

DESIGNCORE® DISCOVERY PRO 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 PRO 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
- ✓ IP67 Ingress Protection
- ✓ Premium Lenses
- ✓ Lens-Specific Image Science Tuning
- ✓ Designed for Multi-Camera Systems

APPLICATIONS

AUTONOMOUS VEHICLE AND ROBOTICS

| | |
|-----------------------|---|
| SAFETY | Wide 150° HFOV camera to cover blind spots |
| NAVIGATION | Medium 97° HFOV cameras for surround view. |
| IDENTIFICATION | Narrow 55° HFOV camera to read QR codes or AprilTags. |
| ORIENTATION | 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

| | |
|-----------------------|---|
| SAFETY | Wide 150° HFOV camera to direct foot traffic |
| NAVIGATION | Medium 97° HFOV cameras for gesture control. |
| IDENTIFICATION | Narrow 55° HFOV camera to classify items on a checkout or assembly line. |
| ORIENTATION | Combine any camera with a D3 radar sensor, or use a pre-configured fusion module, to access full 3D resolution. |

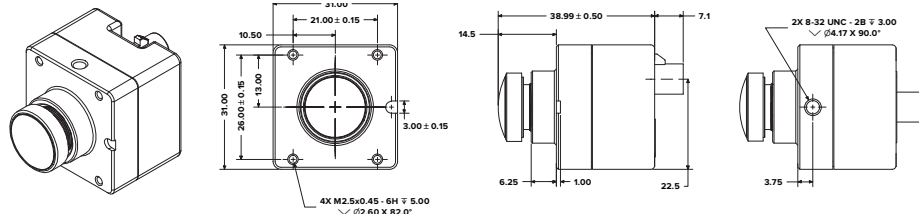
SPECIFICATIONS

| | |
|--|--|
| Series | DesignCore® Discovery PRO |
| 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 | IP67 |
| 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) |

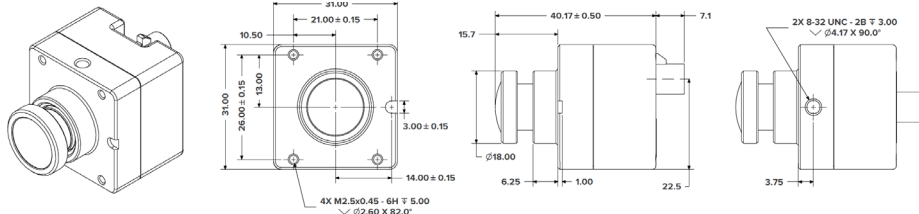
LENS SPECIFICATIONS

| | 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 | 97 - ∞ cm |
| Operating Focal Range [in] | 11 - ∞ in | 11 - ∞ in | 39 - ∞ in |
| IR Cut Edge | 660nm | 660nm | 650nm |
| Full Fill | Yes | Yes | Yes |
| Mounting | Integral M12 | Integral M12 | Integral M12 |

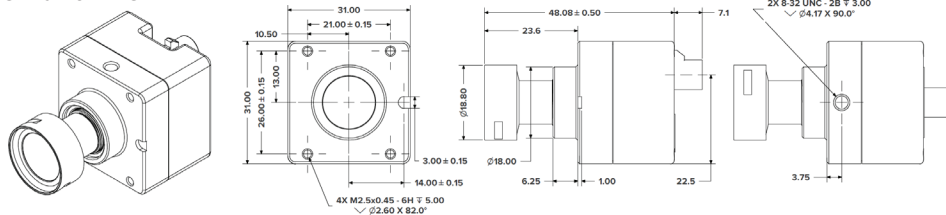
ISX031 PRO Wide FOV



ISX031 PRO Medium FOV



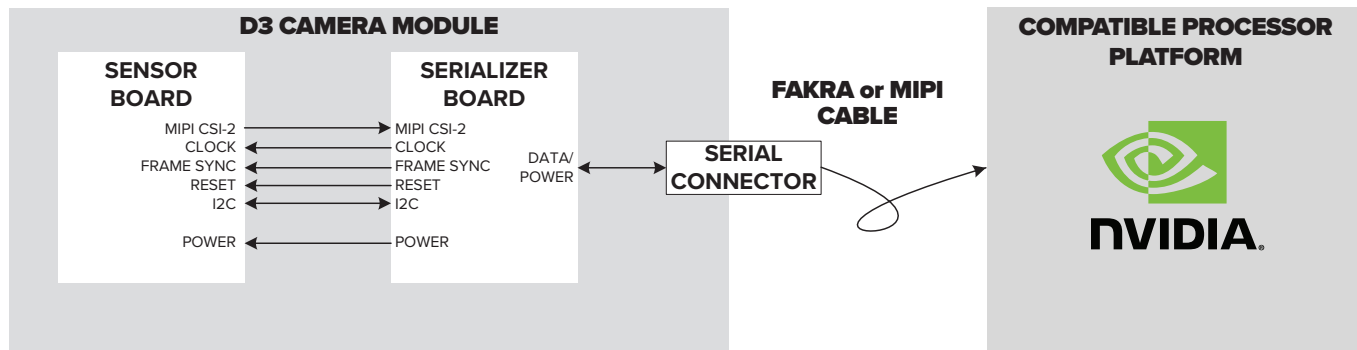
ISX031 PRO Narrow FOV



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:

SONY

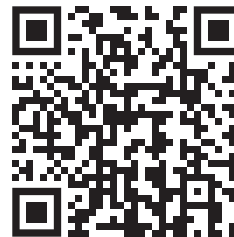
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ORDERING INFORMATION

DesignCore® Discovery PRO Series (ISX031)

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

D3Engineering.com/product-category/camera-modules



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