Product Overview

MANO9600: CMOS Image Sensor, Rolling Shutter, 9.6 Megapixel

For complete documentation, see the data sheet.

The MANO9600 is a rolling shutter CMOS image sensor with a resolution of 3840 x 2500 pixels. The high sensitivity 2.4 μm x 2.4 μm pixels supports correlated double sampling readout reducing noise and increasing dynamic range. The MANO9600 has a high level of programmability using a four wire serial peripheral interface that enables the user to read out specific regions of interest. Higher frame rates are achieved with single ROI or sub-sampled readout modes. The sensor has built-in features for bias control and power supply regulation. The sensor has on-chip programmable gain amplifiers and 10-bit A/D converters. The integration time and gain parameters can be reconfigured without any visible image artifact. Optionally the on-chip automatic exposure control loop (AEC) controls these parameters dynamically. The image’s black level is either calibrated automatically or can be adjusted by adding a user programmable offset.

The image data interface of the M1-SN/SE part consists of four LVDS lanes running at 620 Mbps, facilitating frame rates up to 20 frames per second. A separate synchronization and clock channel containing payload information is provided to facilitate the image reconstruction at the receive end. The M2-SN/SE part provides a parallel CMOS output interface at reduced frame rate. The MANO 9600 is packaged in a 52-pin LCC package.

Features

- High Full Well Capacity
- Industrial sensor with compact pixel size
- High configurability
- Fast adaptability

Benefits

- High maximum SNR for demanding applications
- Nearly 10MP resolution in just 2/3 inch format
- High flexibility to optimize sensor performance for customer application
- Fast switching between operating modes

Applications

- Biometrics
- Medical imaging
- Machine Vision

End Products

- Biometric finger scanner, palm scanner and iris scanner equipment
- Medical analysis equipment
- Industrial inspection systems

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