

# DESIGNCORE® DISCOVERY SERIES

## FEATURING THE IMX390 SENSOR



Pre-configured camera modules for embedded vision applications designed for rapid prototyping and scalable OEM/ODM customization

**Supported Processor Platforms:**



## Dominate dynamic lighting with the DesignCore® Discovery IMX390.

Featuring the next generation of camera modules from **D3**:

Re**Defined** image science tuning optimized for AI out-of-the-box.

Re**Designed** optics that maximize your signal with higher resolving power and wider apertures.

Re**Deployed** on the industry's latest NVIDIA, Texas Instruments, and Intel platforms.

- ✓ High-dynamic range capabilities (HDR)
- ✓ LED flicker mitigation (LFM)
- ✓ Proven Sensor Design
- ✓ Designed For Multi-Camera Systems

Upgrade to Pro for uncompromised image quality and ingress protection (IP67 rated).

### APPLICATIONS

#### AUTONOMOUS VEHICLE AND ROBOTICS

<b>SAFETY</b>	Wide 180° HFOV camera to cover blind spots.
<b>NAVIGATION</b>	Medium 97° HFOV cameras for surround view.
<b>IDENTIFICATION</b>	Narrow 55° HFOV camera to read QR codes or AprilTags.
<b>ORIENTATION</b>	Combine any camera with a D3 radar sensor, or use a pre-configured fusion module, to access full 3D resolution.

#### INDUSTRIAL IOT AND MACHINE VISION

<b>SAFETY</b>	Wide 180° HFOV camera to direct foot traffic.
<b>NAVIGATION</b>	Medium 97° HFOV cameras for gesture recognition.
<b>IDENTIFICATION</b>	Narrow 55° HFOV camera to classify items on a checkout or assembly line.
<b>ORIENTATION</b>	Combine any camera with a D3 radar sensor, or use a pre-configured fusion module, to access full 3D resolution.

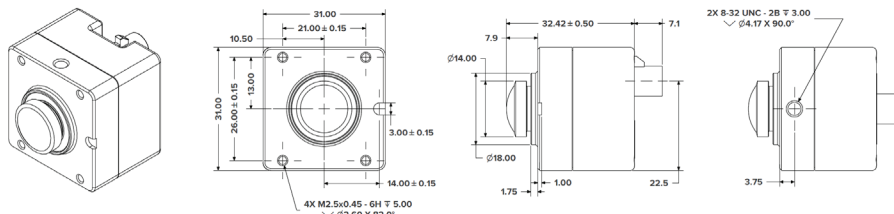
### SPECIFICATIONS

Series	DesignCore® Discovery
Sensor	Sony IMX390
Maximum Resolution	1920 x 1080 (Full-HD)
Pixel Pitch	3.0 x 3.0 μm
Bit Depth	12-bit
Shutter	Rolling
Maximum Frame Rate	1920x1080 (Full-HD) @ 30 FPS
Spectrum	Color (RGB)
Nominal Operating Voltage	12V
Operating Temperature Range [Celsius]	-40 to 85 °C
Operating Temperature Range [Fahrenheit]	-40 to 185 °F
Seal Rating	Unsealed
Connector	FAKRA Straight Plug, Code – Z (Fits All) Intel MIPI CSI Flat-Flex Cable
Serial Interfaces	FPDLink™ III, GMSL2, MIPI CSI-2
Pre-Configured Software Drivers and Image Tuning	Download From D3 After Purchase

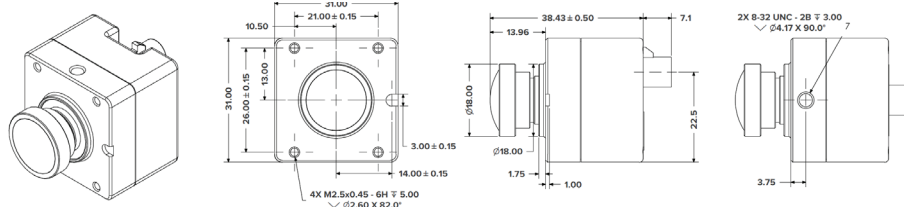
### LENS SPECIFICATIONS

	Wide	Medium	Narrow
Focal Length	1.83mm	2.60mm	6.00mm
Aperture	F/2.3	F/2.6	F/2.8
Horizontal Field of View (HFOV)	180°	97°	55°
Vertical Field of View (VFOV)	101°	64°	31°
Diagonal Field of View (DFOV)	207°	105°	62°
Operating Focal Range [cm]	14 - ∞ cm	27 - ∞ cm	115 - ∞ cm
Operating Focal Range [in]	6 - ∞ in	11 - ∞ in	45 - ∞ in
IR Cut Edge	650nm	650nm	650nm
Full Fill	Yes	Yes	Yes
Mounting	Integral M12	Integral M12	Integral M12

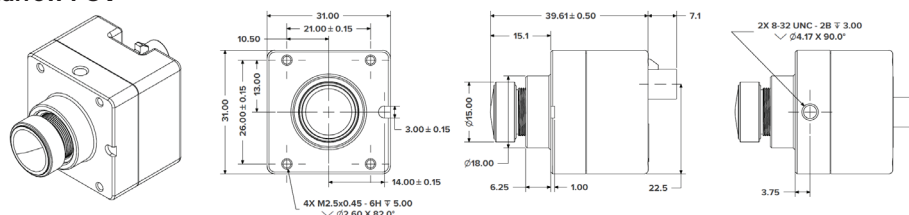
## IMX390 Wide FOV



## IMX390 Medium FOV



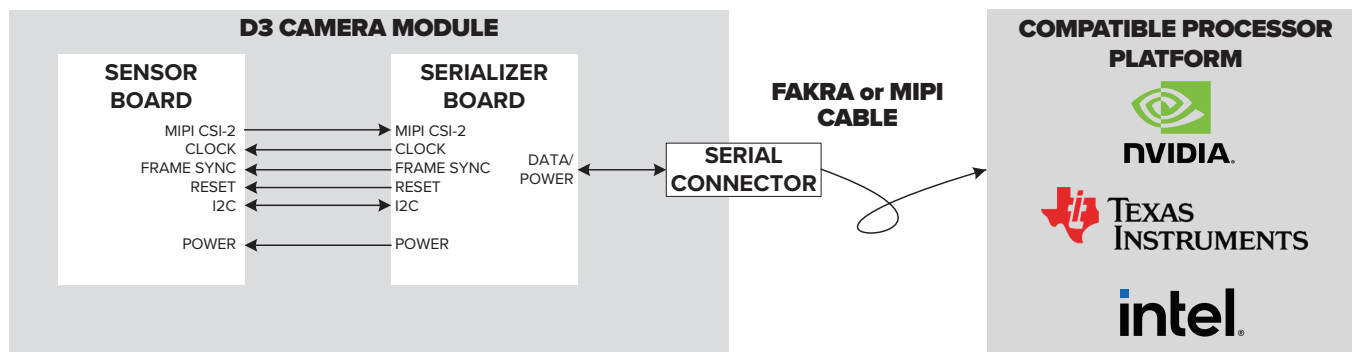
## IMX390 Narrow FOV



3D models available upon request

Measurements in mm

## DEVELOP YOUR EMBEDDED VISION SYSTEM WITH D3 CAMERAS AND PLATFORMS



## ACCELERATE TIME TO MARKET WITH THE D3 PRODUCT DEVELOPMENT PROCESS

**DEFINE:** Enable off-the-shelf cameras with software pre-configured on D3's compatible NVIDIA, Texas Instruments, and Intel processor platforms to quickly find the vision system that best suits your application.

**DESIGN:** Work with our design services team to customize off-the-shelf cameras for your use case and volume production requirements.

**DEPLOY:** Leverage D3's dependable capabilities as an American original design manufacturer to deploy your product faster than the competition.

*When the possibilities are endless, D3 makes the best solution possible.*

Proud to Collaborate with Our Sensor Partner:

# SONY

Copyright © 2023 D3. All rights reserved. DesignCore is a trademark of D3. All other trademarks are the property of their respective owners. 5.22

## ORDERING INFORMATION

DesignCore® Discovery Series

Buy online and request volume pricing through our camera selection tool:

[D3Engineering.com/product-category/camera-modules](https://D3Engineering.com/product-category/camera-modules)

## SKUs

D3CMC70N-106-085  
 D3CMC68N-106-085  
 D3CMC69N-106-085  
 D3CMC70N-106-084  
 D3CMC68N-106-084  
 D3CMC69N-106-084  
 1002021-68



CALL: 585-429-1550

EMAIL: [Sales@D3Engineering.com](mailto:Sales@D3Engineering.com)

VISIT: [D3Engineering.com](https://D3Engineering.com)