

# RealSense D401, D415, D430, D457 GMSL

## Powering the Visual Cortex for Industrial Robotics

Feature	D401 Module	D415 Module	D430 Module	D457 Camera
<b>Use Case</b>	High precision inspection, manipulators including humanoid hands, robotic arms, and pick & place, industrial warehousing automation	Industrial robotics, 3D scanning, wearables, indoor scanning applications	Humanoids, service robots, warehousing automation, VSLAM	Industrial Robotics, autonomous vehicles, Outdoor 3D scanning
<b>Software</b>	RealSense SDK 2.0	RealSense SDK 2.0	RealSense SDK 2.0	RealSense SDK 2.0
<b>Interface</b>	GMSL multi-camera support	GMSL multi-camera support	GMSL multi-camera support	GMSL FAKRA / USB 3
<b>RGB Sensor Technology</b>	Global shutter <sup>3</sup>	Rolling shutter	Global shutter	Global shutter
<b>Depth FOV (H x V)<sup>1</sup></b>	84° x 58°	65° x 40°	87° x 58°	87° x 58°
<b>Depth Resolution</b>	Up to 1280 x 720	Up to 1280 x 720	Up to 1280 x 720	Up to 1280 x 720
<b>Depth Accuracy<sup>2</sup></b>	<2% at 50 cm	<2% at 2 m	<2% at 4 m	<2% at 4 m
<b>Depth Frame Rate</b>	Up to 90 fps	Up to 90 fps	Up to 90 fps	Up to 90 fps
<b>RGB Resolution and Frame Rate</b>	1280 x 720 at 30 fps	1920 x 1080 at 30 fps	Up to 1920 x 1080 at 30 fps	1280 x 800 at 30 fps
<b>RGB Sensor FOV (H x V)</b>	87° x 58°	69° x 42°	69° x 42°	90° x 65°
<b>IMU</b>	No	No	D435i, D435if	Yes
<b>Minimum Depth Distance (Min-Z)</b>	~7 cm @ 480p	~45 cm	~28 cm	~52 cm
<b>Ideal Range</b>	0.07 m to 0.50 cm	0.5 m to 3 m	0.3 m to 3 m	0.6 m to 6 m
<b>Main Components</b>	Module (D401-class) + GMSL serializer interface	Module (D415-class) + GMSL serializer interface	Module (D430-class) + GMSL serializer interface	RealSense Vision Processor D4 + RealSense depth module D450
<b>Dimensions</b>	X=36.5 mm, Y=19.4 mm, Z=10.5 mm	X=83.7 mm, Y=10.0 mm, Z=4.7 mm	X=70.7 mm, Y=14.0 mm, Z=10.53 mm	124 x 29 x 36 mm (L x H x D)

<sup>1</sup> Depth FOV (H x V) measured by +/-3° of stated value <sup>2</sup> Z-accuracy as measured as out of the factory <sup>3</sup> Left imager RGB with ISP