

RealSense GMSL/FAKRA Product line

Scalable 3D Perception Built for Industrial Autonomy

Gigabit Multimedia Serial Link (GMSL) is a multigigabit, point-to-point connection targeting the automotive space. GMSL supports multistream over a single cable, up to 15m with a coax cable. GMSL is a high-performance protocol combined with a secure FAKRA connector making it best suited for robotic and warehouse applications.

Perfect for Robotic Applications

RealSense GMSL/FAKRA product family adds a GMSL serializer and FAKRA connector to the RealSense camera product line.

GMSL/FAKRA is a lower power, lower ESD/EMI noise, lower latency, and a longer cable length interface compared with USB and higher bandwidth compared to Ethernet. For these reasons, this cable and connector standard is preferred for robotic applications. It requires a compatible host platform with a GMSL de-serializer and FAKRA connector. The USB connector is used for production line and debug only.

Supported by SDK 2.0 for Ease of Integration

With many different depth products joining the RealSense family, we recognize that our customers want the ability to easily upgrade from one generation or product line to the next. The GMSL/FAKRA product line is supported with the same cross-platform open-source RealSense™ SDK 2.0, with a separate kernel driver package for the GMSL serializer. It is tested and verified on leading platforms with GMSL de-serializer and FAKRA connector support, including NVIDIA and iCore.

GMSL SKUs Description and Combinations¹

Component	D415	D430	D450	D401
RealSense Vision Processor D4 Board	V5	V5	V5	V6
RealSense Depth Module	✓	X	X	X
Standard/Wide Stereo Imagers	S	W	W	W
Standard/Wide Infrared Projector	S	W	W	X
IMU	X	X	✓	X
RGB Color Sensor	✓	X	✓	✓ ⁽²⁾

Definitions:

- D415 - RealSense Depth Module D415
- D430 - RealSense Depth Module D430
- D450 - RealSense Depth Module D450
- D401 - RealSense Depth Module D401
- V5 - RealSense Vision Processor D4 Board V5 GMSL/FAKRA
- V6 - RealSense Vision Processor D4 Board V6 GMSL/FAKRA

Notes:

1. These are the validated combinations between modules and vision processors
2. Left depth sensor provides RGB color from the left imager via ISP



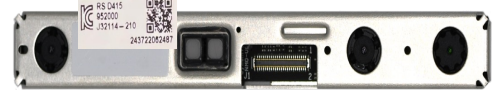
D457



D450



D415



D430



V5



UFL connector to FAKRA

D401



V6



UFL connector to FAKRA