SenseEdge Development Kit
GMSL Series

For RealSense D457 Camera

The AVerMedia SenseEdge Development Kit — GMSL Series — is a fully integrated, ready-to-use AI vision platform that helps developers and engineering teams move from idea to deployment - faster and smarter.

At the hardware level, it combines the AVerMedia D317 NVIDIA® Jetson™ AGX Orin carrier board, GMSL deserializer board, and RealSense™ D457 depth camera into one unified system.

On the software side, NVIDIA JetPack BSP and RealSense SDK come pre-integrated, giving users instant access to NVIDIA Jetson's low-latency AI inference and RealSense's 3D depth perception the moment it powers on.

Accelerate Innovation

Skip the complexity of component integration with a fully pre-validated AI vision kit that works out-of-the-box.

Reliable Edge Intelligence

Real-time 3D depth sensing with onboard IMU plus Jetson's AI computing ensures low-latency decision-making without cloud dependency.

Industrial Strength

Built on rugged AVerAI platforms with extended temperature support, robust I/O, and camera interface flexibility for diverse deployment environments.

Faster Time-to-Market

Streamlined procurement and validation in one SKU helps reduce risk, cut development costs, and bring AI vision products to market sooner.

Versatile Applications

Ideal for robotics, AMRs, drones, warehouses, factories, and smart infrastructure solutions requiring dependable depth and AI processing in harsh, high-vibration environments.

AVerMedia D317 AGX Orin Carrier Board

SOM Support	NVIDIA Jetson AGX Orin 32GB (Standard) NVIDIA Jetson AGX Orin 64GB/Industrial AGX Orin (Optional)
Network	1 x GbE RJ-45 1 x M.2 key E 2230 for WiFi 6
Display Output	1 x HDMI 2.0 (3840 x 2160 at 60Hz)
Storage	2 x NVMe M.2 Key M 2280 (1 x only support S1 Type Top side component SSD)
Power Requirement	ATX 4-pin, 12V +/- 5% DC Input (Power adaptor with ATX 4-pin to DC jack are included)
USB Ports	1 x USB 3.2 Type-C for BSP installation 1 x USB 3.2 Type-C (host mode only)
Expansion Header	30-pin header: 1 x UART, 1 x I2C, 3 x GPIO, 1 x SPI, 2 x CAN BUS, 1 x I2S, 5V (Maximum 0.7A), 3.3V (Maximum 0.7A) 12-pin header: 1 x 12V (Maximum 0.7A), 1 x 5V (Maximum 1A), 1 x 3.3V (Maximum 1A) power output, 1 x USB 2.0, 1 x DMIC 16-pin wafer for OOB or external buttons

AVerMedia GMSL Deserializer Board

Deserializer	Maxim 96712
MIPI Output	1 x 4-lane MIPI CSI-2 v1.3 output from each Deserializer (16-lanes total) via 120-pin camera expansion board to board connector
Camera Input Connectors	2 x Mini FAKRA to support 8 x GMSL camera (via FAKRA cable)
Power-Over-Coax	Supports Power-Over-Coax (POC)
Environment	Operating temperature: -40°C to 85°C (TBD) Storage temperature: -40°C to 85°C (TBD) Relative humidity: 40 °C @ 95%, non-condensing

RealSense D457 GMSL Camera

Use Environment	Indoor/Outdoor (IP65-rated)
Image Sensor Technology	Global Shutter
Ideal Range	0.6m to 6m
Depth	Depth technology: Stereoscopic IMU included Minimum depth distance (Min-Z) at Max Resolution: ~52cm Depth accuracy: <2% at 4 m FOV: 87° × 58° Depth output resolution: up to 1280 × 720 Depth frame rate: up to 90 fps
RGB	RGB frame rate: 30 fps RGB frame resolution: up to 1280 × 800 RGB sensor technology: Global Shutter RGB Sensor FOV (H x V): 90 × 65° RGB Sensor Resolution: 1 MP

Software

Software Support	Ubuntu 22.04 Jetpack 6.2.0 OpenCV 4.10.0
Software Feature	RealSense D457 GMSL camera driver pre-installed RealSense SDK pre-installed NVIDIA JetPack BSP pre-installed

AVerMedia RealSense