

DESIGNCORE® DISCOVERY PRO SERIES

FEATURING THE IMX390 SENSOR



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

Supported Processor Platforms:



Dominate dynamic lighting with the DesignCore® Discovery PRO IMX390.

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, Texas Instruments, and Intel platforms.

- ✓ High-dynamic range capabilities (HDR)
- ✓ LED flicker mitigation (LFM)
- ✓ Proven Sensor Design
- ✓ IP67 Ingress Protection
- ✓ Premium Lenses
- ✓ Lens-Specific Image Science Tuning
- ✓ Designed For Multi-Camera Systems

APPLICATIONS

AUTONOMOUS VEHICLE AND ROBOTICS

SAFETY	Wide 180° HFOV camera to cover blind spots.
NAVIGATION	Medium 100° HFOV cameras for surround view.
IDENTIFICATION	Narrow 60° 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 180° HFOV camera to direct foot traffic.
NAVIGATION	Medium 100° HFOV cameras for gesture control.
IDENTIFICATION	Narrow 60° 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.

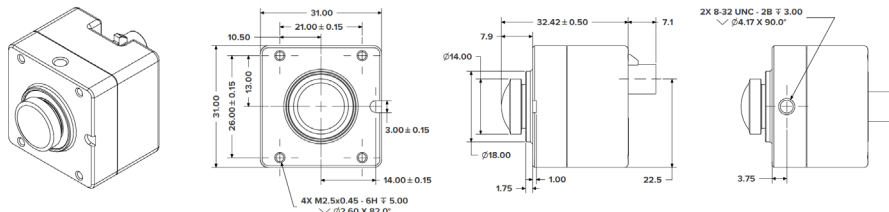
SPECIFICATIONS

Series	DesignCore® Discovery PRO
Sensor	Sony 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) @ 60 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	IP67
Connector	FAKRA Straight Plug, Code – Z (Fits All) Intel MIPI CSI Flat-Flex Cable
Serial Interfaces	FDPLink™ III, GMSL2, MIPI CSI-2
Pre-Configured Software Drivers and Image Tuning	Download From D3 After Purchase

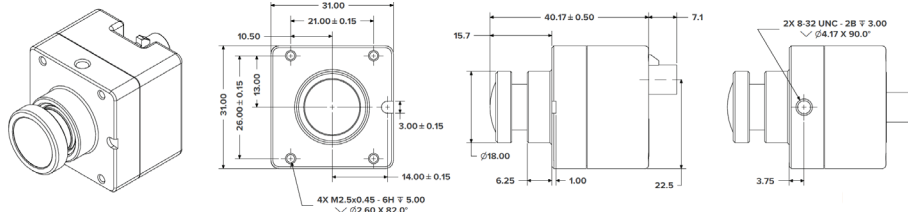
LENS SPECIFICATIONS

	Wide	Medium	Narrow
Focal Length	1.83mm	2.80mm	5.05mm
Aperture	F/2.3	F/2.8	F/2.6
Horizontal Field of View (HFOV)	180°	98°	65°
Vertical Field of View (VFOV)	101°	62°	37°
Diagonal Field of View (DFOV)	207°	107°	75°
Operating Focal Range [cm]	14 - ∞ cm	27 - ∞ cm	115 - ∞ cm
Operating Focal Range [in]	6 - ∞ in	11 - ∞ in	45 - ∞ in
IR Cut Edge	650nm	660nm	650nm
Full Fill	Yes	Yes	Yes
Mounting	Integral M12	Integral M12	Integral M12

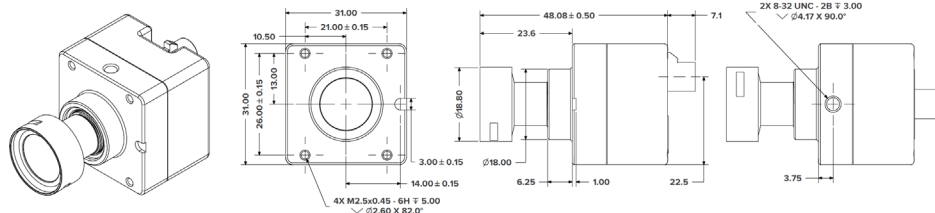
IMX390 PRO Wide FOV



IMX390 PRO Medium FOV



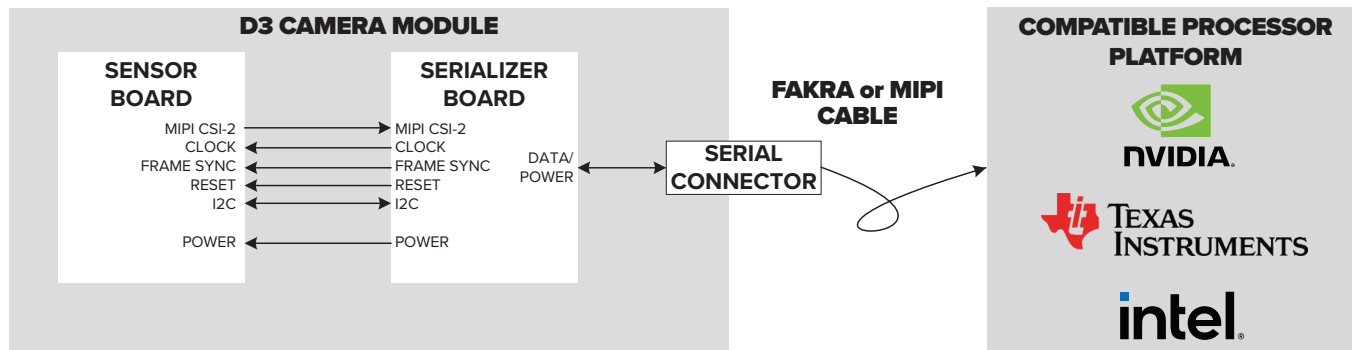
IMX390 PRO Narrow FOV



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

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ORDERING INFORMATION

DesignCore® Discovery PRO Series

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

D3Engineering.com/product-category/camera-modules

SKUs

- D3CMC70N-106-085-S
- D3CMC52N-106-085-S
- D3CMC67N-106-085-S
- D3CMC70N-106-084-S
- D3CMC52N-106-084-S
- D3CMC67N-106-084-S



CALL: 585-429-1550

EMAIL: Sales@D3Engineering.com

VISIT: D3Engineering.com