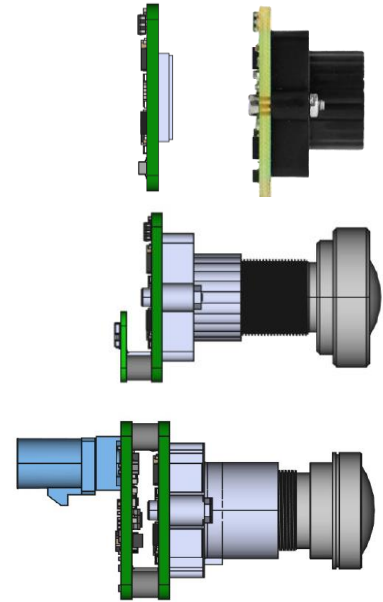




## FSM:GO - IMX678C

8MP/4K 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 IMX678-AAQR1 (AR)         |
| Shutter Type      | CMOS Rolling Shutter           |
| Technology        | Starvis2                       |
| Spectrum          | Color (RGB)                    |
| Optical Format    | 1/1.8"                         |
| Pixel Size        | 2 x 2 μm                       |
| Resolution (max.) | 3840 x 2160 (4K / 8MP)         |
| Framerate (max.)* | 10Bit: 72 FPS<br>12Bit: 60 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)        | 54°             | 100°            | 110°            |
| Optical Filter | IR cut (650 nm) | IR cut (660 nm) | IR cut (650 nm) |
| Aperture       | F/2             | F/2.7           | F/2             |
| 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)<br>Micro Coax (50 pin)<br>FFC (40 pin) (unshielded) | FAKRA (Single Coax)   |
| 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 [mm] | 26.5 (W) x 26.5 (D)<br>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-IMX678C-[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)
  - *L54A*: 54° HFOV (LM: M12B)
  - *L100A*: 100° HFOV (LM: M12B)
  - *L110A*: 110° HFOV (LM: M12B)
- **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-077-00-V-00 | FLP-EM-044-00-V-00 | FLP-AM-040-02-V-00 |
| Field of View [°]         |                    |                    |                    |
| Horizontal                | 54                 | 100                | 110                |
| Vertical                  | 32                 | 55                 | 62                 |
| Diagonal                  | 61                 | 114                | 127                |
| Aperture (F-Number)       | F/2                | F/2.7              | F/2                |
| 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-MI-M-12522-00  | FLA-MI-M-12522-00  |
| Temperature Range         | -20°to +70°C*      | -40°to +85°C*      | -30°to +85°C*      |
| Sensor Coverage           |                    |                    |                    |

\*Image tuning and assembly are performed at 25°C. Temperature variations may affect performance and focus.

| 2.2 Lens Specification |                     |                     |                  |
|------------------------|---------------------|---------------------|------------------|
| Focal length [mm]      | 7.68                | 4.5                 | 4                |
| Min. Object Dist. [m]  | 0.1                 | 0.1                 | 0.3              |
| Hyperfocal Dist. [m]   | 7.38                | 1.88                | 2.00             |
| Max. IC [mm]           | 9.4                 | 11.06               | 9.25             |
| Back Focal Length [m]  | 8.86                | 7.33                | 6.5              |
| Distortion [%]         | -2.19 (F-Tan-Theta) | -35.8 (F-Tan-Theta) | -0.177 (F-Theta) |
| Rel. Illumination [%]  | 55                  | 86                  | 30               |
| Max. CRA [°]           | 10.8                | 9.2                 | 14.5             |
| TTL [mm]               | 33.62               | 29.64               | 31.61            |
| Construction           | 9 (Glass)           | 7 (Glass)           | 8-7 (Glass)      |

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

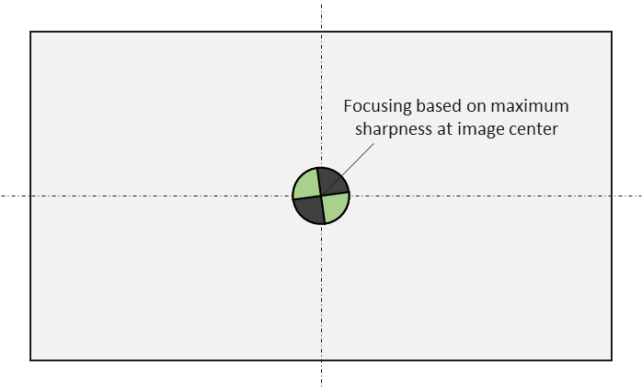


Figure 3.1



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)      | -                 | L54A<br>L100A<br>L110A | -                 | -                 |



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                     |

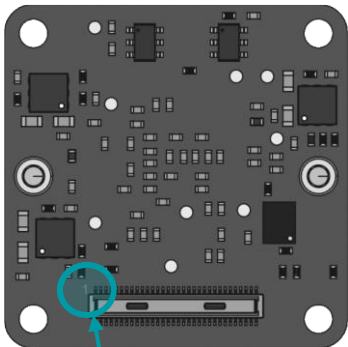


5.1 Pinouts

**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:

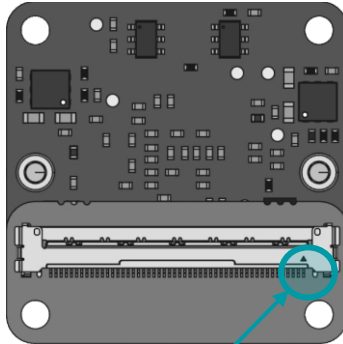
Type: Hirose DF40C-60DP-0.4V(51)



PIN 1

Pinout

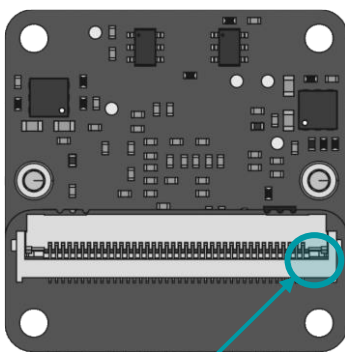
|    |            |    |            |
|----|------------|----|------------|
| 1  | 3V8_VDD    | 2  | 1V8_VDD    |
| 3  | 3V8_VDD    | 4  | 1V8_VDD    |
| 5  | NC         | 6  | NC         |
| 7  | NC         | 8  | NC         |
| 9  | NC         | 10 | NC         |
| 11 | GND        | 12 | GND        |
| 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**

PIN 1

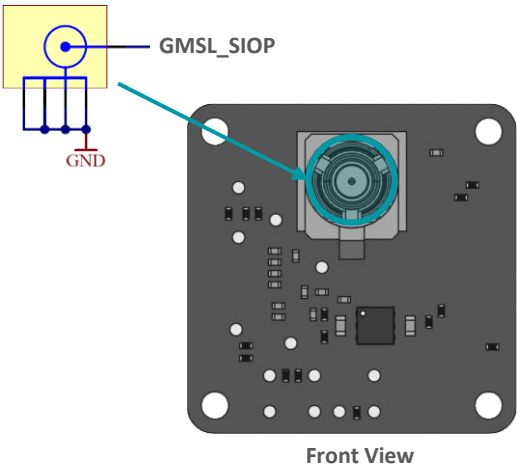
**Pinout**

|    |            |    |          |
|----|------------|----|----------|
| 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       |
| 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       |



## 5.2 Signal Description

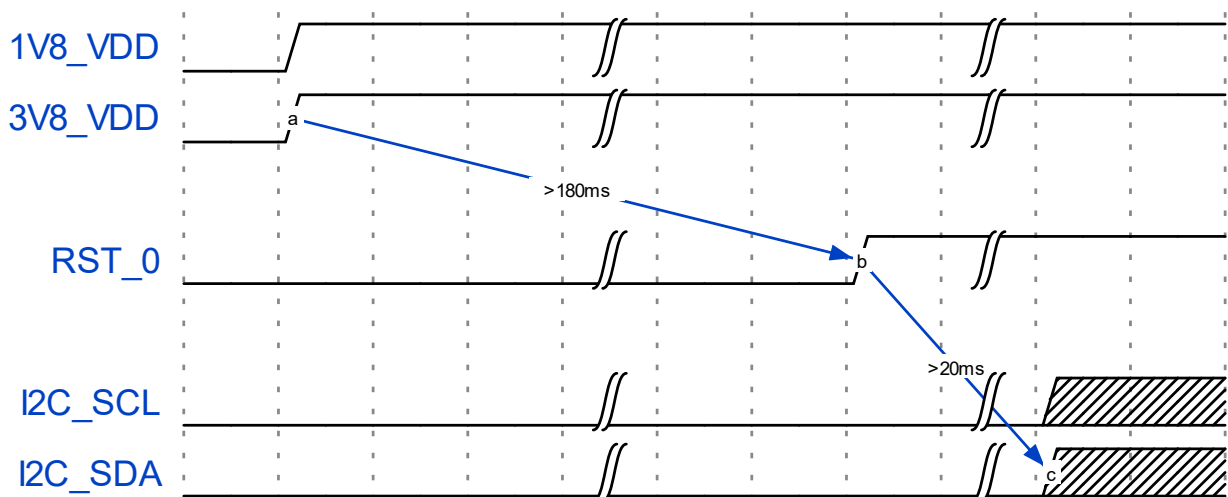
|                     |                                                      |                    |                                                         |
|---------------------|------------------------------------------------------|--------------------|---------------------------------------------------------|
| <b>3V8_VDD</b>      |                                                      | <b>1V8_VDD</b>     |                                                         |
| I/O Type            | Power                                                | I/O Type           | Power                                                   |
| Function            | 3.8V Power supply                                    | Function           | 1.8V Power supply                                       |
| Connected to        | LDO_IC                                               | Connected to       | LDO_IC                                                  |
| DC Charact.         | 3V8_VDD=3.7V-5.1V,<br>max. 0.3A per line             | DC Charact.        | 1V8_VDD=1.7V-1.9V,<br>max. 0.3A per line                |
| <b>IS_RST_0</b>     |                                                      | <b>SLAMODE0/1</b>  |                                                         |
| I/O Type            | IN                                                   | I/O Type           | IN                                                      |
| Function            | Image sensor reset (XCLR)                            | Function           | I2C slave address configuration                         |
| Connected to        | Reset_IC                                             | Connected to       | Image Sensor, pull-down res. 10k                        |
| I/O Standard        | LVC MOS18 (1.8V)                                     | I/O Standard       | LVC MOS18 (1.8V)                                        |
| I/O State           | Normal: High,<br>Reset: Low                          | DC Charact.        | VILmax=0.36V, VIHmin=1.44V                              |
| DC Charact.         | VILmax=0.36V, VIHmin=1.44V                           |                    |                                                         |
| <b>I2C_SCL</b>      |                                                      | <b>I2C_SDA</b>     |                                                         |
| I/O Type            | IN/OUT                                               | I/O Type           | IN/OUT                                                  |
| Function            | I2C clock                                            | Function           | I2C data                                                |
| Connected to        | Image Sensor, no pull-up                             | Connected to       | Image Sensor, no pull-up                                |
| I/O Standard        | LVC MOS18 (1.8V)                                     | I/O Standard       | LVC MOS18 (1.8V)                                        |
| DC Charact.         | VILmax=0.54V, VIHmin=1.26V                           | DC Charact.        | VILmax=0.36V, VIHmin=1.44V                              |
| <b>XMASTER</b>      |                                                      | <b>XVS / XHS</b>   |                                                         |
| I/O Type            | IN                                                   | I/O Type           | IN/OUT                                                  |
| Function            | Image sensor master/slave                            | Function           | Vertical/Horizontal sync signal                         |
| Connected to        | Image Sensor, pull-down res. 10k                     | Connected to       | Image Sensor, pull-up res. 10k                          |
| I/O Standard        | LVC MOS18 (1.8V)                                     | I/O Standard       | LVC MOS18 (1.8V)                                        |
| DC Charact.         | VOLmax=0.36, VOLmin=1.44V                            | DC Charact.        | VILmax=0.36V, VIHmin=1.44V,<br>VOLmax=0.2V, VOHmin=1.6V |
| <b>TENABLE</b>      |                                                      | <b>TOUT0/1</b>     |                                                         |
| I/O Type            | IN                                                   | I/O Type           | OUT                                                     |
| Function            | Test enable                                          | Function           | Test output pins from image sensor                      |
| Connected to        | Image Sensor                                         | Connected to       | Image Sensor                                            |
| I/O Standard        | LVC MOS18 (1.8V)                                     | I/O Standard       | LVC MOS18 (1.8V)                                        |
| DC Charact.         | VILmax=0.36V, VIHmin=1.44V                           | DC Charact.        | VILmax=0.36V, VIHmin=1.44V                              |
| <b>D_DATA_#_P/N</b> |                                                      | <b>D_CLK_0_P/N</b> |                                                         |
| I/O Type            | OUT                                                  | I/O Type           | OUT                                                     |
| Function            | MIPI-CSI2 output data<br>(Lane #, Positive/Negative) | Function           | MIPI-CSI2 output clock<br>(Positive/Negative)           |
| Connected to        | Image sensor                                         | Connected to       | Image sensor                                            |
| I/O Standard        | MIPI D-PHY                                           | I/O Standard       | MIPI D-PHY                                              |

### 5.3 I2C Address Configuration (SLAMODE)

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

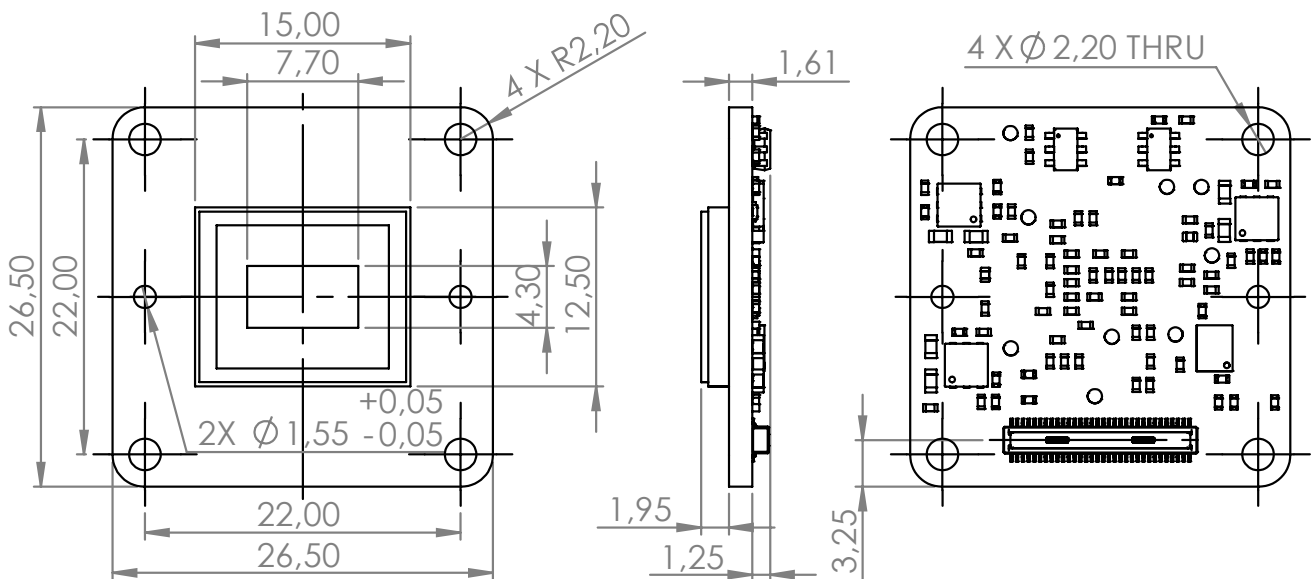
The following chapter contains the measured drawings split into the core segments of the product.

- 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].

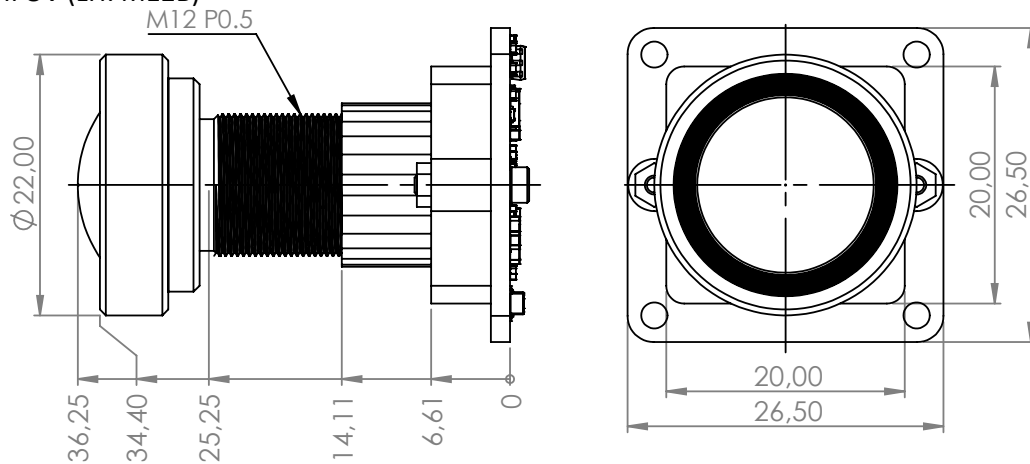
### 6.1 Sensor Module (Bare FSM:GO)

Interface: PixelMate

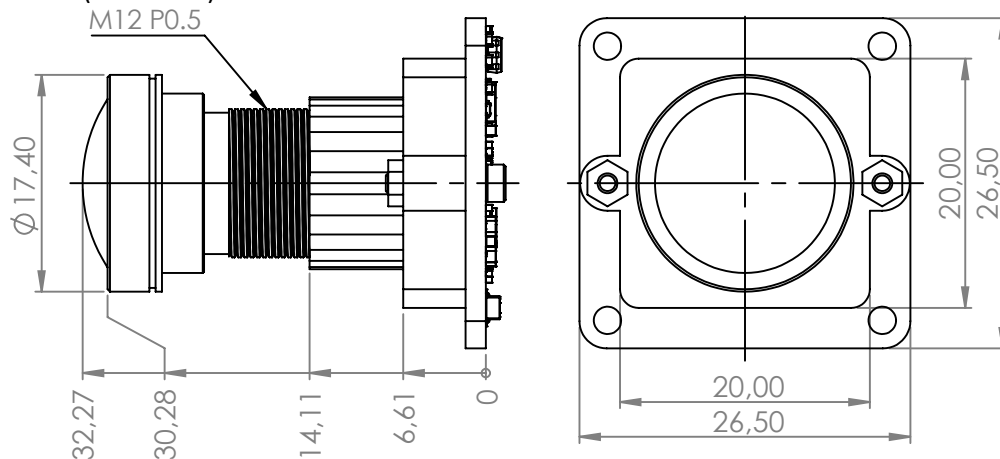


## 6.2 FSM:GO with Lens

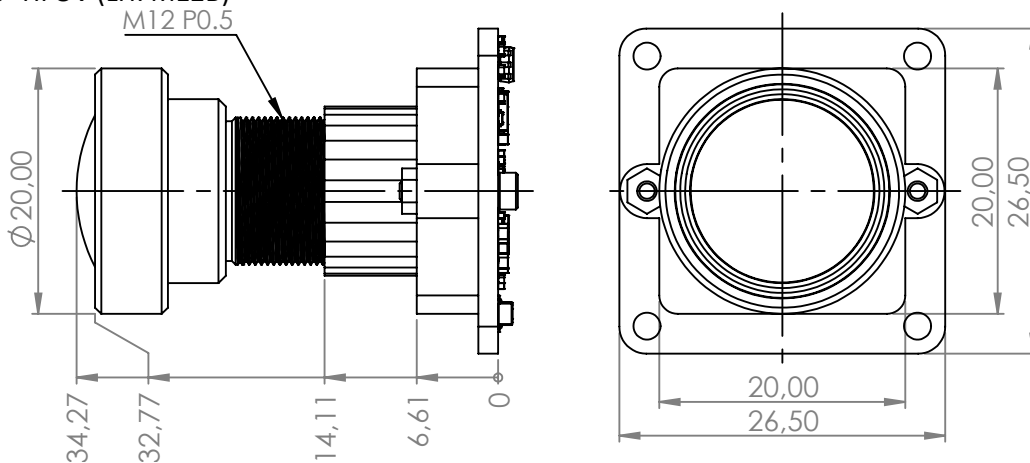
### L54A: 54° HFOV (LH: M12B)



### L100A: 100° HFOV (LH: M12B)

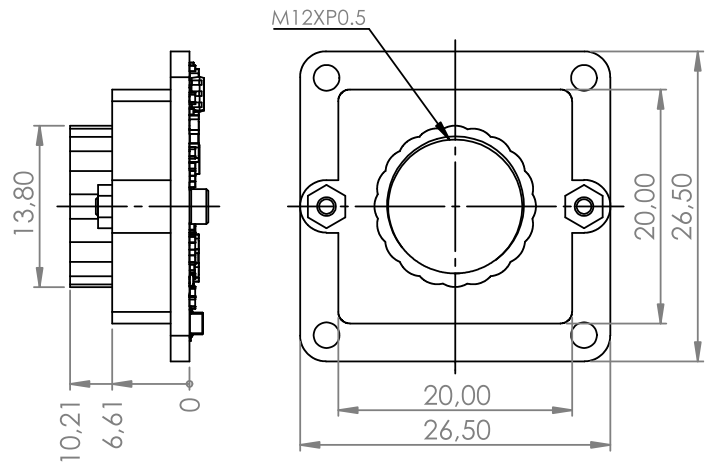


### L110A: 110° HFOV (LH: M12B)

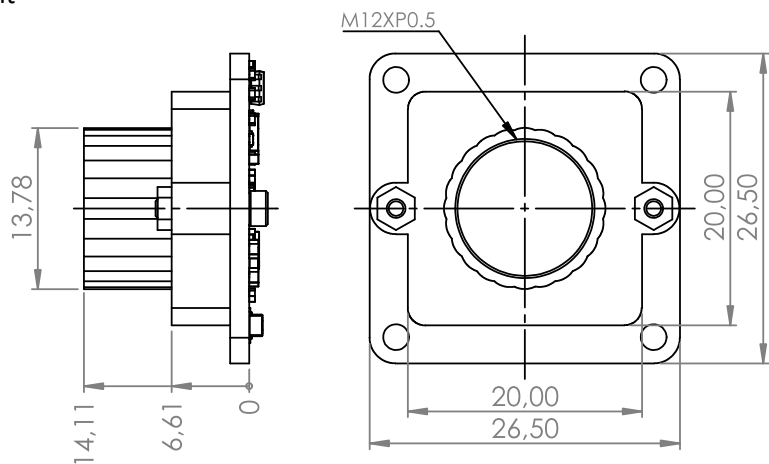


6.3 FSM:GO with Mount

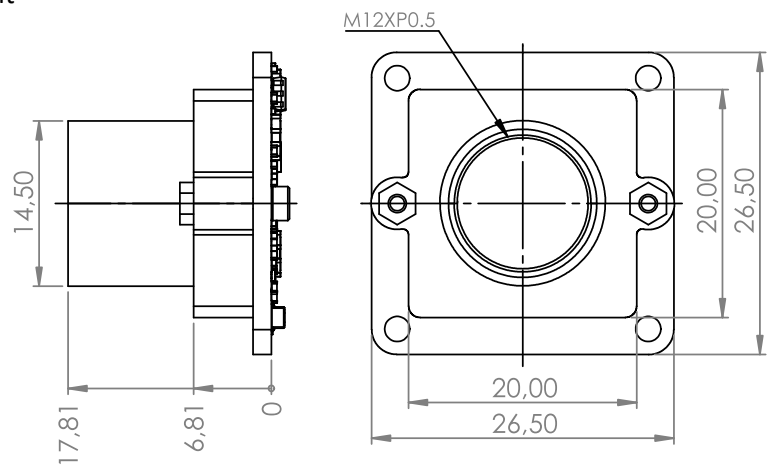
M12A: 8.6 mm Height



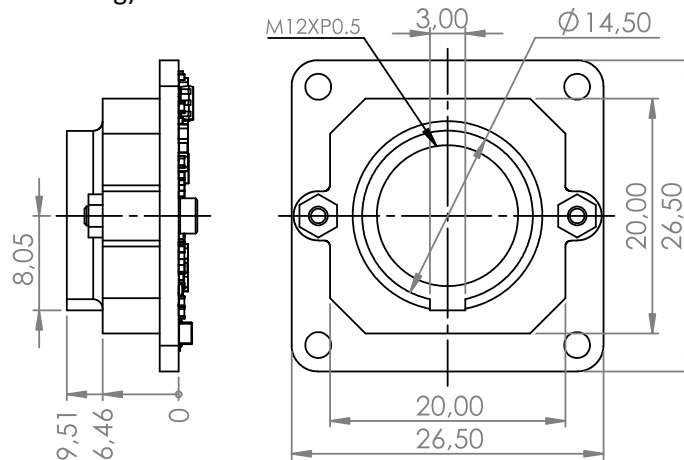
M12B: 12.5 mm Height



M12C: 16.2 mm Height



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

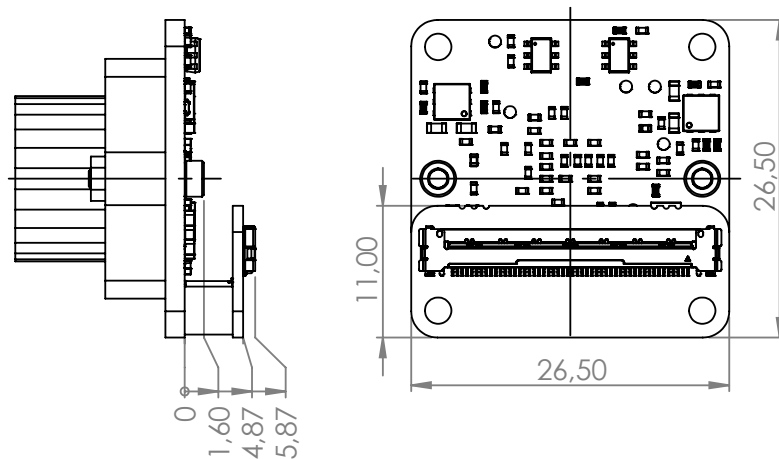


#### 6.4 FSM:GO with Interface Adapter

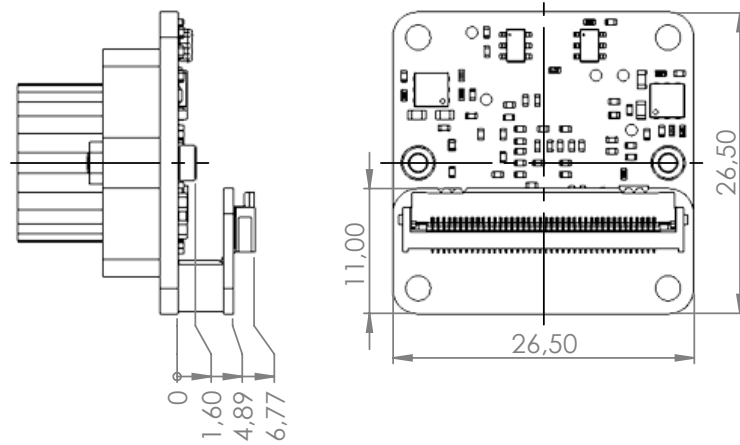
**PM:** See bare "Sensor Module"

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

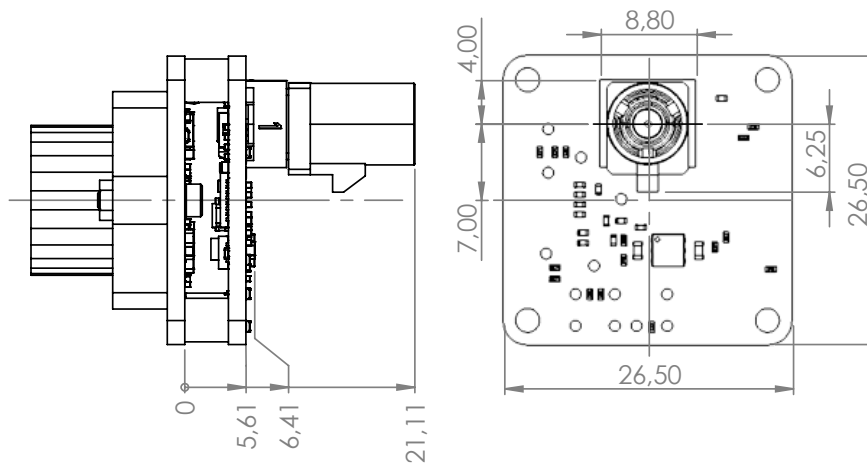
**MC50A:** MicroCoax (50 pin)



**FFC40A:** Flat-Flex Cable (40 pin)



**GMSL3A** (FAKRA, Single Coax)





7 Platform & 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 & Jetson Orin NX Devkits |      |
|--------------|--------------------------|------|-------------------------|------|------------------------|------|-------------------------------------------|------|
|              | Support (Native)         | GMSL | Support (Native)        | GMSL | Support (Native)       | GMSL | Support (Native)                          | GMSL |
| IMX678       | +                        | +    | +                       | +    | +                      | +    | +                                         | +    |

Supported Features:

| Mode | Resolution | Description  | 2lane/10b [FPS] | 2lane/12b [FPS] | 4lane/10b [FPS] | 4lane/12b [FPS] |
|------|------------|--------------|-----------------|-----------------|-----------------|-----------------|
| 0    | 3856x2180  | FULL_PIX     | 30.0            | 30.0            | 72.1            | 60.0            |
| 1    | 2608x1964  | CROP         | 33.2            | 33.2            | 79.7            | 66.4            |
| 2    | 1920x1080  | CROP         | 58.7            | 58.7            | 140.9           | 117.4           |
| 3    | 1928x1090  | BINNING H2V2 | -               | 30.0            | -               | 60.0            |

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, Color/Tone, Contrast Tuning | +       |

## 7.2 NXP i.MX8MP Support

## Supported Platforms:

| i.MX 8M PLUS Devkit |        |                  |      |
|---------------------|--------|------------------|------|
| Image sensor        | Driver | Support (Native) | GMSL |
| IMX678              | IMX678 | +                | -    |

## Supported Features:

| Mode | Resolution | Description         | 4lane/10b [FPS]                | 4lane/12b [FPS]                 |
|------|------------|---------------------|--------------------------------|---------------------------------|
| 0    | 3840x2160  | FULL_PIX            | 25 (720 Mbps)<br>30 (891 Mbps) | 25 (891 Mbps)<br>30 (1188 Mbps) |
| 1    | 1920x1080  | BINNING H2V2 + CROP | -                              | 30 (720 Mbps)                   |

## Implemented Features:

| Supported Features        | FSM:GO-IMX678C |
|---------------------------|----------------|
| 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**

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