VDDIO=1.8V
1	Recommended 3-level Strap Resistor Ratios	OPEN
2		4kohm
3		0.8kohm
1	Recommended 2-level Strap Resistor Ratios	OPEN
2		2.49kohm

H/W CONFIG

PIN	BOOTSTRAP	MODE	DESCRIPTION
STRP_1	STRAP_MODE	1	PHY Address:0x00000(0)
RX_CTRL	STRAP_MODE	1	OPEN
ETH_RXD0	MAC0	1	
ETH_RXD1	MAC1	2	RGMII(TX and RX Shift Mode)
ETH_RXD2	MAC2	2	MAC[0;2]: 011
LED_0	MS_SEL	1	Slave mode
		2	Master mode
LED_1	/AUTO	1	Autonomous Operation
		2	Managed



PIN	PULL	Value/Kohm
INT	PU	9
RESET	PU	9
LED_0/1	PD	9
WAKE	PD	50

Layout Notes:

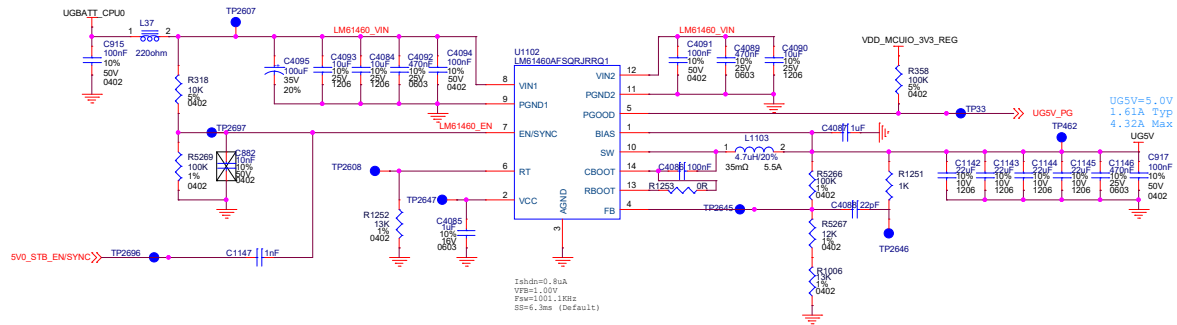
RXC/TXC/RXD[0:3]/TXD[0:3]
1) Trace length: as short as possible <10.5cm
2) Impedence control: 50-ohms+/-10% single end mode
3) Length mismatch: <100mil for each group
4) Spacing: 3W
5) Ground reference and ground guide
6) Minimum layer change
7) No stub for trace routing

MDI
1) Trace length: as short as possible
2) Impedence control: 100-ohm+/-10% differential mode
3) Length mismatch: <10mil
4) Spacing: 3W
5) No stub for trace routing

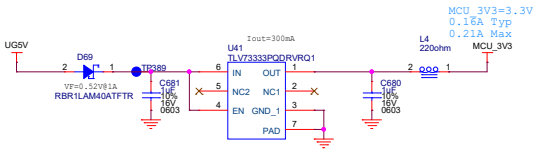
<Variant Name>

OFILM	Program: 12. 1000 ETH_PHY	
	Program No: C385	Rev: V001
Thursday, June 16, 2022	Block Title: 1000 ETH_PHY	Sheet: 12 of 24

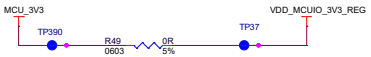
UG_5.0V



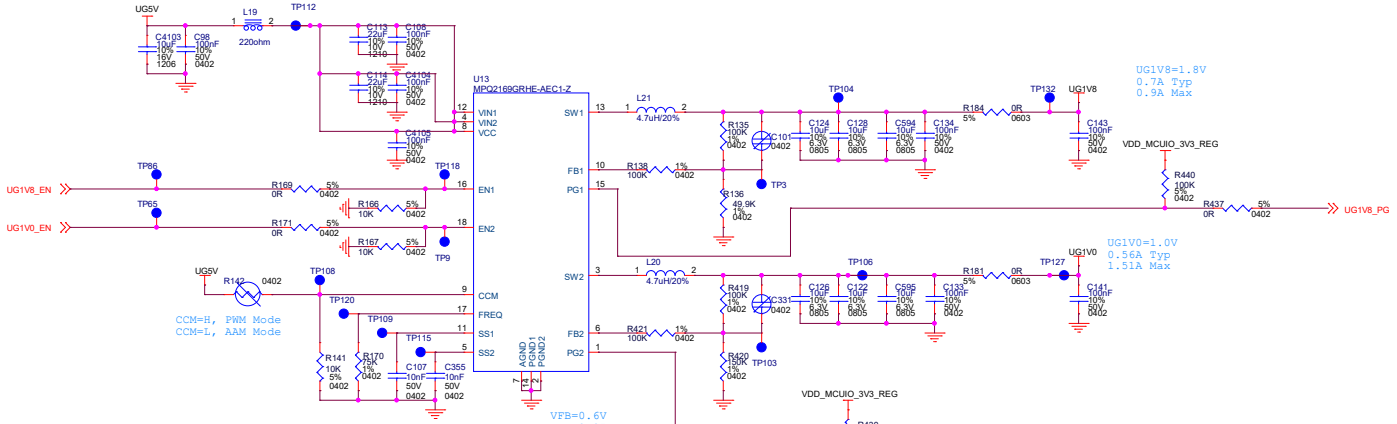
MCU_3V3



VDD_MCUIO_3V3_REG



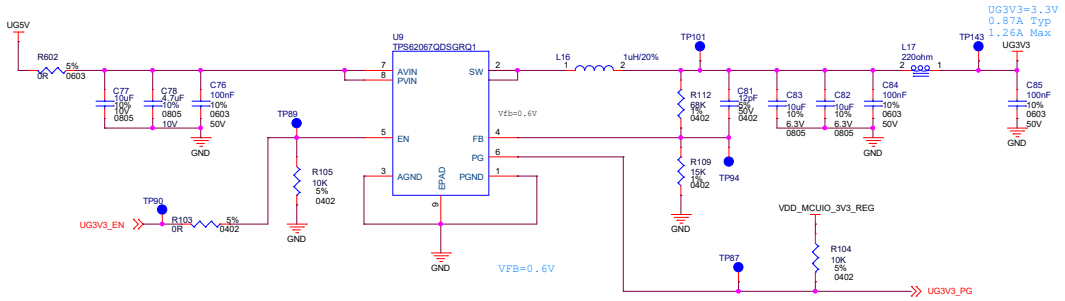
UG1V8& UG1V0



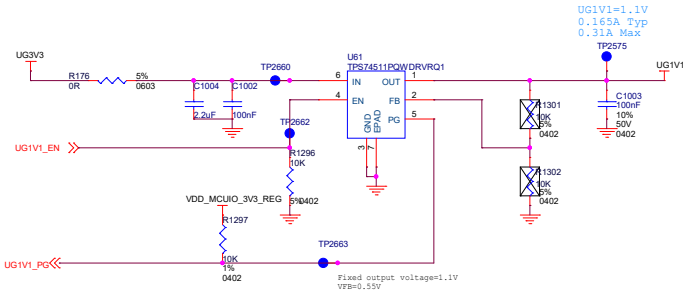
<Variant Name>

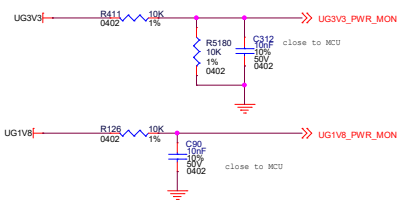
OFILM	Program: 15.SYS_POWER1	
	Program No: C385	Rev: V001
Thursday, June 16, 2022	Block Title: 15.SYS_POWER1	Sheet: 15 of 24

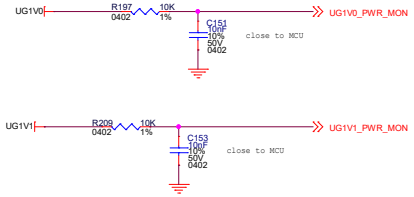
UG3V3



UG1V1



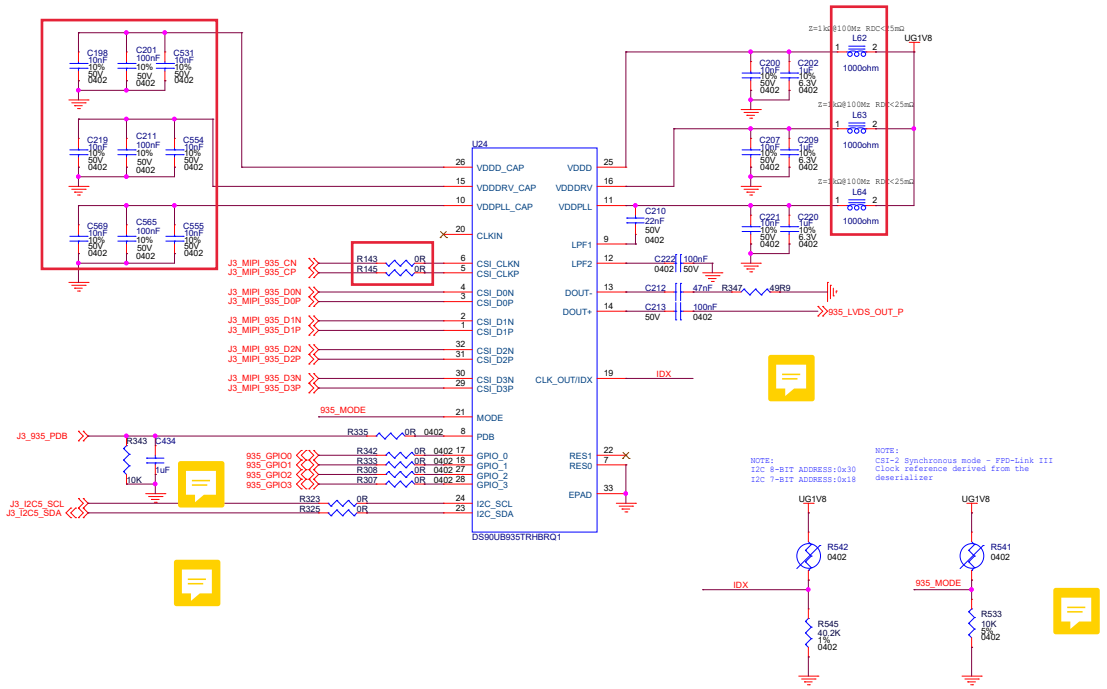




<Variant Name>

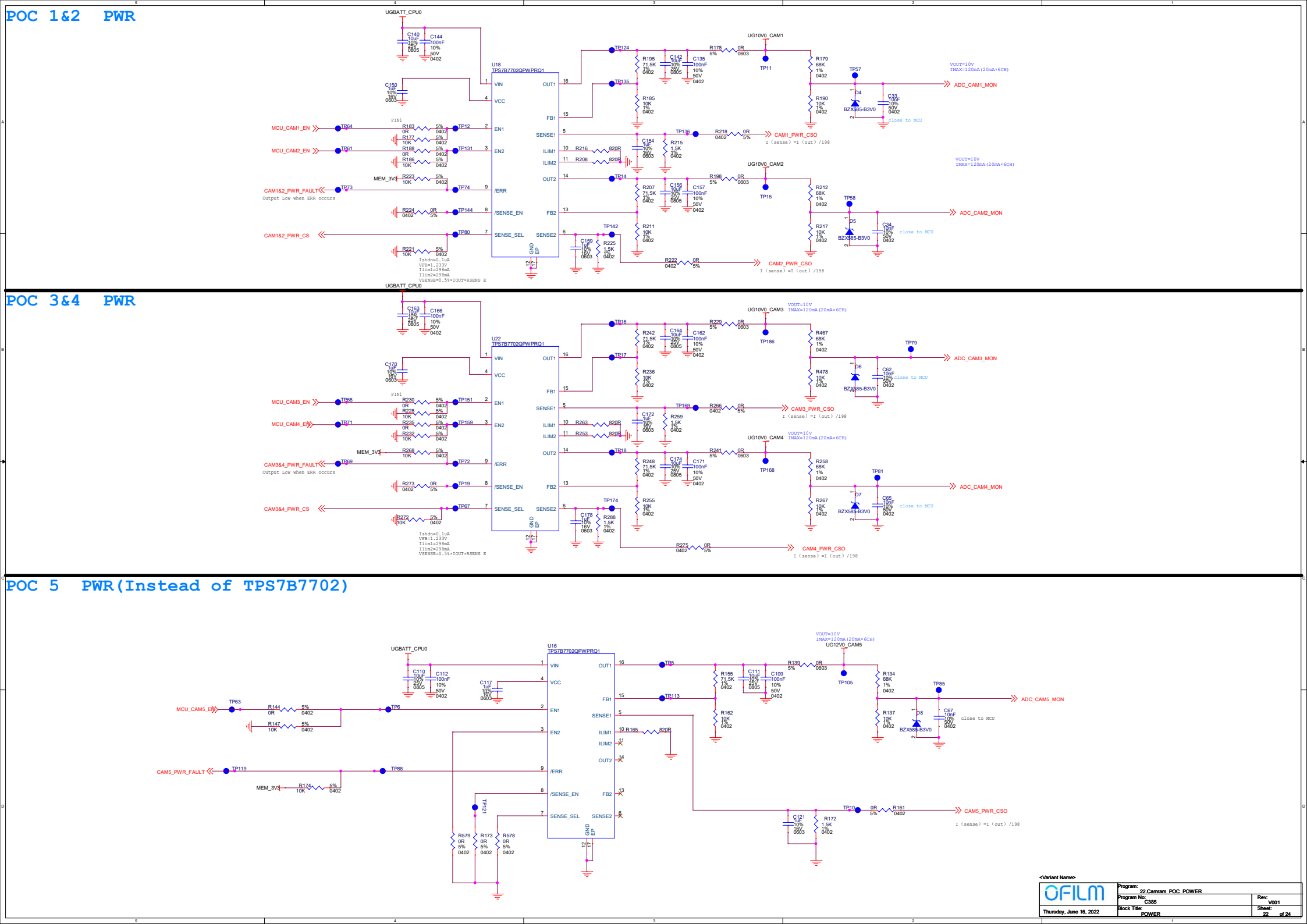
OFILM	Program: 16.SYS_POWER2	
	Program No: C385	Rev: V001
Thursday, June 16, 2022	Block Title: 16.SYS_POWER2	Sheet: 16 of 24

VIDEO_OUT_DS90UB935

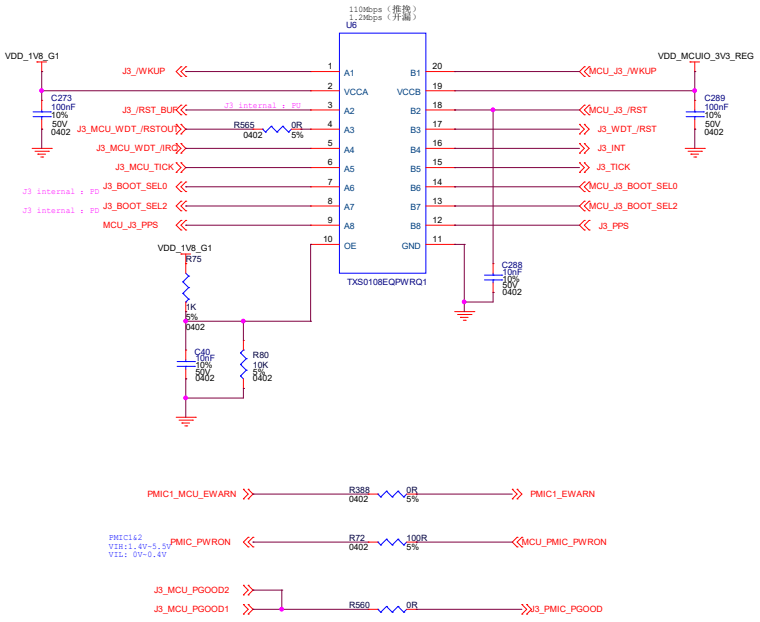


<variant_name>

OFILM	Program: 21.VIDEO_OUT_DS90UB935	
	Program No: C385	Rev: V001
Thursday, June 16, 2022	Block Title: 21.VIDEO_OUT_DS90UB935	Sheet: 21 of 24


POC 1&2 PWR
UGBATT_CPU0
U18
TPS7B7702QPWPRQ1
VIN
VCC
EN1
EN2
/ERR
/SENSE_EN
SENSE_SEL
OUT1
FB1
SENSE1
ILIM1
ILIM2
OUT2
FB2
SENSE2
GND
EP
MCU_CAM1_EN
MCU_CAM2_EN
CAM1&2_PWR_FAULT
Output Low when ERR occurs
CAM1&2_PWR_CS
MEM_3V3
UG10V0_CAM1
UG10V0_CAM2
ADC_CAM1_MON
ADC_CAM2_MON
CAM1_PWR_CSO
CAM2_PWR_CSO
I (sense) =I (out) /198
VOUT=10V
IMAX=120mA(20mA×6CH)
close to MCU
Ishdn=0.1uA
VFB=1.233V
Ilim1=298mA
Ilim2=298mA
VSENSE=0.5%×IOUT×RSENS E
POC 3&4 PWR
U22
TPS7B7702QPWPRQ1
MCU_CAM3_EN
MCU_CAM4_EN
CAM3&4_PWR_FAULT
CAM3&4_PWR_CS
UG10V0_CAM3
UG10V0_CAM4
ADC_CAM3_MON
ADC_CAM4_MON
CAM3_PWR_CSO
CAM4_PWR_CSO
POC 5 PWR(Instead of TPS7B7702)
U16
TPS7B7702QPWPRQ1
MCU_CAM5_EN
CAM5_PWR_FAULT
UG12V0_CAM5
ADC_CAM5_MON
CAM5_PWR_CSO
<Variant Name>
OFILM
Program: 22.Camram_POC_POWER
Program No: C385
Block Title: POWER
Rev: V001
Sheet: 22 of 24
Thursday, June 16, 2022

LEVEL SHFIT



<Variant Name>

OFILM	Program: 24_Level_shfit	
	Program No: C385	Rev: V001
Thursday, June 16, 2022	Block Title: 24_Level_shfit	Sheet: 24 of 24