

READ ME:
This EL0258 is a bridge board which might connect to many TOF modules. Below table shows the characteristics of this board for the reference for any new module candidate in the future.

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- VGA TOF Module: PhotonIC JH-2027-00
- TOF Sensor: Samsung S5K33DXX
There are very limit spec information on the PhotonIC JH-2027-00's drawing so all these spec are captured from Samsung S5K33DXX's datasheet.

The characteristics of this board (EL0258)		The spec of S5K33DXX
3V3_TOF	- The layout trace on this board could sustain max. 400mA	- It doesn't specify the max. current consumption from the spec
3V3_VCSEL	- The layout trace on this board could sustain max. 800mA	- It doesn't specify the max. current consumption from the spec
MIPI	Support lanes	- 2 lanes
	Max. speed	- 1.6Gbps per lane
	Impedance control	- 100 ohm
I2C	Operating level	- 1.8V level
	Operating speed	- 100kHz, 400kHz, 1MHz
	Slave address	- L: 20h/21h - H: 5Ah/5Bh
MCLK	- Operating speed depends on the host bus	- 6 to 64MHz

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From the spec of S5K33DXX, it needs 1V05, 1V8 and 2V8, and on JH-2027-00 side, it only requests 1V8 and 3V3 so we could assume there are some regulators inside JH-2027-00 to handle the power requirement.

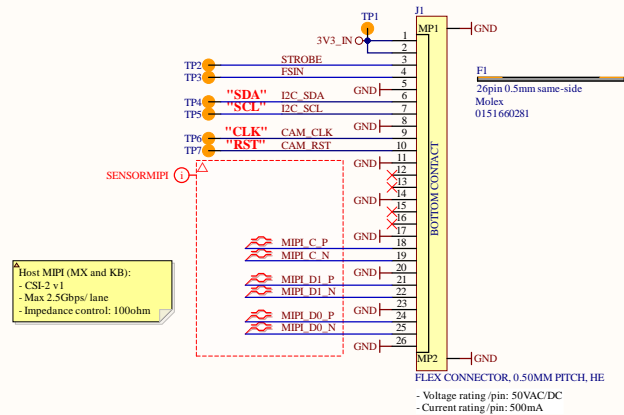
Project: *EL0258*
Current Revision: *R0M0E1*

EL0258 **Revision History:**

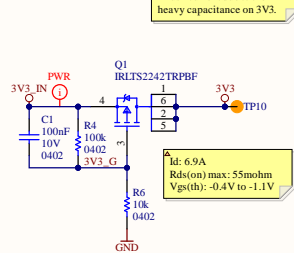
Date	Revision	Reason for Change	Changes Implemented
Feb-07-2023	R0M0E0 (Initialized)	1) This board is to bridge ToF module (Default: PhotonIC VGA module JH-B2027-00) and Luxonis OAK FFC baseboard	
Apr-18-2023	R0M0E1	1) The slave address of the ToF module JH-B2027-00 doesn't follow the spec. Thus, the slave address setting needs to be modified.	R2: DNP -> Mounted R3: Mounted -> DNP

Title <i>EL0258</i>			Luxonis Holding 1925 Harmony Park Drive Westminster, CO 80234 United States		Cannot open file C:\Users\Brian\Luxonis\Documents\EL0258
Size: <i>Tabloid</i>	Number: <i>D0000999</i>	Revision: <i>R0M0E1</i>			
Date: <i>20.06.2024</i>	Time: <i>17:00:53</i>	Sheet <i>1</i> of <i>3</i>			
Drawn by: <i>Eason Lin</i>					

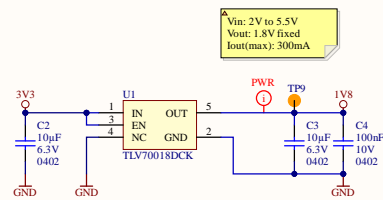
FFC CAMERA CONNECTOR (FROM OAK FFC BASEBOARD)



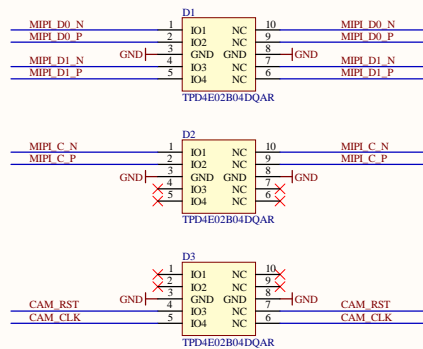
SOFT START



1V8 LDO

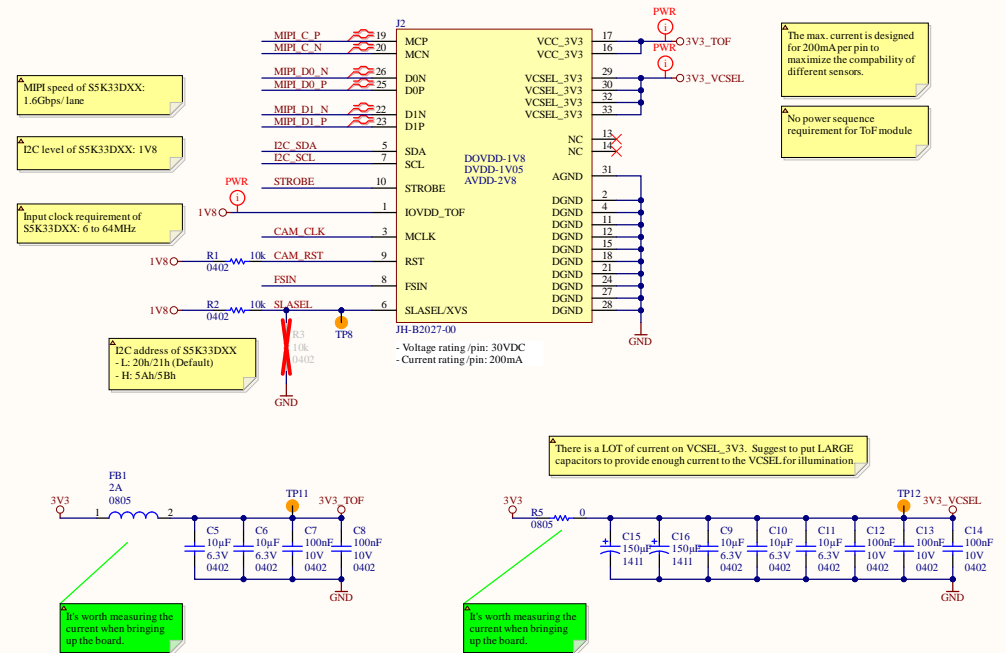


ESD PROTECTION



TO TOF MODULE

Supply Information			
Supply Name emb.		Voltage	Max Current
Module	Sensor		
DOVDD	VDD-I/O	1.8V	2.5mA
DVDD	VDD-D	1.05V	52mA
AVDD	VDD-A	2.8V	50mA
Supply CBA ext.			
VDD_VCC		3.3V	1000mA
VDD_VCSEL		3.3V	3500mA
DOVDD		1.8V	



MISCELLANEOUS



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