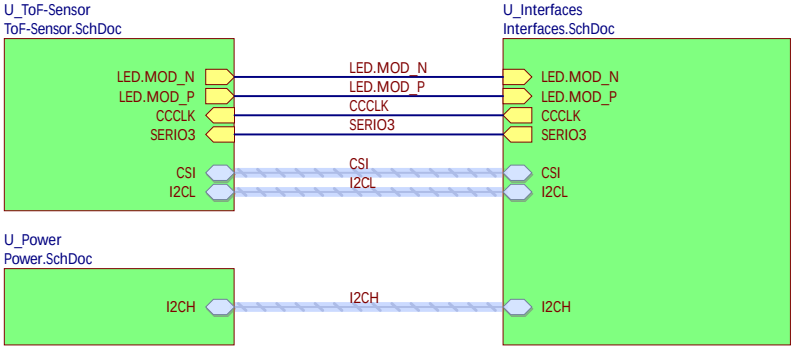


EVK75123-MLX75024

PN2017002.13
Rev: V1.3

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Top Layer

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Filename: TopLayer.SchDoc



Optional Circuitry!
EVK75024 has an integrated serializer/deserializer pair, however, in a custom application design the video output can be connected directly to an application processor.

Serializer

Mount Option1 (default)
Connected via board-to-board connector.

Mount Option2
Connected via USB3.0 Micro B connector.

IlluminationBoard Interface

Optional Circuitry!
GPIO Level Shifter

PLL-Clock Generator

Optional Circuitry!
InputCLK flexibility on the EVK has been implemented to test with different input clocks. In a custom application design the InputCLK has to be supplied by a 80MHz crystal oscillator (like U2)

Optional Circuitry!
MLX75024 has an integrated temperature sensor, the EVK has an additional external temp.sensor for comparison reasons only. The second external temp.sensor is positioned next to MLX75123 for information purposes only, it has no value in a custom application design.

Temperature Sensors

Optional Circuitry!
I2C Level Shifter
MLX75123 supports 1V8 and 3V3 for I2C communication!
MLX75123 is currently configured to operate at 1V8.

EVK75123-MLX75024

Interfaces / PLL / Temp. Sensors

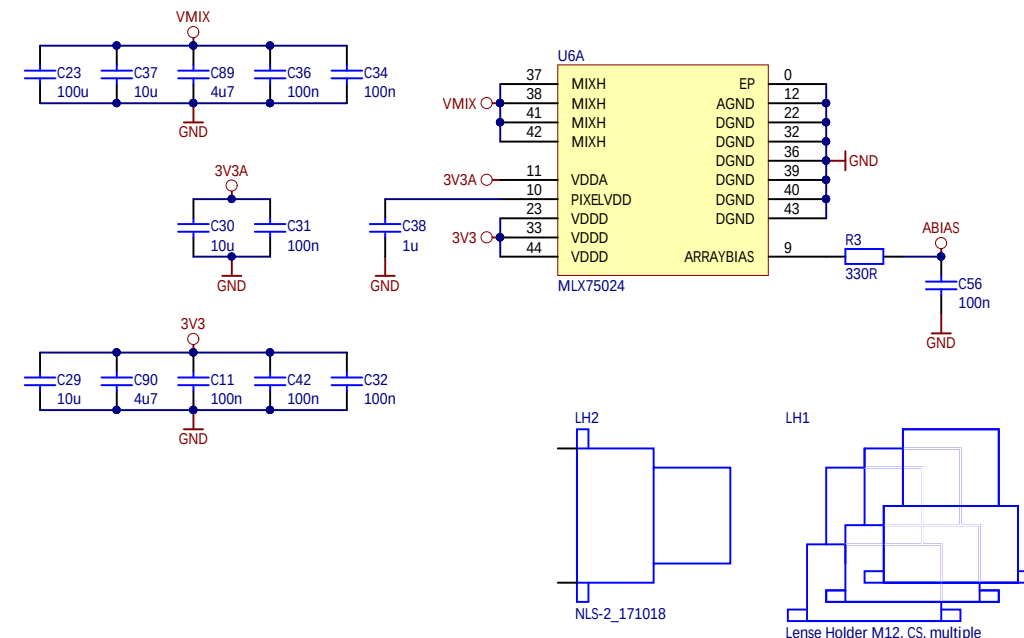
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Size: A3

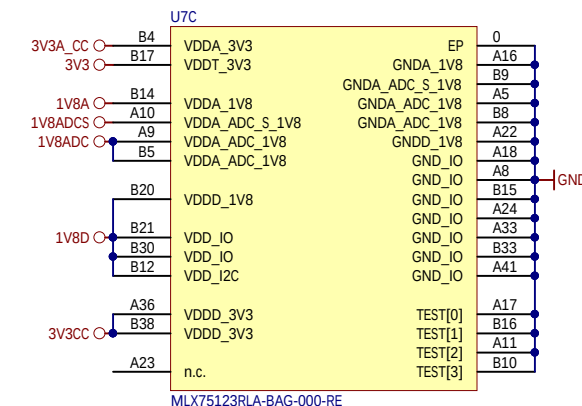
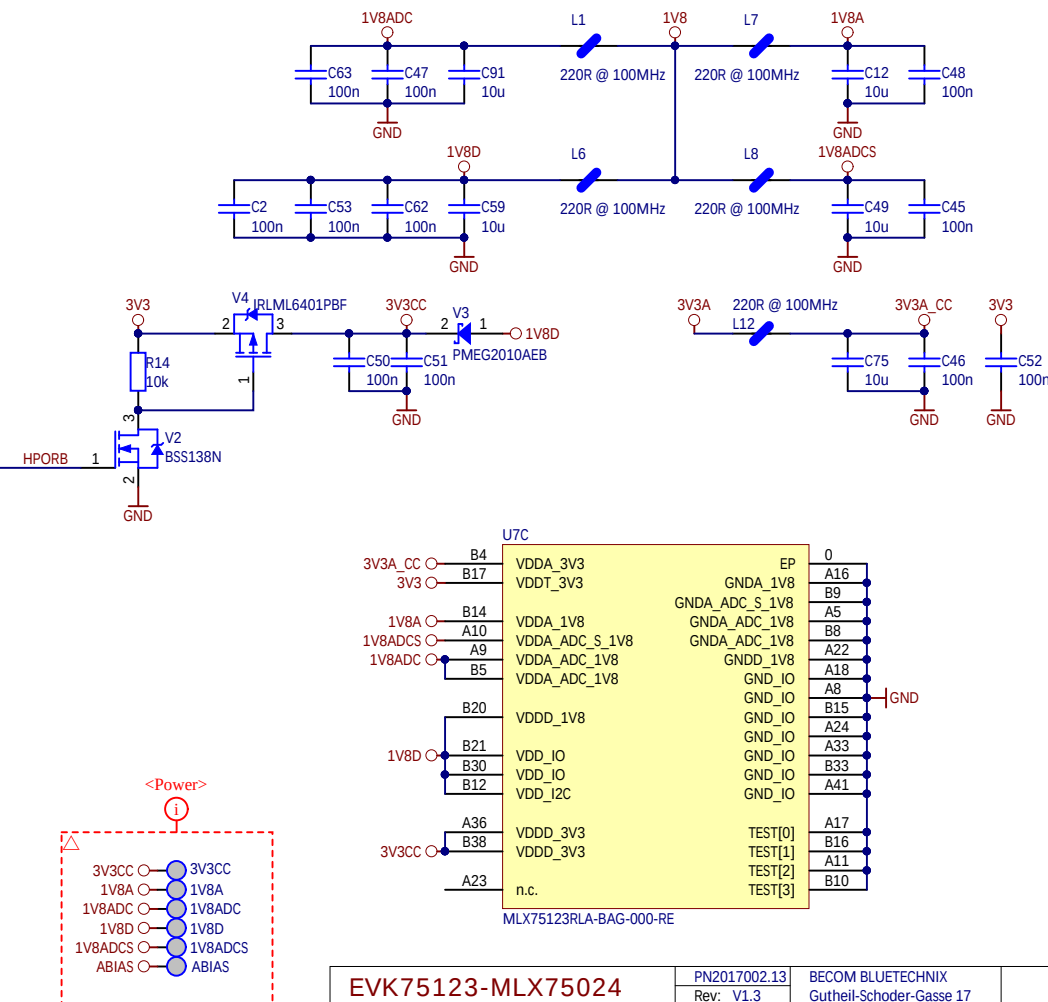
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Embedding Ideas

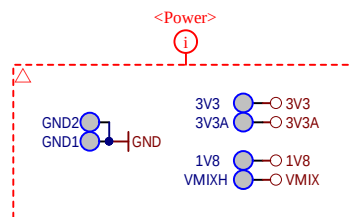
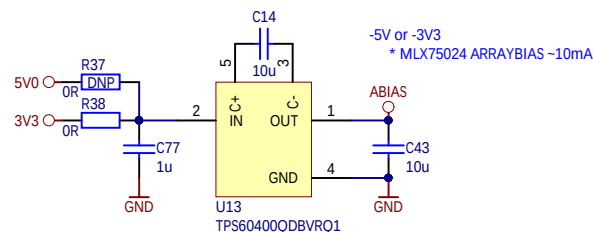
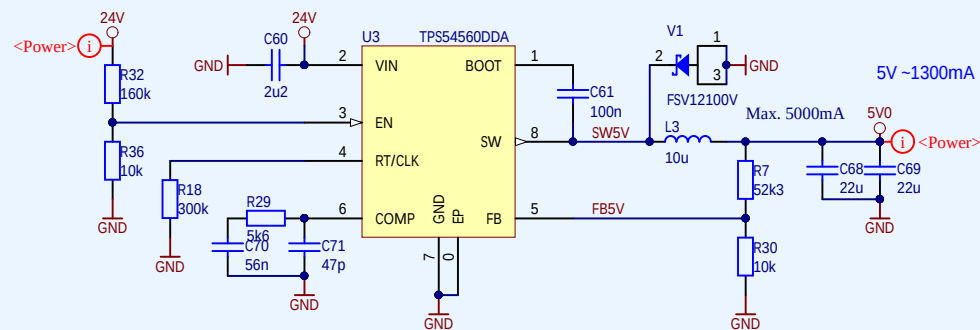


ToF-CC

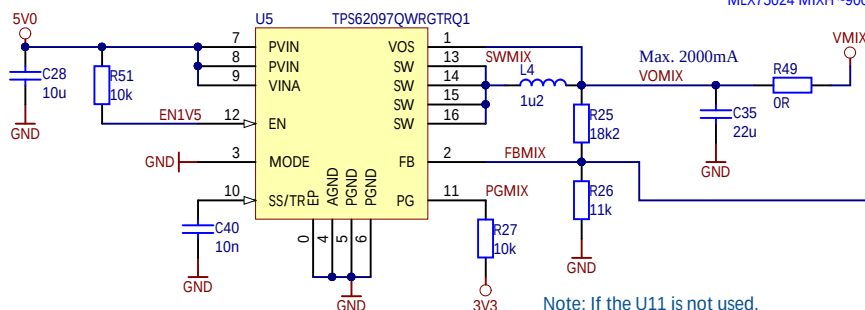


Optional Circuitry!

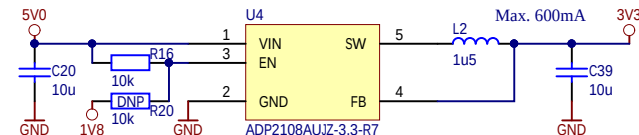
Only needed on EVK SensorBoards, because of 24V input voltage!
5V is needed as supply towards the IlluminationBoard (ic-HG)



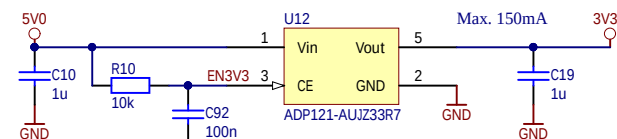
Max. 2V5
* MLX75024 MIXH ~900mA (peak)



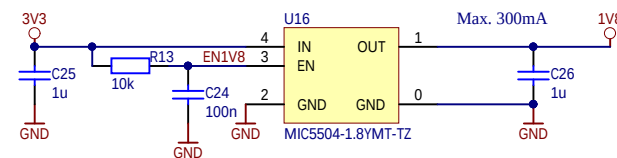
Note: If the U11 is not used,
the feedback resistor values
have to be recalculated!



3V3
* MLX75024 VDD ~20 mA
* MLX75123 VDD_3V3 ~20 mA
* 1V8 LDO (U16) ~109 mA
* SerializerCore ~150 mA
* PLL ~70 mA
* I2C Level Shifter ~3 mA
* XTAL ~8 mA
* GPIO Level Shifter



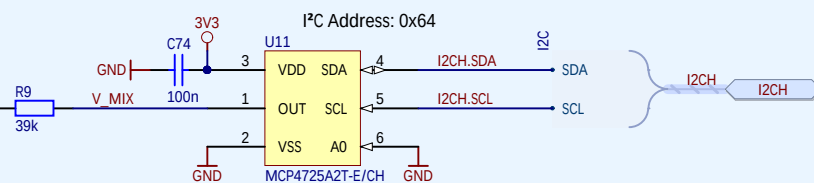
3V3 Analog
* MLX75024 VDDA ~50 mA
* MLX75123 VDDA_3V3 ~1 mA



1V8
* MLX75123 VDDA_1V8 ~5 mA
* MLX75123 VDDA_ADC_S_1V8 ~15 mA
* MLX75123 VDDA_ADC_1V8 ~50 mA
* MLX75123 VDD_1V8 ~10 mA
* MLX75123 VDDIO ~20 mA
* MLX75123 VDD_I2C ~5 mA
* SerializerIO ~2 mA
* 2x TMP108 ~2 mA

Optional Circuitry!

Integrated flexibility for analysis of MIXH voltage on the EVK only.
In a custom application design MIXH is fixed at 2V5.



EVK75123-MLX75024

Power Supplies

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