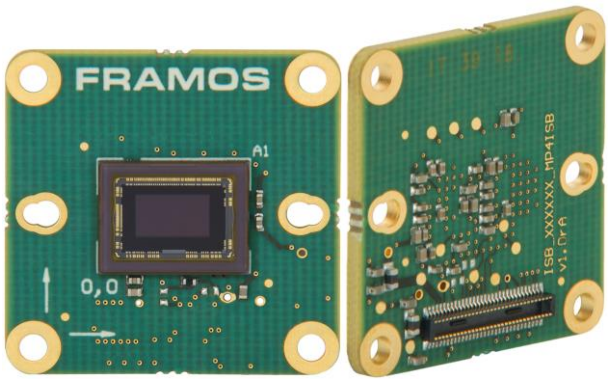
FSM-IMX415 Datasheet

Sony IMX415-AAQR Sensor Module

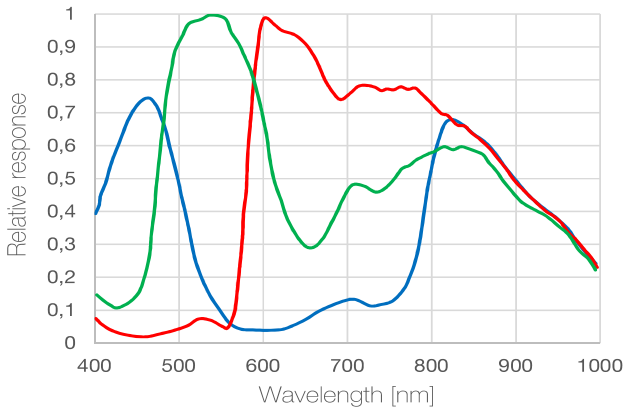
FRAMOS Sensor Module



Key Benefits & Features:

- 8.4 Mpx Sony CMOS Rolling 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-IMX415C (Color):



Specification	
Model Name	**FSM-IMX415C** (V1A)

Image Sensor	
Vendor / Name	Sony IMX415-AAQR
Shutter Type	CMOS Rolling Shutter
Technology / Grade	Starvis + NIR / Security
Chromaticity	Color
Optical Format	1/2.8“
Pixel Size	1.45 x 1.45 µm
Max. Resolution	8.4 Mpx / 3864 x 2192 px
Framerate (max.)	90 FPS (4-Lane) 44 FPS (2-Lane)
Bit Depth(s)	10 / 12 bit

Interface	
Data Interface	MIPI CSI-2 (2 / 4 Lane)
Communication Interface	I²C
Drive Frequency(s)	24 / 27 / 37.125 / 72 / 74.25 MHz
Input Voltages	1.1V, 1.8V, 2.9V
Interface Connector	Hirose DF40C-60DP-0.4V(51)
EEPROM (Sensor ID)	No

Mechanical	
Dimensions (HxWxD)	26.5 x 26.5

Environmental	
Operating Temperature	-30°C to +85°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	
Driver	V4L2 Based Device Driver Libargus / Argus Camera (ISP Tuned) Isaac ROS compliant
Supported Platform(s)	**NVIDIA Jetson Family:** AGX Xavier, Nano, TX2 (NX), Xavier NX, AGX Orin
Software Version(s)	NVIDIA JP4.6 / L4T32.6.1

Suggested Accessories & Adapters	
Compatible FSA Type	FSA-FT11/A
Recommended Devkit(s)	FSM-IMX415C/TXA_Devkit (TX2, AGX) FSM-IMX415C/NVN_Devkit (Nano, NX)
Lens Mounts	M12 or C/CS-Mount options

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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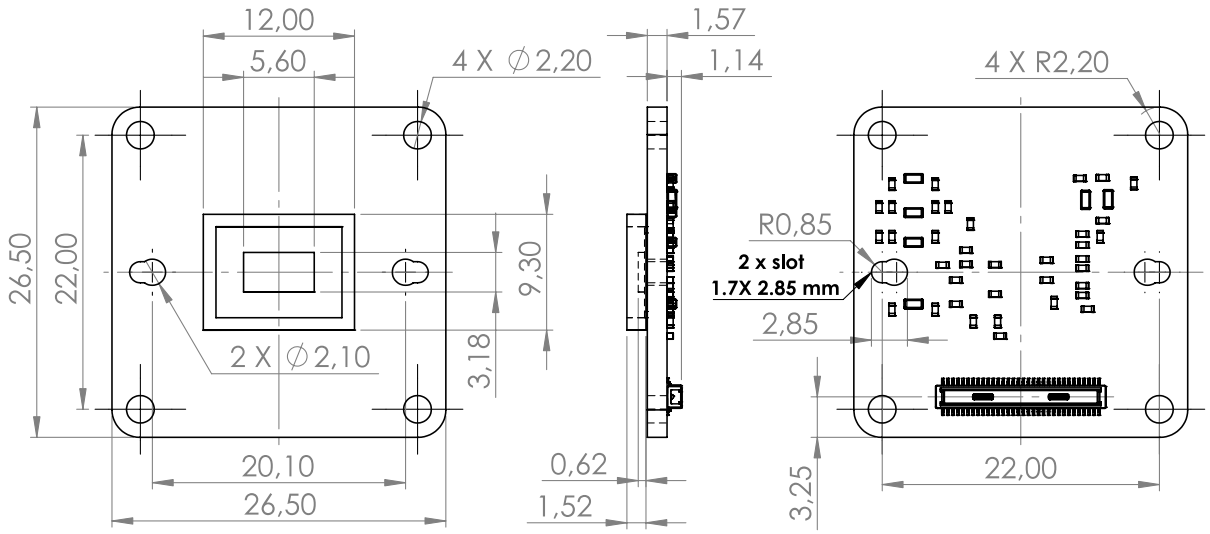
Mechanical Drawing



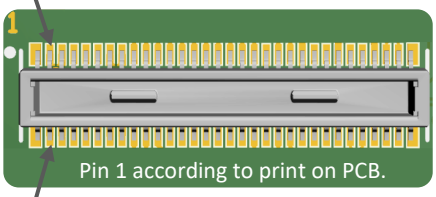
Sensor image optical center is in mechanical board center.

Connector Pinout

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

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

Name	NC	NC	2V9	2V9	1V8	GND	GND	XCLR	NC	NC	SCL	NC	XVS	SDA	XHS	XTRIG	NC	SLAMODE1	GND	INCK	NC	GND	NC	NC	GND	D_DATA_0_N	D_DATA_0_P	GND	D_DATA_2_P	D_DATA_2_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	NC	NC	1V1	1V1	NC	GND	GND	NC	NC	NC	NC	NC	NC	NC	TENABLE	TOUT	NC	SLAMODE2	GND	NC	NC	GND	D_DATA_3_P	D_DATA_3_N	GND	D_DATA_1_N	D_DATA_1_P	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.

Version v1.2d from 2022-12-16

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