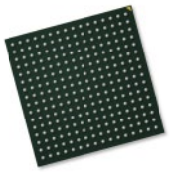
OAX4600

ASIC Product Brief



Automotive Industry's Most Robust Integrated ISP and NPU for Simultaneous DMS/OMS; Features Design Flexibility with Integrated RGB-IR ISPs in a Small Package with Low Power Consumption

OMNIVISION's OAX4600 is an AI-enabled application-specific integrated circuit (ASIC) that can seamlessly and simultaneously power dedicated driver and occupant monitoring systems (DMS/OMS). The OAX4600 uses a stacked-die architecture to provide integrated RGB-IR image signal processing (ISP) with an integrated AI neural processing unit (NPU) and embedded DDR3 memory (2 Gb) in a single low power, small package chip. The OAX4600 is capable of higher resolution processing of up to 5 megapixels. It has fast boot-up time to eliminate any delay between ignition and activation of the interior camera and features integrated cybersecurity.

The OAX4600 is a next generation ASIC that uses OMNIVISION's dedicated NPU with 2 tera operations per second (TOPS). The OAX4600 features 2 Gb of embedded DDR stacked memory and utilizes the tri-ARM® Cortex® A53 with NEON™ core subsystem.

Applications

- Automotive driver assistance system (ADAS)
- Surround view system (SVS)
- Driver monitoring system (DMS)
- Interior monitor system (IMS)
- Camera monitor system (CMS)
- E-mirror
- Rear view camera (RVC)

Features

- **Frame rate:** Up to 5MP @ 30 fps
- **Power:**
  - I/O: 1.2V/1.35V, 1.8V, 3.3V
  - Core: 0.9V
- **Interface:**
  - MIPI Rx: 4-lane (1x4, 2x2)
  - MIPI Tx: 4-lane (1x4, 2x2)
  - Serial interface, storage card / NAND flash, LPDDR3
- **Output format:**
  - MIPI CSI: 8-bit YUV420/YUV422, 8/10/12-bit RAW
  - MIPI DSI: RGB888

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