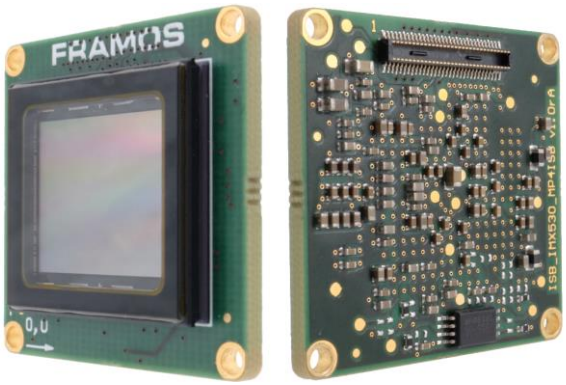
FSM-IMX530 Datasheet

Sony IMX530-AAMJ / IMX530-AAQJ Sensor Module

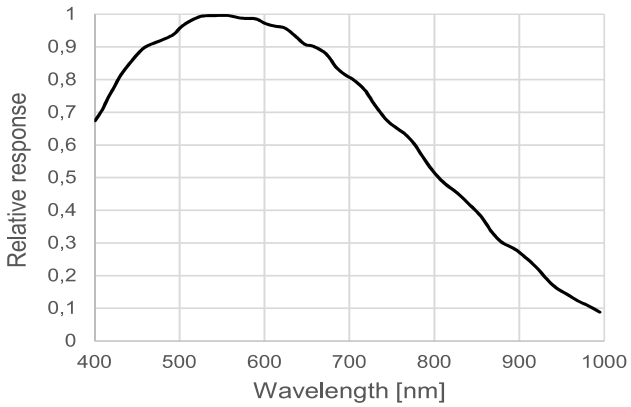
FRAMOS Sensor Module



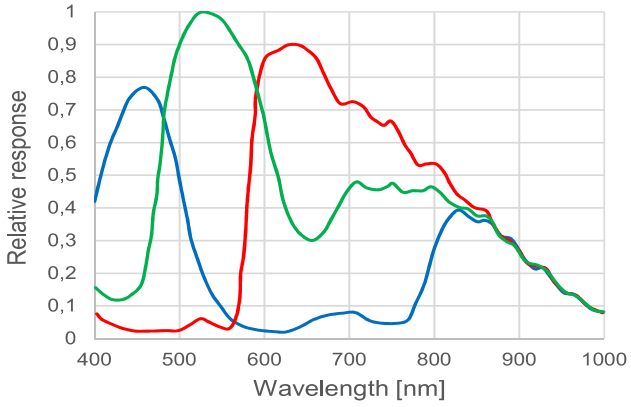
Key Benefits & Features:

- 24.5 Mpx Sony CMOS Global Shutter sensor module, ready to embed!
- All FSMs are part of a rapid prototyping ecosystem, consisting of:
  - ✓ Adapters to various processing boards
  - ✓ Design sources for deep embedding
  - ✓ Various accessories and design in services

FSM-IMX530M (Monochrome):



FSM-IMX530C (Color):



Specification	
Model Name	**FSM-IMX530M / FSM-IMX530C** (V1A)

Image Sensor	
Vendor / Name	Sony IMX530-AAMJ / IMX530-AAQJ
Shutter Type	CMOS Global Shutter
Technology / Grade	Pregius S (Gen4) / Industrial
Chromaticity	Color / Mono
Optical Format	1.2“
Pixel Size	2.74 x 2.74 µm
Max. Resolution	24.5 Mpx / 5328 x 4608 px
Framerate (max.)	SLVS-EC: 106.9 FPS (8-Lane) CSI-2: 14.7 FPS (4-Lane)
Bit Depth(s)	8 / 10 / 12 bit

Interface	
Data Interface	SLVS, SLVS-EC (1 / 2 / 4 / 8 Lane)
Communication Interface	I²C (4-wire serial)
Drive Frequency(s)	37.125 / 54 / 74.25 MHz
Input Voltages	1.1V, 1.8V, 2.9V, 3.3V
Interface Connector	Hirose DF40C-60DP-0.4V(51)
EEPROM (Sensor ID)	Yes

Mechanical	
Dimensions (HxWxD)	28 x 28

Environmental	
Operating Temperature	-30°C to +75°C (function) -10°C to +60°C (performance)
Storage Temperature	-40°C to +85°C
Ambient Humidity	20% to 95% RH, non condensing

Software Support (requires FSA with MIPI CSI-2 conversion)	
Driver	V4L2 Based Device Driver
Supported Platform(s)	**NVIDIA Jetson Family:** AGX Xavier, TX2, AGX Orin
Software Version(s)	NVIDIA JP4.6 / L4T32.6.1

Suggested Accessories & Adapters	
Compatible FSA Type	FSA-FT18/A-00G FSA-FT18/BC
Recommended Devkit(s)	FSM-IMX530x/TXA_Devkit (TX2, AGX) FSM-IMX530x/XX1_Devkit (Xilinx)
Lens Mounts	C/CS-Mount option

A matrix with compatible *Sensor Adapters (FSA)* and *Processor Board Adapters (FPA)* for various setups can be found at the end of this document.

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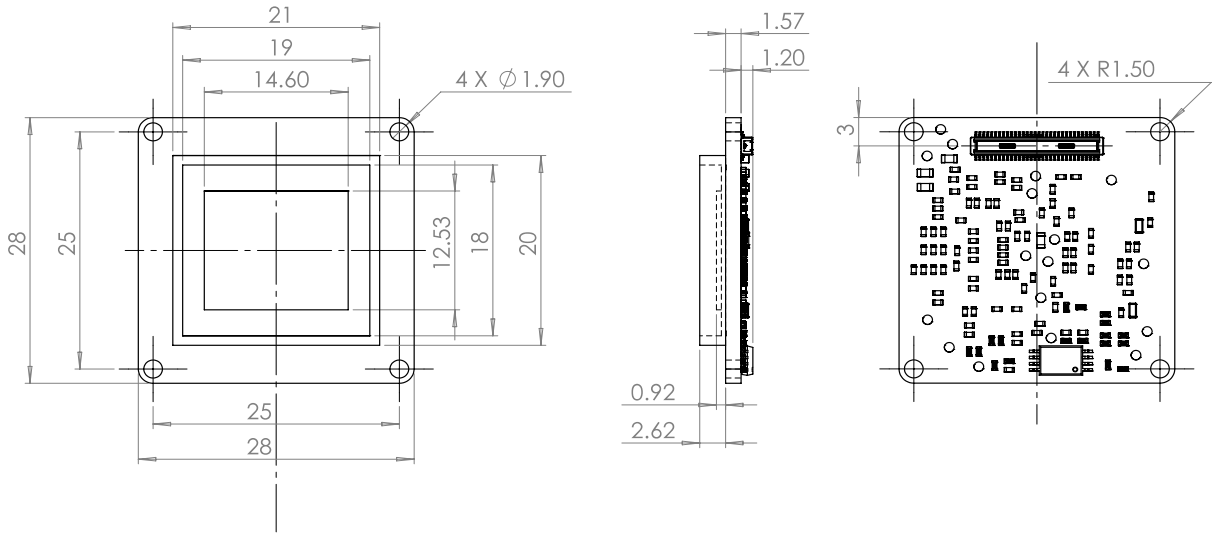
Mechanical Drawing



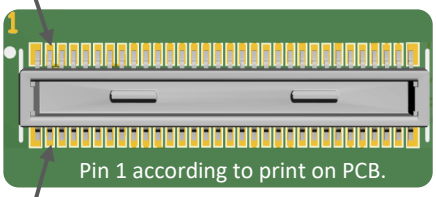
Sensor image optical center is in mechanical board center.

Connector Pinout

Type: Hirose DF40C-60DP-0.4V(51)

Mating Type: Hirose DF40HC(4.0)-60DS-0.4V(51)

Name	NC	NC	3V3	3V3	1V8	GND	GND	SDA	SDO	TOUT0	TOUT1	TOUT2	SLAMODE1	SLAMODE2	OMODE	GND	RST	MCLK	GND	D_DATA_6_P	D_DATA_6_N	GND	D_DATA_4_P	D_DATA_4_N	GND	D_DATA_2_P	D_DATA_2_N	GND	D_DATA_0_P	D_DATA_0_N
Pin	1	3	5	7	9	11	13	15	17	19	21	23	25	27	29	31	33	35	37	39	41	43	45	47	49	51	53	55	57	59



Pin	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60
Name	1V8_EEPROM	1V8_EEPROM	1V1	1V1	2V9	GND	GND	SCL	XCE	SLAMODE0	XMASTER	XTRIG2	XTRIG1	XHS	XVS	GND	D_DATA_7_P	D_DATA_7_N	GND	D_DATA_5_P	D_DATA_5_N	GND	D_DATA_3_P	D_DATA_3_N	GND	D_DATA_1_P	D_DATA_1_N	GND	D_CLK_0_P	D_CLK_0_N

Signals are routed directly from image sensor to connector. Details on specific signals are described in the respective image sensor datasheet.

SLVS and SLVS-EC share the same pins. The numbering of D_DATA_n pins is applied according to SLVS. For SLVS-EC operation, please refer to the image sensor datasheet.

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