

# DESIGNCORE® DISCOVERY SERIES

## FEATURING THE ISX031 (IMX623-I) SENSOR



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

**Supported Processor Platform:**



## Dominate dynamic lighting with the DesignCore® Discovery ISX031.

Featuring the next generation of rugged 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 platforms.

- ✓ Smart Camera Compatible with Third-Party NVIDIA® Jetson Orin™ Platforms
- ✓ Latest Generation High-Dynamic Range Capabilities (HDR)
- ✓ LED Flicker Mitigation (LFM)
- ✓ Frame Sync
- ✓ 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 150° 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 150° HFOV camera to direct foot traffic
<b>NAVIGATION</b>	Medium 97° HFOV cameras for gesture control.
<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.

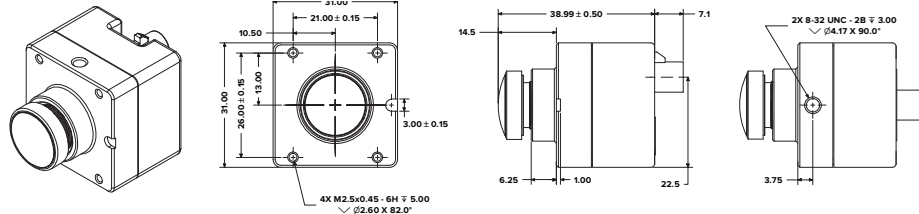
## SPECIFICATIONS

Series	DesignCore® Discovery
Sensor	Sony ISX031 (IMX623 With On-Sensor ISP Tuned By D3)
Maximum Resolution	1920 x 1440
Pixel Pitch	3.0 x 3.0 µm
Bit Depth	8-bit YUV Rendered
Shutter	Rolling
Maximum Frame Rate	30 FPS at 1920 x 1440
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)
Serial Interfaces	FDPLink™ III, GMSL2
Pre-Configured Drivers and Image Tuning	Download From D3 After Purchase (As Loadable Kernel Modules)

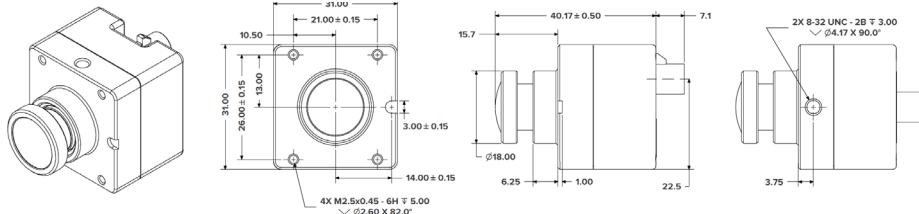
## LENS SPECIFICATIONS

	Wide	Medium	Narrow
Focal Length	2.40mm	2.80mm	5.05mm
Aperture	F/1.9	F/2.8	F/2.6
Horizontal Field of View (HFOV)	150°	97°	55°
Vertical Field of View (VFOV)	108°	80°	41°
Diagonal Field of View (DFOV)	190°	110°	68°
Operating Focal Range [cm]	27 - ∞ cm	27 - ∞ cm	115 - ∞ cm
Operating Focal Range [in]	11 - ∞ in	11 - ∞ in	45 - ∞ in
IR Cut Edge	660nm	660nm	650nm
Full Fill	Yes	Yes	Yes
Mounting	Integral M12	Integral M12	Integral M12

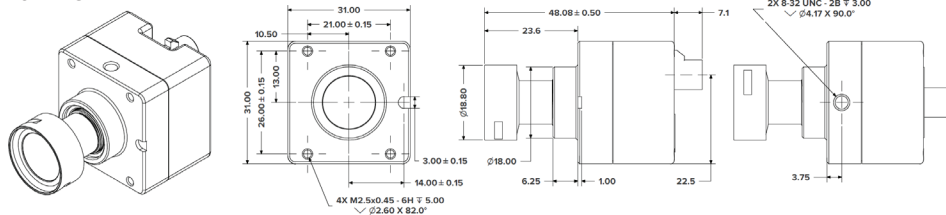
### ISX031 Wide FOV



### ISX031 Medium FOV



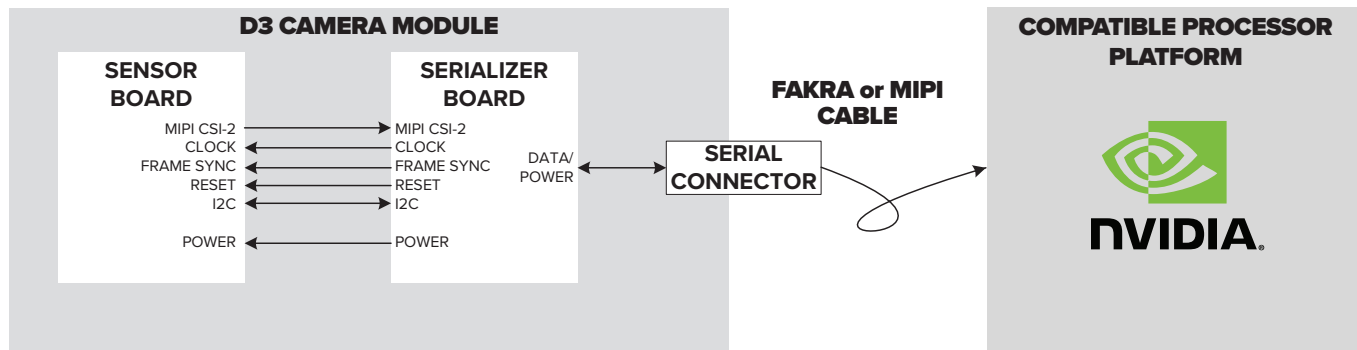
### ISX031 Narrow FOV



3D models available in camera selection tool

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:



### ORDERING INFORMATION

DesignCore® Discovery Series (ISX031)

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

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



CALL: 585-429-1550

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

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