



VITA25K: CMOS Image Sensor, Global Shutter, 25 Megapixel

Overview Specifications Packages

Datasheet: VITA 25K Image Sensor
Rev. 9 (781kB)

>View Material Composition
>No Product Change Notifications exist

Product Overview

Product Description

The VITA 25K is a 5120 x 5120 CMOS image sensor delivering high resolution images at frame rates up to 53 frames per second. The high sensitivity 4.5 μm x 4.5 μm pixels support pipelined and triggered global shutter readout modes and can also be operated in a low noise rolling shutter mode. In rolling shutter mode, the sensor supports correlated double sampling readout, reducing noise and increasing the dynamic range.

The sensor has on-chip programmable gain amplifiers and 10-bit A/D converters. The image's black level is either calibrated automatically or can be adjusted by adding a user programmable offset.

A high level of programmability using a four wire serial peripheral interface enables the user to read out specific regions of interest. Up to 32 regions can be programmed, achieving even higher frame rates.

The image data interface consists of 32 LVDS lanes. Each channel runs at 620 Mbps. A separate synchronization channel containing payload information is provided to facilitate the image reconstruction at the receive end.

The VITA 25K is packaged in a ceramic 355 pin PGA package and is available in a monochrome and color version.

Features

- True family concept
- Multiple shutter modes
- High configurability
- Fast adaptability
- Multiple windowing
- High dynamic range

Benefits

- Ease of adaption over multiple resolutions
- Global and rolling, in master or slave mode
- Easily tailored to application requirement
- Fast change between operating modes
- Speed increase from windowing in x and y direction
- Capturing high dynamic scenes with no loss to image quality

Applications

- High-end Machine Vision Systems
- Motion monitoring

End Products

- Intelligent traffic systems

Technical Documentation & Design Resources

Application Notes (2)

Data Sheets (1)

Collateral Brochures (1)

Package Drawings (1)

Availability and Samples

Product	Status	Compliance	Description	Package		MSL*	Container		Budgetary Price/Unit
				Type	Case Outline		Type	Qty.	
NOIV1SE025KA-GDC	Active	Pb-free Halide free	CMOS Image Sensor, Global Shutter, 25 Megapixel, 53 FPS, LVDS Interface, Color, Micro Lens	CPGA-355	107DJ	NA	Tray JEDEC	12	Contact Sales Office
NOIV1SN025KA-GDC	Active	Pb-free Halide free	CMOS Image Sensor, Global Shutter, 25 Megapixel, 53 FPS, LVDS Interface, Mono, Micro Lens	CPGA-355	107DJ	NA	Tray JEDEC	12	Contact Sales Office

Moisture Sensitivity level (MSL) for surface mount devices (lead free measured at 260°C reflow, non lead free at 235°C reflow)

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