Low Power, Small Form Factor Video Analytics Camera

Preliminary Datasheet

ADIS17001

FEATURES

- **Low power QVGA imager with logarithmic sensitivity**
  - **130dB dynamic range**
  - **Edge detection and homography analytics algorithm for tracking and counting object motion**
- **Low power ADSP Blackfin® digital signal processing**
  - **512Mb LPDDR SRAM for advanced algorithms**
- **Image Stabilization**
  - **Dual axial digital gyroscope, up to ± 100°/s dynamic range**
  - **Tri-axial digital accelerometer, up to ±16 *g* dynamic range**
- **Autonomous operation and data collection**
  - **Configurable boot-loader installed within flash memory**
- **Factory calibrated optical focus and alignment**
- **Conformal coated for environmental mitigation**
- **Designed to be FCC recognized:**
  - **FCC CFR 47 Part 15, Subpart B, class B**
- **Programmable operation and control for custom video analytics firmware**
- **Secure authentication option available**
- **USB 2.0 compliant interface for data, supply, ground**
- **Single-supply: 4.75V-5.25V via ruggedized USB 2.0**
- **Operating temperature range: –40°C to +85°C**
- **10kV ESD interface protection**

APPLICATIONS

- **Smart City video analytics**
- **Parking detection**
- **Machine vision**
- **Industrial analytics and lighting**

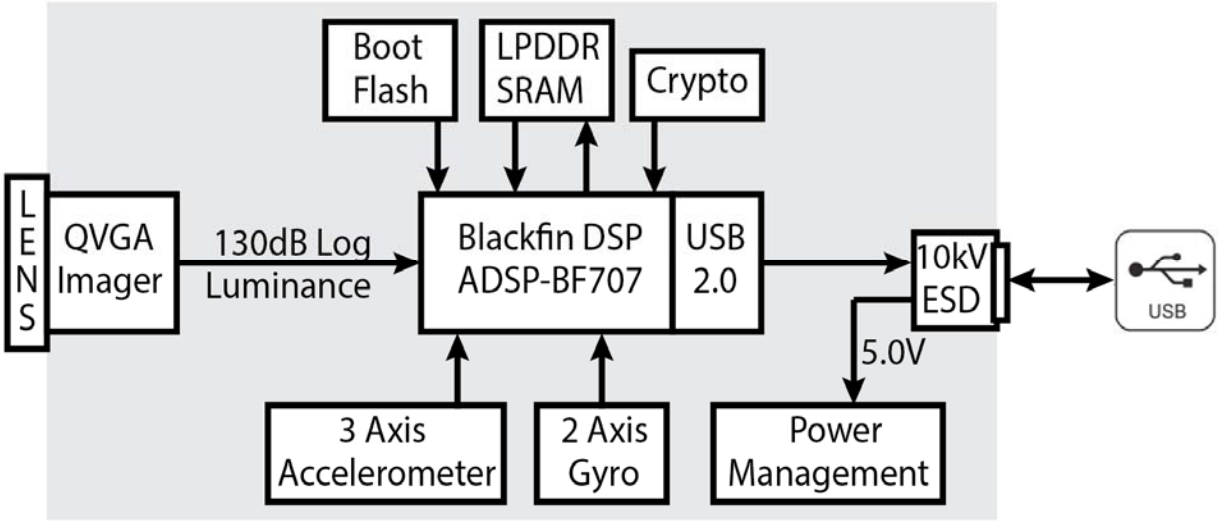
GENERAL DESCRIPTION

The ADIS17001 is a low power video analytics camera in a small form factor for interface to USB 2.0 HOST compliant devices including single board computers. It includes a dual axial gyroscope and a tri-axial accelerometer for image stabilization, tilt and impact detection. The ADIS17001 combines industry leading logarithmic sensitivity video imager technology along with digital signal processing and IMU that optimize video performance. Optical factory calibration is performed for each camera for optimum focus and alignment.

The ADIS17001 provides a simple, cost effective method for integrating video sensor, digital signal processing, and IMU into industrial systems, especially when compared with the complexity and investment associated with discrete designs. All optical calibrations are part of the production process at the factory, greatly reducing system-commissioning time. The USB 2.0 and software API provide a simple interface for video collection and configuration control.

The ADIS17001 is a complete camera within a small form factor board using a single USB 2.0 connector interface. The ADIS17001 provides a 110° horizontal field of view (HFOV) lens.

FUNCTIONAL BLOCK DIAGRAM



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