NEWSIGHT IMAGING
WHERE TECHNOLOGY SHINES

Product Brief

NSI3000 - CMOS Image Sensor Chip

- Eight Rows: 4 rows of tall pixels (4x8 micron) and 4 rows of square pixels (4x4 micron)
- Virtual 1x8192 resolution, high sensitivity (effective 8x16 size pixels by analog binning)
- Integrated configurable 8-12 bit direct A/D with parallel 10-12 bit digital output
- iTOF support (Indirect Time of Flight)
- Integrated Bandgap Reference
- Output speeds up to 80 MHz
- Integrated CDS for fixed pattern noise reduction
- Ambient Light Subtraction
- Multiple Readout modes
- Direct pixel control by programming
- Binning of different rows
- Double buffer mode for high frame rate
- Programmable frame rate up to 40,000 fps
- Onboard Test Mode capabilities, including External Input to A/D
- Single Power Supply 3.3 Volts
- Sensitivity: 75V/lux-sec
- Power consumption – 0.072W

  (at conditions: 7.5MHz, 3.3V ,23°C.)
- Package: 40pin LCC

The **NSI3000** is designed for Machine Vision applications, is using 8 rows of 2048 pixels made of 4 rows of 4µm x 8µm pixels and 4 rows of 4µm x 4µm pixels. Binning of the large pixels provides high sensitivity while the small pixels can provide a fine signal with effective resolution of 8192 with low power dissipation and compact size.

The **NSI3000** is designed for programmable high frame rate speeds, allowing better analysis and reaction to events.

The sensor is manufactured in CMOS technology, with extremely high sensitivity pixels. The high sensitivity allows the sensor to replace more expensive CCD sensors in many applications.

PIXEL OUTPUT INTERFACE

Parallel Synchronous output, configurable.

SERIAL INTERFACE

I2c + proprietary

NSI3000EB EVALUATION BOARD

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