Chipsmall

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

ISL79987, ISL79988

4-Channel Differential Input Video Decoder with MIPI-CSI2/BT.656 Output for Around View Applications

FN8907
Rev.0.00
Dec 12, 2016

The ISL79987 and ISL79988 integrate four, high-quality NTSC/PAL/SECAM video decoders that convert analog composite video signals to digital component YCbCr data for automotive applications. Each channel contains a 10-bit ADC that supports single-ended, differential, and pseudo differential composite video inputs, and proprietary clamp and gain controllers. The ISL79987 and ISL79988 utilizes a 4H-comb filter for separating luminance and chrominance to reduce cross noise artifacts, and proprietary clamp and gain controllers. Integrated short-to-battery and short-to-ground detection, advanced image enhancement capabilities such as the programmable Automatic Contrast Adjustment (ACA), and the MIPI-CSI2/ITU-R BT.656 output interface make the ISL79987 and ISL79988 an ideal solution for the demands of automotive around view applications.

Applications

- Automotive around view

Related Literature

- For a full list of related documents, visit our website
  - ISL79987, ISL79988 product pages

Features

Analog Video Decoder

- Software-selectable analog input control allows for combinations of single-ended CVBS and differential CVBS
- Integrated, four-video analog anti-aliasing filters and 10-bit CMOS ADCs with differential and single-ended inputs
- Fully programmable static gain or automatic gain control for the Y-channel
- Programmable white peak control for the Y-channel
- 4-H adaptive comb filter Y/C separation
- PAL delay line for color phase error correction
- Digital sub-carrier PLL for accurate color decoding
- Digital horizontal PLL for synchronization processing and pixel sampling
- Advanced synchronization processing and sync detection for handling non-standard and weak signal
- Automatic color control and color killer
- Chroma IF compensation
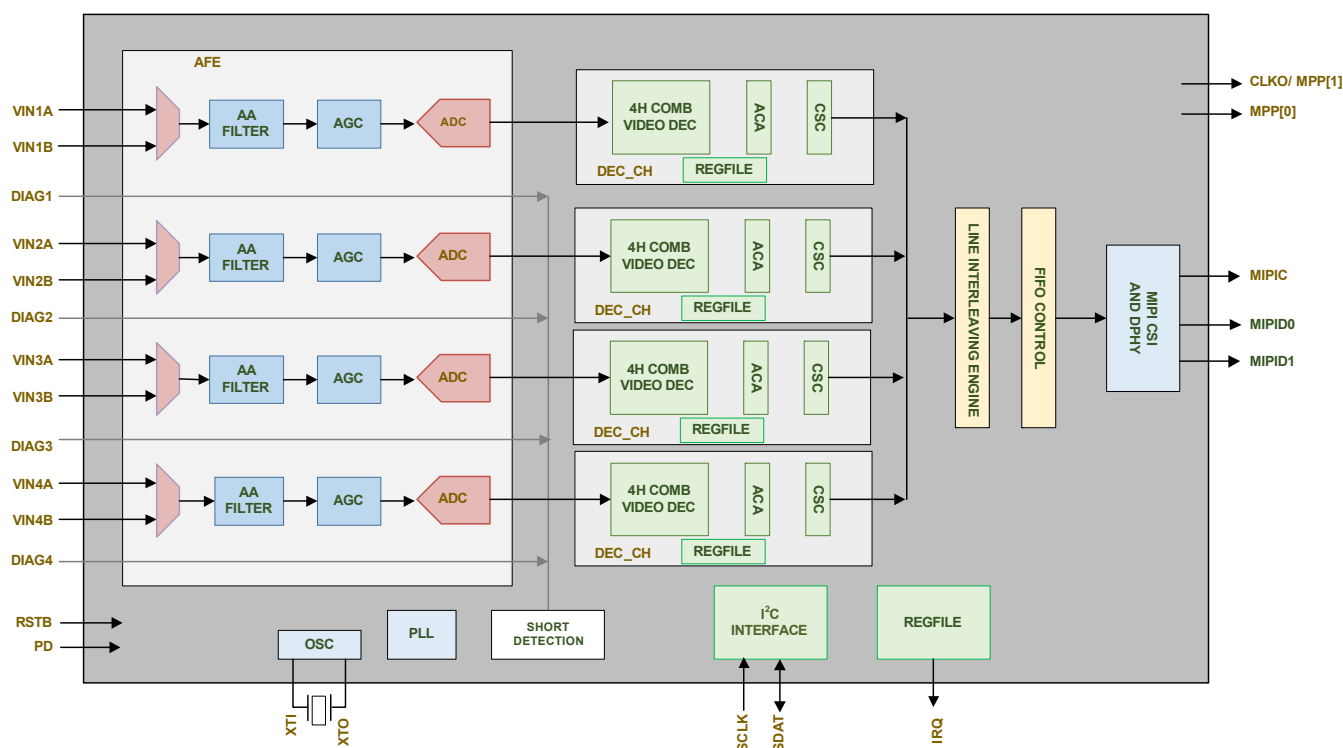- Programmable output cropping

FIGURE 1. ISL79987 BLOCK DIAGRAM

Video Processing

- Automatic Contrast Adjustment (ACA)
- Programmable hue, brightness, saturation, contrast, and sharpness.
- Image enhancement with peaking and CTI

MIPI Output

- MIPI CSI-2 version 1.1 compliant unidirectional output
- Standard virtual identification channel support
- Non-standard pseudo virtual channel support
- One or two data lanes
- YUV422 or RGB565 output format

Digital Output

- Supports standard ITU-R BT.656 format or time multiplexed output with 27/54/108MHz
- Output voltage 1.8V to 3.3V

Miscellaneous

- Low power consumption
- Power save and power-down mode
- Short-to-battery detection
- Short-to-ground detection
- Two wire MPU serial bus interface
- Supports real time control interface
- Single 27MHz crystal for all operations
- 1.2V/3.3V power supply
- 48 Ld QFN package
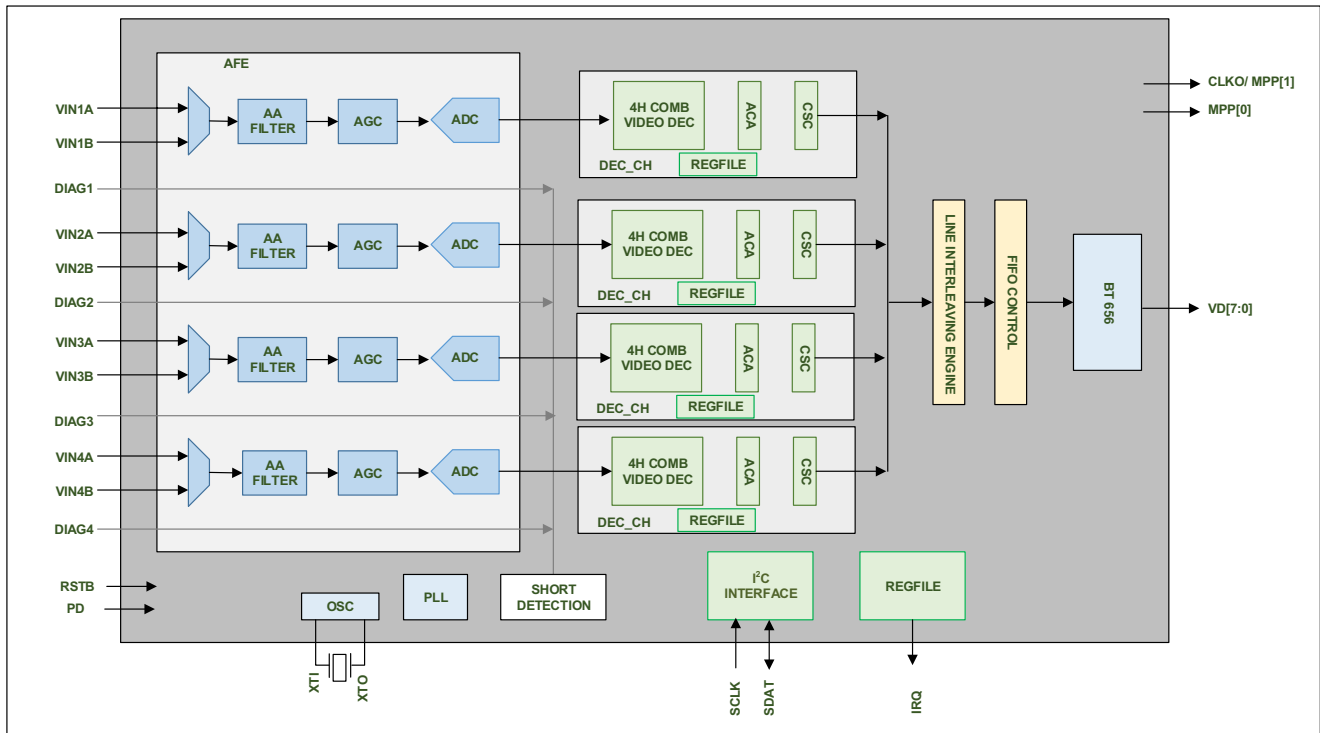- ISL79987ARZ and ISL79988ARZ are AEC-Q100 qualified

FIGURE 2. ISL79988 BLOCK DIAGRAM

For additional products, see www.intersil.com/en/products.html

For information regarding Intersil Corporation and its products, see www.intersil.com

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