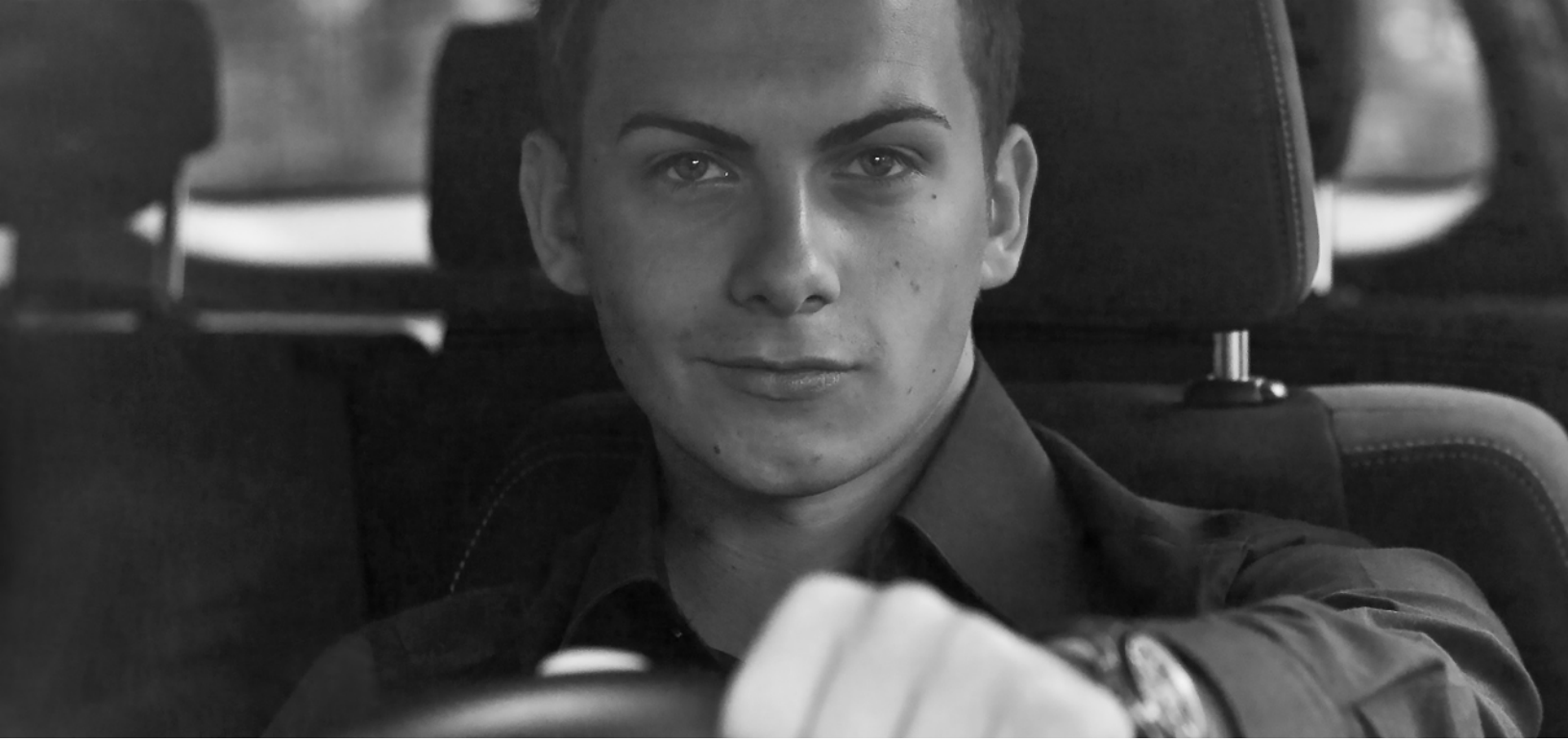

OX01N1B

1.5-Megapixel Product Brief

1.5-Megapixel Global Shutter Sensor for Automotive Driver Monitoring Systems

The OX01N1B is a 1.5-megapixel (MP) mono BSI global shutter (GS) sensor for in-cabin automotive driver monitoring systems (DMS). The device features OMNIVISION's industry-leading Nyxel® near-infrared (NIR) technology. It has a pixel size of 2.2 microns (µm) and 1/4.51-inch optical format.

Key features of the OX01N1B include industry-leading NIR quantum efficiency (QE) at 36% for excellent low-light performance, a high modulation transfer function (MTF) for better image quality and resolution, output formats in both mono RAW and YUV for convenient system integration, low power consumption, and an optical format that enables extremely compact camera module design. The OX01N1B uses OmniPixel®4-GS technology for simultaneous image capture in all pixels to accurately reproduce rapid motion without any deformation. The OX01N1B has integrated ASIL B and cybersecurity that meet the latest industry standards.

The OX01N1B is available for sampling now and will be in mass production in Q3 2026.

Applications

- In-cabin DMS monitoring systems

Features

- **Active array size:** 1440 x 1080
- **Maximum image transfer rate:**
  - 1440 x 1080: 90 fps (MIPI)
- **Power supply:**
  - Analog: 2.8V
  - Digital: 1.2V
  - I/O pads: 1.8V
- **Output interfaces:** Up to 4-lane MIPI CSI-2 D-PHY, 10-bit DVP
- **Output formats:** 10-bit YUV and mono RAW
- **Lens size:** 1/4.51"
- **Pixel size:** 2.2 µm x 2.2 µm

Version 1.0, April 2025

OMNIVISION®

4275 Burton Drive
Santa Clara, CA 95054
USA

Tel: + 1 408 567 3000
Fax: + 1 408 567 3001
www.ovt.com