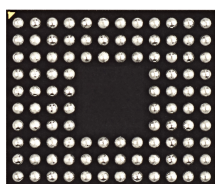
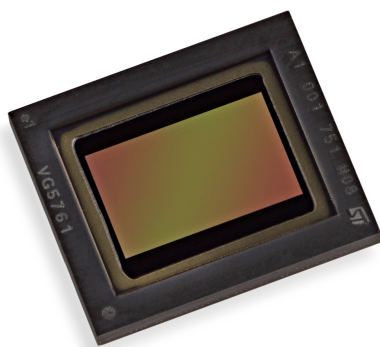



Automotive 1.6 - 2.3 megapixel high-dynamic global shutter image sensor



Features

- AEC-Q100 grade 2 automotive qualification ongoing 
- Automotive global shutter with high-dynamic technology range (up to 98 dB linear) and high-density charge storage
- 3.2 μm pixel GS-HDR, monochrome, visible, and IR spectrum
- Optical formats
 - 1.6 MP (1464 x 1104) at 75 fps in 1/3" optical format with micro lens
 - 2.3 MP (1944 x 1204) at 60 fps in 1/2.5" optical format with micro lens
- Very high MTF, even in near IR (perfect pixel encapsulation)
- Low noise 11-bit ADC with digital CDS
- Linear or compressed output from RAW8 to RAW16 resolution
- Output interface
 - Mipi CSI-2 (4 x 0.8 Gbps)
 - Parallel 12 bits (100 MHz)
 - Camera control interface (CCI)
- Machine vision application support
 - In-pixel HDR and background substration modes, with flexible strobe illumination control
 - Up to 4-LED control output, synchronized with sensor integration periods
 - 8 regions of interest (ROI)
 - Programmable sequences of 4-frame contexts
 - Master/slave external frame start control
 - Embedded 16-bit video processing pipe with pixel defect correction, high dynamic range (HDR) merge with ghost removal, and programmable compression of dynamic
 - Mirror/flip/crop
 - Support of subsampling by 2 and by 4
 - Support of binning by 2 and by 4
 - Integrated double temperature sensors
 - Operating junction temperature of -40 °C to 125 °C
 - Automotive qualified IM2BGA plastic package
 - Large spectrum glass for visible and IR applications with dual AR coating
 - ASIL B support e.g. CPU redundancy, embedded full self test, memory and register ECC, safety manager, and voltage monitoring
 - Monochrome micro lens (maximum CRA optimized for 20 °C and 0 °C)

Product summary

Root part number	Resolution (megapixel)	Package
VG5661	1.6	IM2BGA 8.5 x 8.5 mm
VG5761	2.3	IM2BGA 10.0 x 8.5 mm
VD5661	1.6	Bare die
VD5761	2.3	

Product label



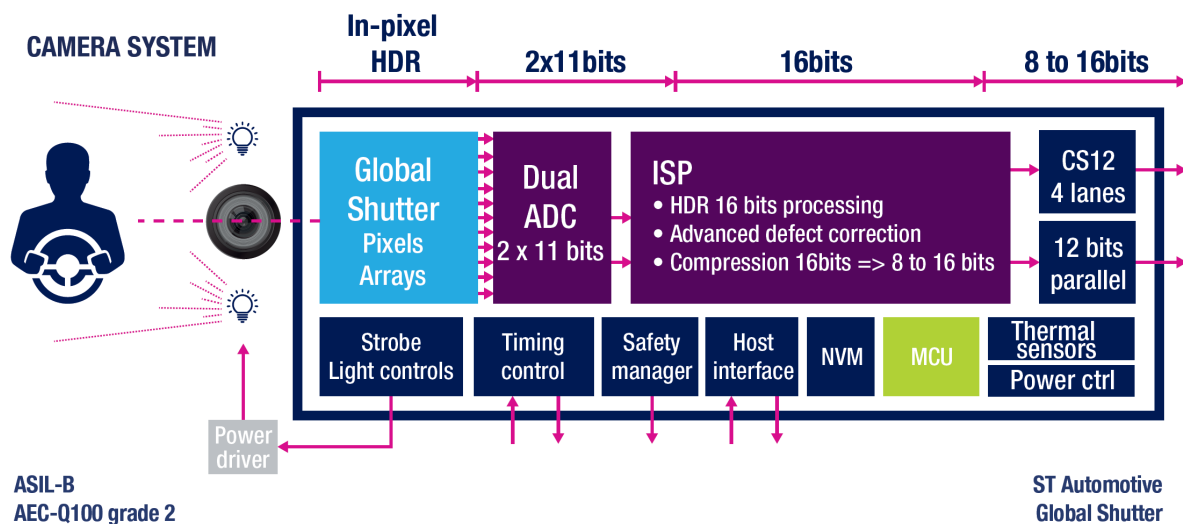
Description

This automotive global shutter sensor product family features both HDR and ultra low-noise where crosstalk is minimized for near infrared (NIR) scenes.

They are highly recommended for high-end computer vision applications in demanding environments.

1 Block diagram

Figure 1. Block diagram of Vx5y61



2 Ordering information

Table 1. Order codes

Order code	Resolution	Packages	Maximum CRA optimization
VG5661AAL5/1	1.6 megapixel monochrome	IM2BGA 8.5 x 8.5 mm	20 ° linear
VG5761AALJ/1	2.3 megapixel monochrome	IM2BGA 10.0 x 8.5 mm	
VD5661AA/RW	1.6 megapixel monochrome	Bare die	
VD5761AA/RW	2.3 megapixel monochrome		

Revision history

Table 2. Document revision history

Date	Version	Changes
19-Nov-2018	1	Initial release
21-Nov-2018	2	Updated the main document title to include all root part numbers
27-Nov-2018		Added sustainability logo Updated Section Description

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