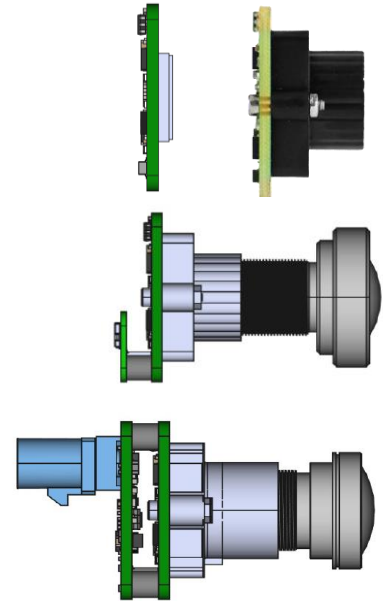




## FSM:GO - IMX662C

2MP/2K optical sensor module with Sony Starvis2 low-light image sensor.

### What is the FSM:GO?

- Family of ready to mount image sensor modules
- Paired with a standard lens from the selected range
- Focused to your specific working distance
- Assembled with your interface choice
- Simple and off-the-shelf

### Contact Information

Framos GmbH

### Technical Support:

[support@framos.com](mailto:support@framos.com)

### Website:

<https://www.framos.com>



Product Specification - Overview

Sensor Module

|                   |                                |
|-------------------|--------------------------------|
| Type              | Sony IMX662-AAQR1 (AR)         |
| Shutter Type      | CMOS Rolling Shutter           |
| Technology        | Starvis2                       |
| Spectrum          | Color (RGB)                    |
| Optical Format    | 1/2.8"                         |
| Pixel Size        | 2.9 x 2.9 µm                   |
| Resolution (max.) | 1920x1080 (1080p/2MP)          |
| Framerate (max.)* | 10Bit: 60 FPS<br>12Bit: 90 FPS |
| Bit Depth*        | 10/12 bit                      |

\*Platform dependent

Platform Support (Driver, ISP)

|        |                            |
|--------|----------------------------|
| NVIDIA | Jetson Xavier, Orin Family |
| NXP    | i.MX8MP                    |



Lens Option(s)

|                |                 |                 |                 |
|----------------|-----------------|-----------------|-----------------|
| FOV (H)        | 58°             | 86°             | 137°            |
| Optical Filter | IR cut (650 nm) | IR cut (660 nm) | IR cut (650 nm) |
| Aperture       | F/1.9           | F/2.2           | F/1.7           |
| Lens Mount     | M12 x 0.5       | M12 x 0.5       | M12 x 0.5       |

Interface Option(s)

|                    |                           |                       |
|--------------------|---------------------------|-----------------------|
| Data Interface     | MIPI CSI 2 (D-PHY, v1.2)  | GMSL3 (12Gbps)        |
| Physical Interface | PixelMate (60 pin)        | FAKRA (Single Coax)   |
|                    | Micro Coax (50 pin)       |                       |
|                    | FFC (40 pin) (unshielded) |                       |
| Communication      | I <sup>2</sup> C          | I <sup>2</sup> C      |
| Power Supply       | Two Rails (3.8V, 1.8V)    | Power over Coax (12V) |
| Power Cons. (Max)  | 540mW                     | 1.2W                  |

Mechanical Specification

|            |                           |
|------------|---------------------------|
| Dimensions | 26.5 (W) x 26.5 (D)       |
| [mm]       | H: [min 4.81 – max 57.36] |
| Housing    | None/Boardlevel           |
| Lens Mount | M12 x 0.5 (var. options)  |

Applications:

- Security and surveillance
- Drones - AGV and AGVs
- Streaming and conferencing
- Sport analytics
- Mapping, digital twins
- Industrial, robotics

Environmental

|                       |                               |
|-----------------------|-------------------------------|
| Ingress Protection    | None                          |
| Operating Temperature | -30° to +85°C*                |
| Storage Temperature   | -40°to +85°C*                 |
| Ambient Humidity      | Max 95% RH,<br>non-condensing |

\*Sensor module without lens, check [Lens Options](#) for configurations with Lens.

The comprehensive specifications are outlined within the contents of this datasheet.



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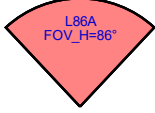
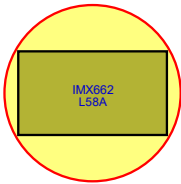
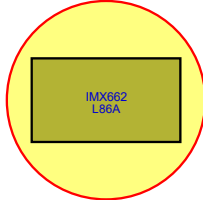
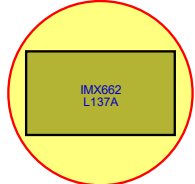
## 1 Order Code Scheme/Options

**FSM:GO-IMX662C-[LM]-[L]-[FS][FD]-[IF]-[MH]-A1Q1**

- **LM:** Lens Holder (Optional)
  - M12A: 8.6 mm Height
  - M12B: 12.5 mm Height
  - M12C: 16.2 mm Height
  - M12D: 7.9 mm Height
- **L:** Lens Type (Optional)
  - L58A: 58° HFOV (LM: M12B)
  - L86A: 86° HFOV (LM: M12A)
  - L137A: 137° HFOV (LM: M12D)
- **FS:** Focusing Service (Optional)
  - FCS: Center Focusing (L: Required)
- **FD:** Focusing Distance
  - HYP: Hyperfocal Distance
  - xxxx: Custom Distance in mm (FS: Required)
- **IF:** Interface (Mandatory)
  - PM: PixelMate (60 pin)
  - MC50A: MicroCoax (50 pin)
  - FFC40A: Flat-Flex Cable (40 pin)
  - GMSL3A: GMSL3 (FAKRA, Single Coax)
- **MH:** Mechanicals/Housing
  - None: Board Level

## 2 Lens Options

### 2.1 Module Specifications

| Lens Type (PN)      | FLP-AM-059-00-V-00                                                                 | FLP-HM-029-07-V-00                                                                  | FLP-AM-025-03-V-00                                                                   |
|---------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| Field of View [°]   |   |   |   |
| Horizontal          | <b>58</b>                                                                          | <b>86</b>                                                                           | <b>137</b>                                                                           |
| Vertical            | 31                                                                                 | 56                                                                                  | 73                                                                                   |
| Diagonal            | 68                                                                                 | 94                                                                                  | 167                                                                                  |
| Aperture (F-Number) | F/1.9                                                                              | F/2.2                                                                               | F/1.7                                                                                |
| Optical Filter      | IRC@650 (±10nm)                                                                    | IRC@660 (±10nm)                                                                     | IRC@650 (±10nm)                                                                      |
| Mount Thread        | M12 x 0.5                                                                          | M12 x 0.5                                                                           | M12 x 0.5                                                                            |
| Mating Mount (PN)   | FLA-MI-M-12522-00                                                                  | FLA-MA-M-08622-00                                                                   | FLA-MC-M-07922-00                                                                    |
| Temperature Range   | -40°to +85°C <sup>1</sup>                                                          | -40°to +85°C <sup>1</sup>                                                           | -40°to +85°C <sup>1</sup>                                                            |
| Sensor Coverage     |  |  |  |

<sup>1</sup> Image tuning and assembly are performed at 25°C. Temperature variations may affect performance and focus.

### 2.2 Lens Specification

|                          |                     |                    |               |
|--------------------------|---------------------|--------------------|---------------|
| Focal length [mm]        | 5.85                | 2.87               | 2.49          |
| Min. Object Distance [m] | 0.5                 | 0.5                | 0.7           |
| Hyperfocal Distance [m]  | 3.11                | 0.65               | 0.63          |
| Max. Image Circle [mm]   | 6.6                 | 7.43               | 6.9           |
| Back Focal Length [mm]   | 6.1                 | 3.49               | 2.87          |
| Distortion [%]           | -19.9 (F-Tan-Theta) | +3.9 (F-Tan-Theta) | -12 (F-Theta) |
| Rel. Illumination [%]    | 50                  | 62                 | 40            |
| Max. CRA [°]             | 12.6                | 15.9               | 16.8          |
| TTL [mm]                 | 23                  | 15.65              | 17.43         |
| Construction             | 6 (Glass)           | 1G4P (Hybrid)      | 3G3P (Hybrid) |

3 Focusing Service and Focusing Distance

| Specification Description | No Focusing <sup>1</sup> | Focusing to Hyperfocal                 | Focusing to Custom Distance             |
|---------------------------|--------------------------|----------------------------------------|-----------------------------------------|
| Type (Code)               | -                        | FCSHYP                                 | FCS[FD]                                 |
| Focus Distance            | N/A                      | Hyperfocal Distance [HYP] <sup>2</sup> | Custom Focus Distance [FD] <sup>3</sup> |
| Focus Target              | N/A                      | Virtual Image (Collimator)             | Virtual Image (Collimator)              |
| Focus Area <sup>4</sup>   | N/A                      | Image Center                           | Image Center                            |
| Lens Fixation             | N/A                      | Permanent (Epoxy)                      | Permanent (Epoxy)                       |

<sup>1</sup> Lens is properly screwed into the lens mount without focusing and fixation.  
<sup>2</sup> Please see "Hyperfocal Distance [m]" in Focusing Specifications – Table 2.2.  
<sup>3</sup> Please see "Min. Object Distance [m]" to infinity in Focusing Specifications – Table 2.2.  
<sup>4</sup> Please see Figure 3.1 below showing the virtual target at image center as the focus area.

Focus Area

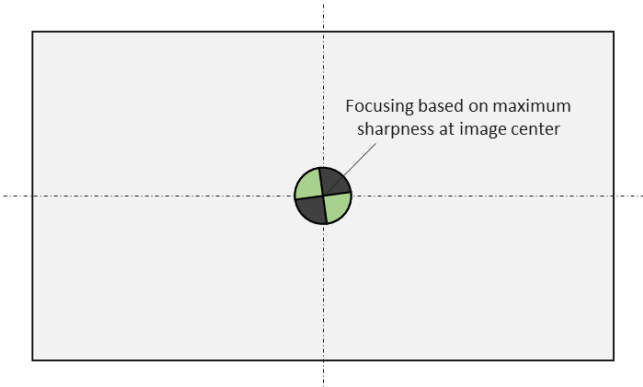


Figure 3.1



4 Lens Mount Options

|                              |                   |                       |                   |                   |
|------------------------------|-------------------|-----------------------|-------------------|-------------------|
| Specification                |                   |                       |                   |                   |
| Type (Code)                  | M12A              | M12B                  | M12C              | M12D              |
| Type (PN)                    | FLA-MA-M-08622-00 | FLA-MI-M-12522-00     | FLA-MO-M-16222-00 | FLA-MC-M-07922-00 |
| Thread Type                  | M12 x 0.5         | M12 x 0.5             | M12 x 0.5         | M12 x 0.5         |
| Height [mm]                  | 8.6               | 12.5                  | 16.2              | 7.9               |
| Barrel Diameter (Outer) [mm] | 13.8              | 13.8                  | 14.5              | 14.5              |
| Thread Length                | 4.6               | 7.9                   | 11.2              | 3                 |
| Mounting Hole Distance [mm]  | 22                | 22                    | 22                | 22                |
| Mounting Screw Size          | M1.6              | M1.6                  | M1.6              | M1.6              |
| Material                     | PC+30%GF          | ABS                   | C1200 PC/ABS      | PC+10%GF          |
| Appearance [Color]           | Black             | Black                 | Black             | Black             |
| Mating Std. Lens (Code)      | -                 | L58A<br>L86A<br>L137A | -                 | -                 |



5 Interface Options

| Type (Code)          | PM                         | MC50A                     | FFC40A                    | GMSL3A                              |
|----------------------|----------------------------|---------------------------|---------------------------|-------------------------------------|
| Description          | PixelMate                  | Micro-Coax                | Flat-Flex Cable           | GMSL/SerDes                         |
| FSM:GO Integration   | Default FSM:GO Interface   | Adapter Board (Piggyback) | Adapter Board (Piggyback) | Adapter Board (Piggyback)           |
| Interface Standard   | FRAMOS PixelMateC          | Proprietary               | Proprietary               | GMSL, FAKRA Coaxial                 |
| Connector Type       | Hirose DF40C-60DP-0.4V(51) | I-PEX 20525-050E-02       | Molex 5051104091          | Amphenol RF 2FA1-NZSP-PCBB6         |
| Pin Count [#]        | 60                         | 50                        | 40                        | 1+GND                               |
| Pin Pitch [mm]       | 0.4mm                      | 0.4mm                     | 0.5mm                     | -                                   |
| Locking Style        | Self-locking               | Mechanical locking        | Mechanical locking        | Mechanical locking                  |
| Shielding            | Yes                        | Yes                       | No                        | Yes                                 |
| Power Supply [V]     | 3V8, 1V8                   | 3V8, 1V8                  | 3V8, 1V8                  | 12V (Power over Coax)               |
| Data Lanes/Bandwidth | 4-Lanes, 2.5 Gbps (ea.)    | 4-Lanes, 2.5 Gbps (ea.)   | 4-Lanes, 2.5 Gbps (ea.)   | 1-Line at 12Gbps (10Gbps Effective) |
| Mating Connector     | Hirose DF40C-60DS-0.4V(51) | I-PEX 20525-050E-02       | Molex 5051104091          | Amphenol RF 2FA1-NZSP-PCBB6         |
| Mating Cable(s)      | FMA-FC-150/60              | FMA-CBL-MC50-0.3m         | Molex 0150200440          | FMA-CBL-FAK.LD302                   |
| Receiver Boards      | Various FPAs               | FFA-MC50/A                | FFA-FFC40/A               | FFA-GMSL-DES-V2                     |

5.1 Pinouts

**WARNING** Pin 1 is identified on the board. Orient accordingly, paying close attention to the pin number in reference to the locator view illustrated below. Failure to align correctly will cause permanent damage.

PixelMate:

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

PIN 1

Pinout

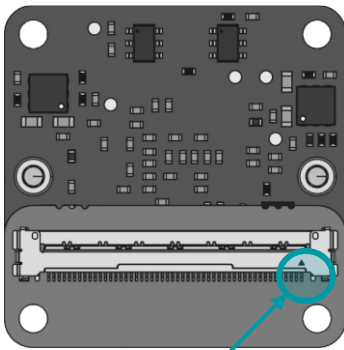
|    |          |    |         |
|----|----------|----|---------|
| 1  | 3V8_VDD  | 2  | 1V8_VDD |
| 3  | 3V8_VDD  | 4  | 1V8_VDD |
| 5  | NC       | 6  | NC      |
| 7  | NC       | 8  | NC      |
| 9  | NC       | 10 | NC      |
| 11 | GND      | 12 | GND     |
| 13 | GND      | 14 | GND     |
| 15 | IS_RST_0 | 16 | NC      |
| 17 | NC       | 18 | NC      |
| 19 | XMASTER  | 20 | TOUT1   |
| 21 | I2C_SCL  | 22 | NC      |
| 23 | NC       | 24 | NC      |
| 25 | XVS      | 26 | NC      |
| 27 | I2C_SDA  | 28 | NC      |
| 29 | XHS      | 30 | TENABLE |
| 31 | NC       | 32 | TOUT0   |
| 33 | NC       | 34 | NC      |



|    |            |    |            |
|----|------------|----|------------|
| 35 | SLAMODE0   | 36 | SLAMODE1   |
| 37 | GND        | 38 | GND        |
| 39 | NC         | 40 | NC         |
| 41 | NC         | 42 | NC         |
| 43 | GND        | 44 | GND        |
| 45 | NC         | 46 | D_DATA_3_P |
| 47 | NC         | 48 | D_DATA_3_N |
| 49 | GND        | 50 | GND        |
| 51 | D_DATA_0_N | 52 | D_DATA_1_N |
| 53 | D_DATA_0_P | 54 | D_DATA_1_P |
| 55 | GND        | 56 | GND        |
| 57 | D_DATA_2_P | 58 | D_CLK_0_P  |
| 59 | D_DATA_2_N | 60 | D_CLK_0_N  |

MC50:

Type: I-PEX 20525-050E-02



PIN 1

Pinout

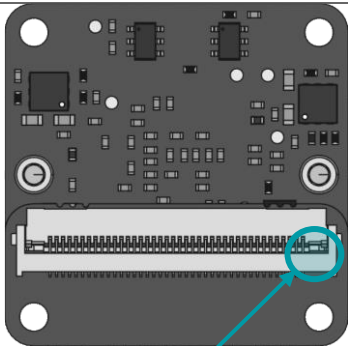
|    |            |    |          |
|----|------------|----|----------|
| 1  | GND        | 26 | I2C_SDA  |
| 2  | D_CLK_0_N  | 27 | NC       |
| 3  | D_CLK_0_P  | 28 | XVS      |
| 4  | GND        | 29 | NC       |
| 5  | D_DATA_2_N | 30 | NC       |
| 6  | D_DATA_2_P | 31 | I2C_SCL  |
| 7  | GND        | 32 | TOUT1    |
| 8  | D_DATA_1_P | 33 | XMASTER  |
| 9  | D_DATA_1_N | 34 | NC       |
| 10 | GND        | 35 | NC       |
| 11 | D_DATA_0_P | 36 | NC       |
| 12 | D_DATA_0_N | 37 | IS_RST_0 |
| 13 | GND        | 38 | GND      |
| 14 | D_DATA_3_N | 39 | NC       |
| 15 | D_DATA_3_P | 40 | NC       |
| 16 | GND        | 41 | NC       |
| 17 | NC         | 42 | NC       |
| 18 | SLAMODE1   | 43 | NC       |
| 19 | SLAMODE0   | 44 | NC       |
| 20 | NC         | 45 | GND      |
| 21 | NC         | 46 | 1V8_VDD  |
| 22 | TOUT0      | 47 | 1V8_VDD  |
| 23 | NC         | 48 | GND      |
| 24 | TENABLE    | 49 | 3V8_VDD  |
| 25 | XHS        | 50 | 3V8_VDD  |

FFC40:

Type: Molex 5051104091

Pinout

|   |            |    |          |
|---|------------|----|----------|
| 1 | GND        | 21 | NC       |
| 2 | D_CLK_0_N  | 22 | XHS      |
| 3 | D_CLK_0_P  | 23 | XVS      |
| 4 | GND        | 24 | I2C_SDA  |
| 5 | D_DATA_2_N | 25 | I2C_SCL  |
| 6 | D_DATA_2_P | 26 | XMASTER0 |
| 7 | GND        | 27 | IS_RST_0 |
| 8 | D_DATA_1_P | 28 | NC       |
| 9 | D_DATA_1_N | 29 | NC       |



PIN 1

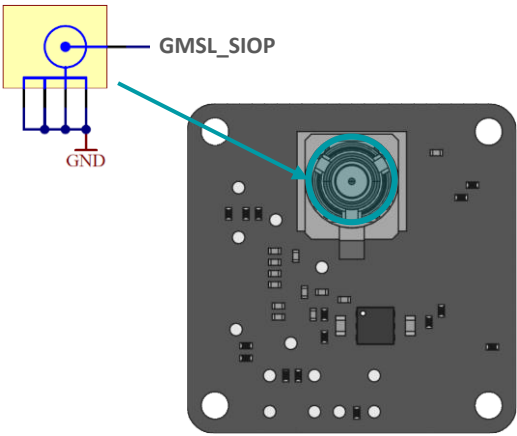
|    |            |    |         |
|----|------------|----|---------|
| 10 | GND        | 30 | NC      |
| 11 | D_DATA_0_P | 31 | NC      |
| 12 | D_DATA_0_N | 32 | NC      |
| 13 | GND        | 33 | NC      |
| 14 | D_DATA_3_N | 34 | GND     |
| 15 | D_DATA_3_P | 35 | 1V8_VDD |
| 16 | GND        | 36 | 1V8_VDD |
| 17 | NC         | 37 | GND     |
| 18 | GND        | 38 | 3V8_VDD |
| 19 | NC         | 39 | 3V8_VDD |
| 20 | NC         | 40 | GND     |

GMSL3A:

Type: 2FA1-NZSP-PCBB6

Pinout

|   |           |
|---|-----------|
| 1 | GMSL_SIOP |
| 2 | GND       |



Front View

5.2 Signal Description

3V8\_VDD

I/O Type Power  
Function 3.8V Power supply  
Connected to LDO\_IC  
DC Charact. 3V8\_VDD=3.7V-5.1V,  
max. 0.3A per line

1V8\_VDD

I/O Type Power  
Function 1.8V Power supply  
Connected to LDO\_IC  
DC Charact. 1V8\_VDD=1.7V-1.9V,  
max. 0.3A per line

**IS\_RST\_0**

|              |                             |
|--------------|-----------------------------|
| I/O Type     | IN                          |
| Function     | Image sensor reset (XCLR)   |
| Connected to | Reset_IC                    |
| I/O Standard | LVC MOS18 (1.8V)            |
| I/O State    | Normal: High,<br>Reset: Low |
| DC Charact.  | VILmax=0.36V, VIHmin=1.44V  |

**SLAMODE0/1**

|              |                                  |
|--------------|----------------------------------|
| I/O Type     | IN                               |
| Function     | I2C slave address configuration  |
| Connected to | Image Sensor, pull-down res. 10k |
| I/O Standard | LVC MOS18 (1.8V)                 |
| DC Charact.  | VILmax=0.36V, VIHmin=1.44V       |

**I2C\_SCL**

|              |                            |
|--------------|----------------------------|
| I/O Type     | IN/OUT                     |
| Function     | I2C clock                  |
| Connected to | Image Sensor, no pull-up   |
| I/O Standard | LVC MOS18 (1.8V)           |
| DC Charact.  | VILmax=0.54V, VIHmin=1.26V |

**I2C\_SDA**

|              |                            |
|--------------|----------------------------|
| I/O Type     | IN/OUT                     |
| Function     | I2C data                   |
| Connected to | Image Sensor, no pull-up   |
| I/O Standard | LVC MOS18 (1.8V)           |
| DC Charact.  | VILmax=0.36V, VIHmin=1.44V |

**XMASTER**

|              |                                  |
|--------------|----------------------------------|
| I/O Type     | IN                               |
| Function     | Image sensor master/slave        |
| Connected to | Image Sensor, pull-down res. 10k |
| I/O Standard | LVC MOS18 (1.8V)                 |
| DC Charact.  | VOLmax=0.36, VOLmin=1.44V        |

**XVS / XHS**

|              |                                                         |
|--------------|---------------------------------------------------------|
| I/O Type     | IN/OUT                                                  |
| Function     | Vertical/Horizontal sync signal                         |
| Connected to | Image Sensor, pull-up res. 10k                          |
| I/O Standard | LVC MOS18 (1.8V)                                        |
| DC Charact.  | VILmax=0.36V, VIHmin=1.44V,<br>VOLmax=0.2V, VOHmin=1.6V |

**TENABLE**

|              |                            |
|--------------|----------------------------|
| I/O Type     | IN                         |
| Function     | Test enable                |
| Connected to | Image Sensor               |
| I/O Standard | LVC MOS18 (1.8V)           |
| DC Charact.  | VILmax=0.36V, VIHmin=1.44V |

**TOUT0/1**

|              |                                    |
|--------------|------------------------------------|
| I/O Type     | OUT                                |
| Function     | Test output pins from image sensor |
| Connected to | Image Sensor                       |
| I/O Standard | LVC MOS18 (1.8V)                   |
| DC Charact.  | VILmax=0.36V, VIHmin=1.44V         |

**D\_DATA\_#\_P/N**

|              |                                                      |
|--------------|------------------------------------------------------|
| I/O Type     | OUT                                                  |
| Function     | MIPI-CSI2 output data<br>(Lane #, Positive/Negative) |
| Connected to | Image sensor                                         |
| I/O Standard | MIPI D-PHY                                           |

**D\_CLK\_0\_P/N**

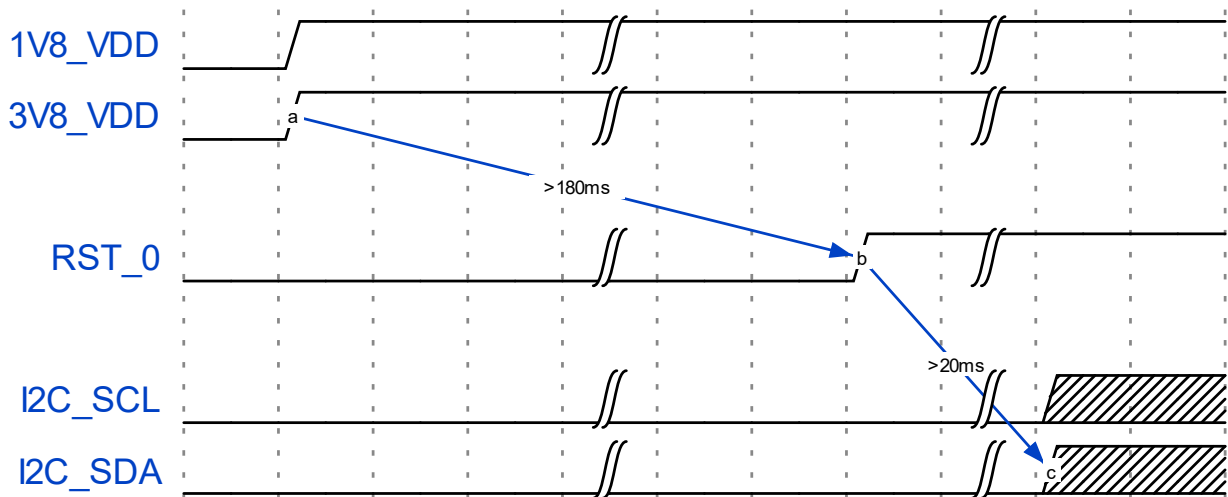
|              |                                               |
|--------------|-----------------------------------------------|
| I/O Type     | OUT                                           |
| Function     | MIPI-CSI2 output clock<br>(Positive/Negative) |
| Connected to | Image sensor                                  |
| I/O Standard | MIPI D-PHY                                    |

**5.3 I2C Address Configuration (SLAMODE)**

| SLAMODE0 | SLAMODE1 | I2C Address |
|----------|----------|-------------|
| 0        | 0        | 0x1A        |
| 0        | 1        | 0x10        |
| 1        | 0        | 0x36        |
| 1        | 1        | 0x37        |

## 5.4 Power-On Sequencing

For correct function, the host system must follow the below timing to properly power up or reset the module. 3V8\_VDD should be generated after 1V8\_VDD, or, ideally at the same time. RST\_0 pin low after powering up PixelMate voltage rails; **180 ms**.



### Legend

Times and voltages which are represented in the above figure are as follows:

- 3V8\_VDD - 3V8 voltage supply from host
- 1V8\_VDD - 1V8 voltage supply from host
- RST\_0 - reset signal driven from the host
- I2C\_SCL - I2C Clock
- I2C\_SDA - I2C Data

## 6 Mechanical Drawings

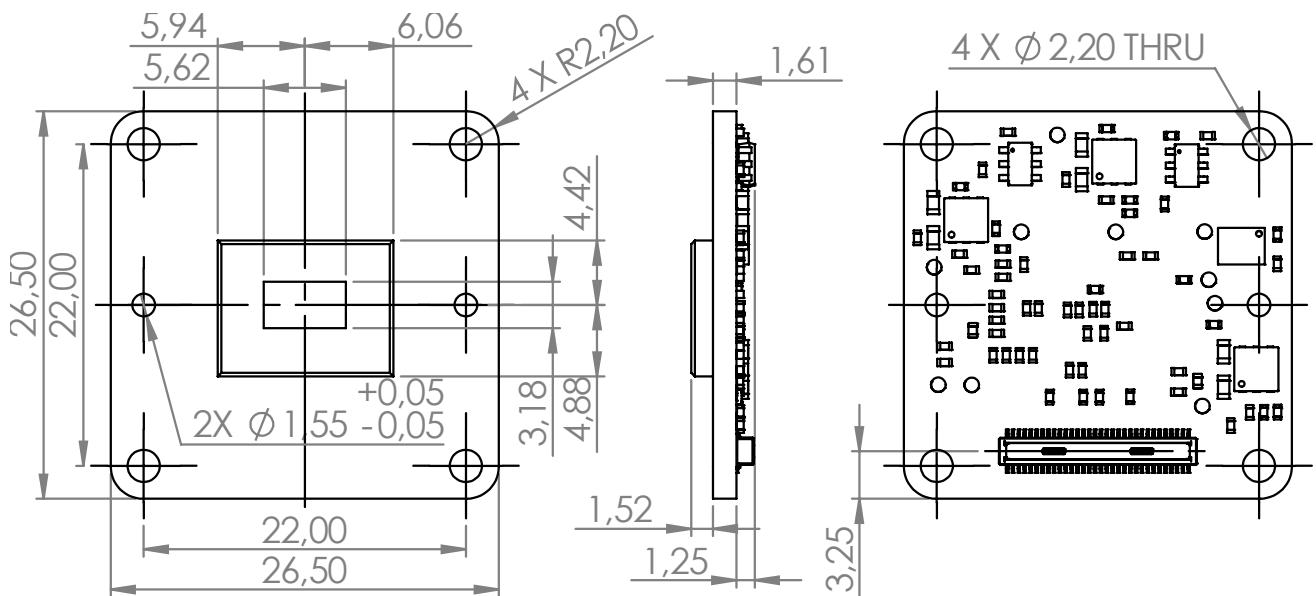
The following chapter contains the measured drawings split into the core segments of the product.

- Bare Sensor Module
- with Lens
- with Lens Mount only
- with Interface Adapter

All measures refer to the backside of the sensor module PCB and allow this way to obtain the overall measures. Unit of measurements is millimeters [mm].

### 6.1 Sensor Module (Bare FSM:GO)

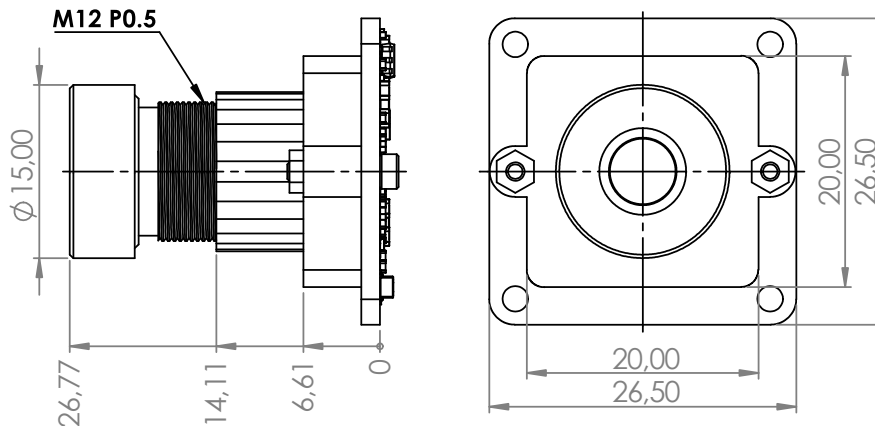
Interface: PixelMate



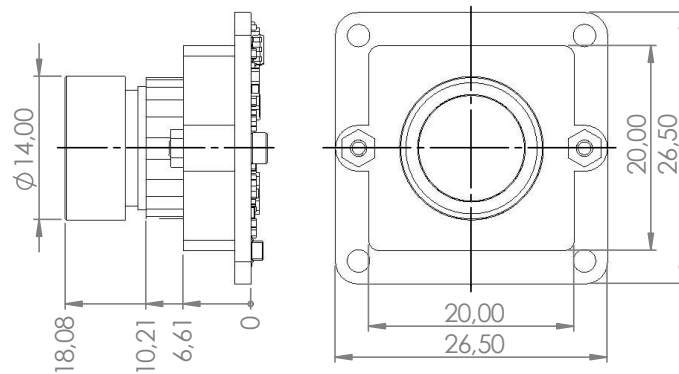
"Board center is sensor active image center"

## 6.2 FSM:GO with Lens

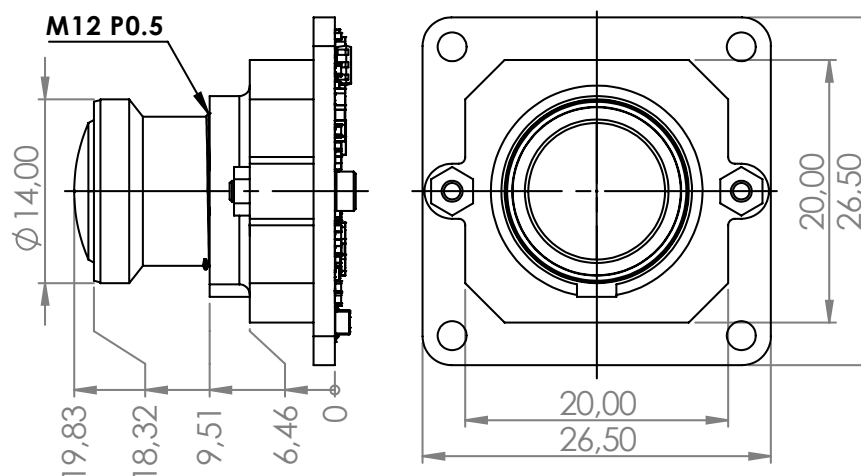
**L58A:** 58° HFOV (LH: M12B)



**L86A:** 86° HFOV (LH: M12A)

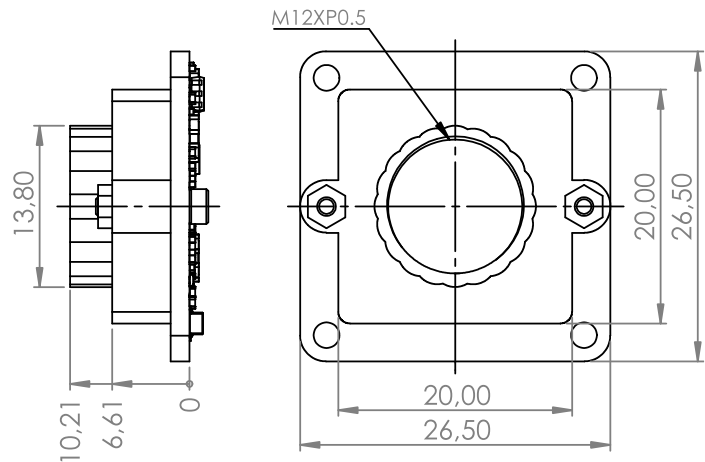


**L137A:** 137° HFOV (LH: M12D)

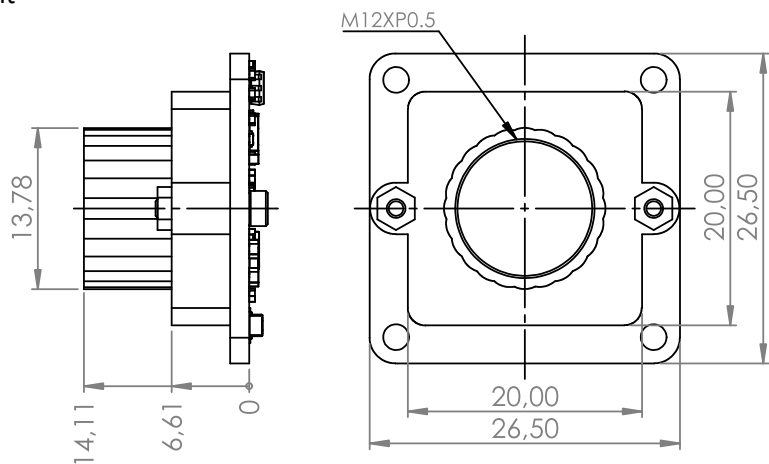


6.3 FSM:GO with Mount

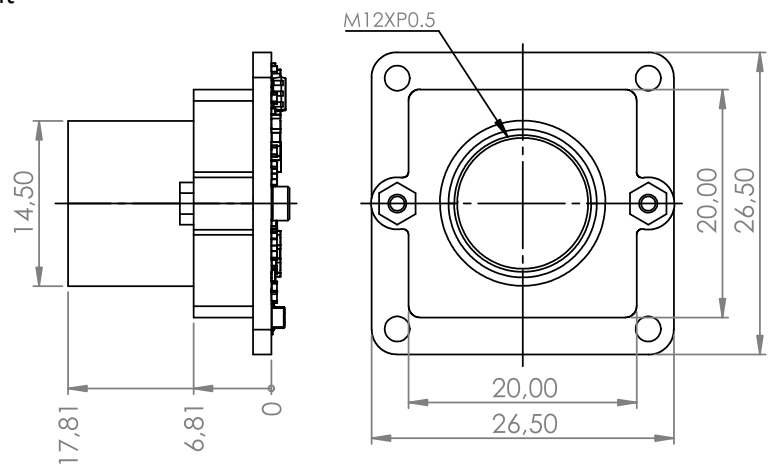
M12A: 8.6 mm Height



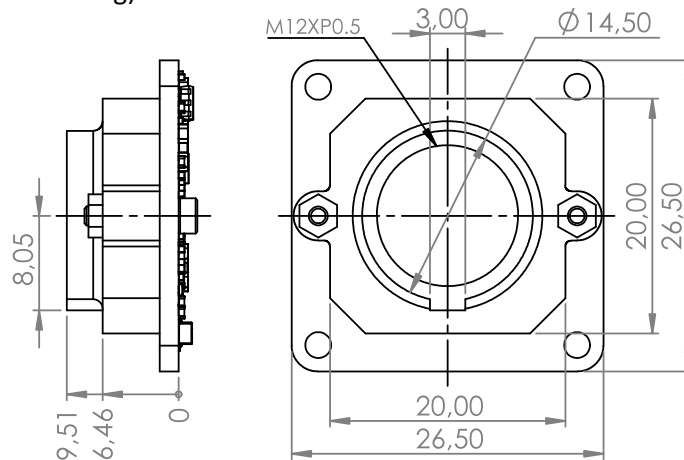
M12B: 12.5 mm Height



M12C: 16.2 mm Height



**M12D:** 7.9 mm Height (wider fitting)

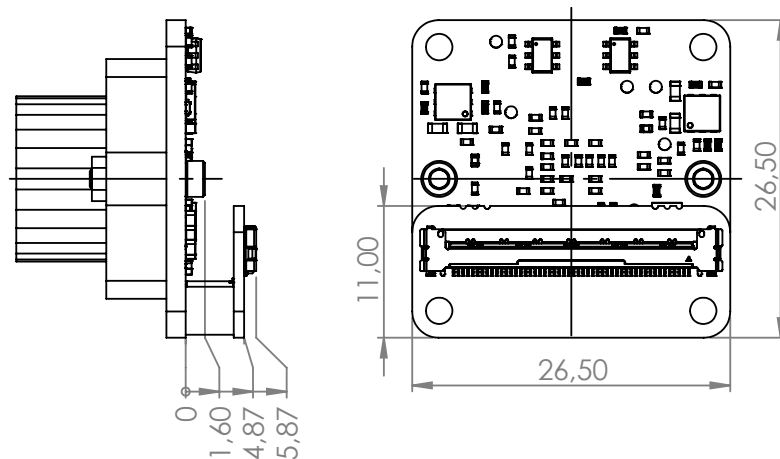


#### 6.4 FSM:GO with Interface Adapter

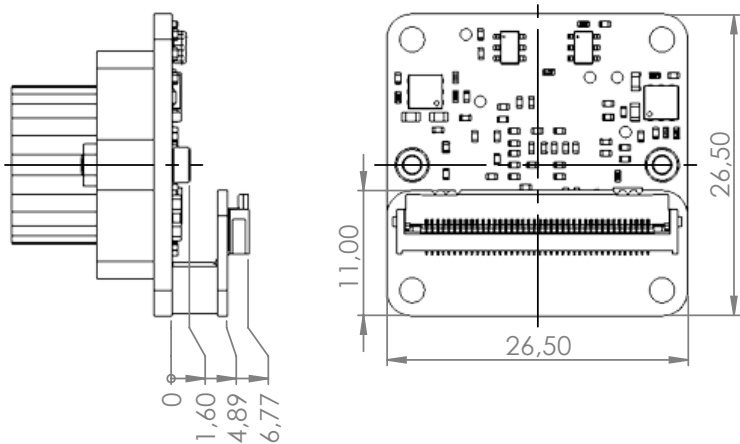
**PM:** See bare "Sensor Module"

**NOTE** Interface adapters fixed with screws for transport, mounting screws not included in product photos and drawings.

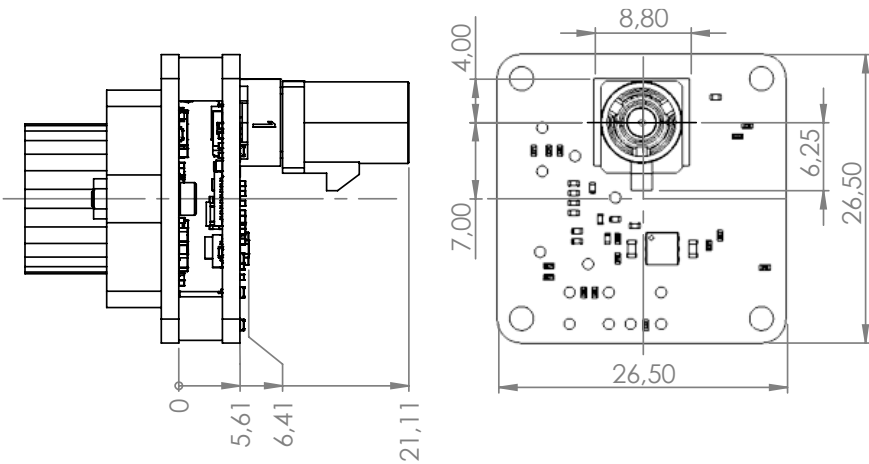
**MC50A:** MicroCoax (50 pin)



FFC40A: Flat-Flex Cable (40 pin)



GMSL3A (FAKRA, Single Coax)



## 7 Platform and Software Specification

### 7.1 Nvidia Jetson Family Support

#### Supported Platforms:

| Image sensor | Jetson AGX Xavier Devkit |      | Jetson Xavier NX Devkit |      | Jetson AGX Orin Devkit |      | Jetson Orin Nano and Jetson Orin NX Devkits |      |
|--------------|--------------------------|------|-------------------------|------|------------------------|------|---------------------------------------------|------|
|              | Support (Native)         | GMSL | Support (Native)        | GMSL | Support (Native)       | GMSL | Support (Native)                            | GMSL |
| IMX662       | +                        | +    | +                       | +    | +                      | +    | +                                           | +    |

#### Supported Features:

| Mode | Resolution | Description  | 2lane/10b [FPS] | 2lane/12b [FPS] | 4lane/10b [FPS] | 4lane/12b [FPS] |
|------|------------|--------------|-----------------|-----------------|-----------------|-----------------|
| 0    | 1920x1080  | CROP         | 97.8            | 65.2            | 97.8            | 65.2            |
| 1    | 1280x720   | 720P MODE    | 142.4           | 94.9            | 142.4           | 94.9            |
| 2    | 640x480    | CROP         | 204.5           | 136.4           | 204.5           | 136.4           |
| 3    | 968x550    | BINNING H2V2 | -               | 96.1            | -               | 96-1            |

#### Implemented Sensor Features:

| Sensor Feature               | Support |
|------------------------------|---------|
| Gain (Analog/Digital)        | +       |
| Frame Rate                   | +       |
| Exposure                     | +       |
| Flip/Mirror                  | -       |
| IS Mode (Master/Slave)       | +       |
| Sensor Mode ID               | +       |
| Test Pattern                 | +       |
| Black Level                  | +       |
| Clear HDR                    | -       |
| Broadcast                    | +       |
| Data Rate                    | +       |
| Synchronizing (Master/Slave) | +       |

#### Supported ISP Features:

| Image Signal Processing Feature   | Support |
|-----------------------------------|---------|
| Demosaic                          | +       |
| Black Level Compensation          | +       |
| Bad Pixel Correction              | +       |
| Color Correction                  | +       |
| Auto White Balance (A, TL84, D65) | +       |
| Manual White Balancing            | +       |
| Lens Shading/Falloff Correction   | +       |
| Noise Reduction                   | +       |

|                                                            |   |
|------------------------------------------------------------|---|
| Sharpening                                                 | + |
| Auto Exposure, Gain, Gamma,<br>Color/Tone, Contrast Tuning | + |

## 7.2 NXP i.MX8MP Support

### Supported Platforms:

| i.MX 8M PLUS Devkit |        |                  |      |
|---------------------|--------|------------------|------|
| Image sensor        | Driver | Support (Native) | GMSL |
| IMX662              | IMX662 | +                | -    |

### Supported Features:

| Mode | Resolution | Description   | 4lane/10b [FPS]                | 4lane/12b [FPS] |
|------|------------|---------------|--------------------------------|-----------------|
| 0    | 1920x1080  | FULL_PIX      | 60 (594 Mbps)<br>60 (720 Mbps) | 60 (594 Mbps)   |
| 1    | 1280x720   | CROP          | 60 (594 Mbps)<br>60 (720 Mbps) | 60 (594 Mbps)   |
| 2    | 960x540    | BINNING       | -                              | 60 fps/594 Mbps |
| 3    | 640x480    | BINNING + ROI | -                              | 60 fps/594 Mbps |

### Implemented Features:

| Supported Features        | FSM:GO-IMX662C |
|---------------------------|----------------|
| Gain (Analog/Digital)     | +              |
| Frame Rate                | +              |
| Exposure                  | +              |
| Flip/Mirror               | -              |
| IS Mode (Master/Slave)    | -              |
| Sensor Mode ID            | +              |
| Test Pattern              | +              |
| Black Level               | +              |
| HDR                       | -              |
| Broadcast                 | -              |
| Data Rate                 | +              |
| Synchronizing Master mode | +              |

**FSM:GO**



**Contact Information**

Framos GmbH

**Technical Support:**

[support@framos.com](mailto:support@framos.com)

**Website:**

<https://www.framos.com>

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