



# FSM-IMX530 Datasheet

Sony IMX530-AAMJ / IMX530-AAQJ Sensor Module

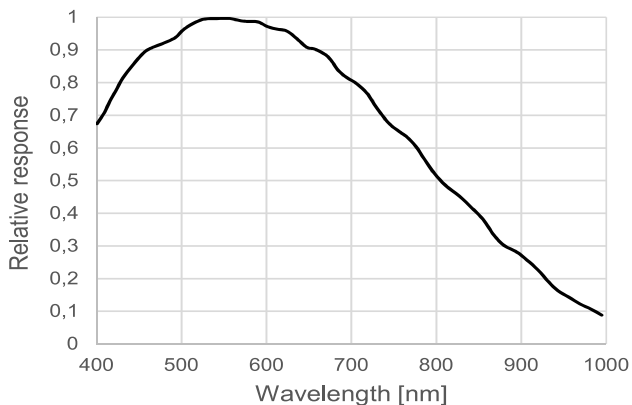
## FRAMOS Sensor Module



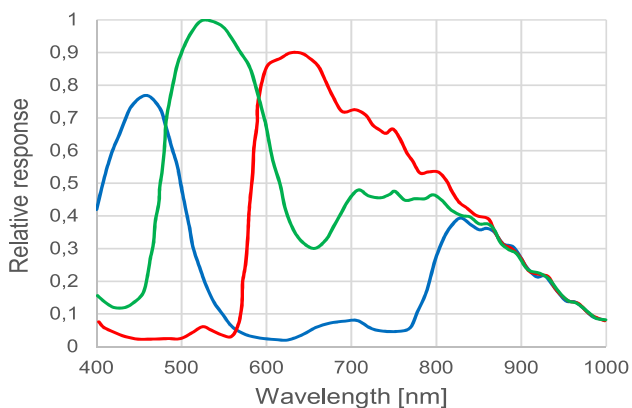
### Key Benefits & Features:

- 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):

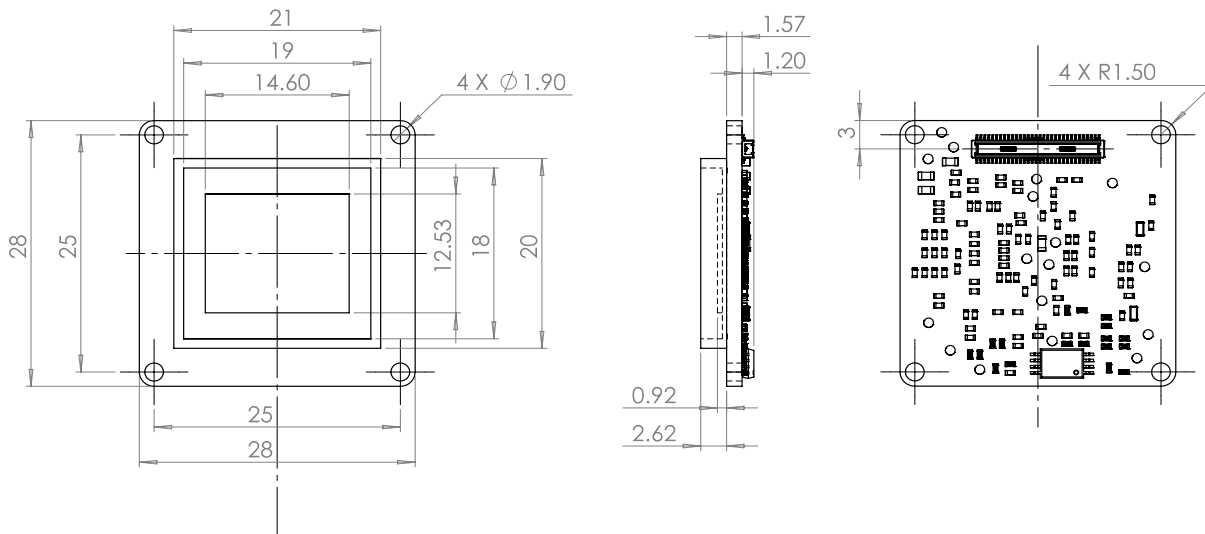


FSM-IMX530C (Color):



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 $\mu\text{m}$
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	I <sup>2</sup> C (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)	<b>NVIDIA Jetson Family:</b> 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 <i>Sensor Adapters (FSA)</i> and <i>Processor Board Adapters (FPA)</i> for various setups can be found at the end of this document.	

**Mechanical Drawing**



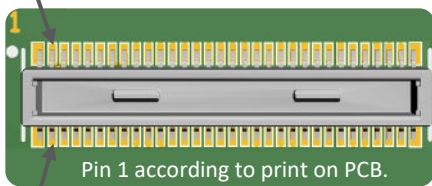
Sensor image optical center is in mechanical board center.

**Connector Pinout**

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

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

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



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