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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!



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### FEATURES

- 1.8 V analog and digital core supply voltage**
- Serial data link with reduced range LVDS outputs**
- Correlated double sampler (CDS) with -3 dB, 0 dB, +3 dB, +6 dB gain**
- 6 dB to 42 dB, 10-bit variable gain amplifier (VGA)**
- 14-bit, 65 MHz analog-to-digital converter**
- Black level clamp with variable level control**
- Complete on-chip timing generator**
- Precision Timing* core with 240 ps resolution @ 65 MHz**
- On-chip 3 V horizontal and RG drivers**
- 6 mm × 6 mm, 84-ball CSP\_BGA package**

### APPLICATIONS

- Professional HDTV camcorders**
- Professional, high-end digital cameras**
- Broadcast cameras**
- Industrial high speed cameras**

### GENERAL DESCRIPTION

The AD9973 is a highly integrated dual channel CCD signal processor for high speed digital video camera applications. Each channel is specified at pixel rates of up to 65 MHz, and consists of a complete analog front end with analog-to-digital conversion, combined with a programmable timing driver. The *Precision Timing* core allows adjustment of high speed clocks with 240 ps resolution at 65 MHz operation. The AD9973 also contains a reduced range LVDS interface for the dual-channel data outputs.

Each analog front end (AFE) includes black level clamping, CDS, VGA, and a 65 MSPS, 14-bit analog-to-digital converter. The timing driver provides the high speed CCD clock drivers for RG, HL, and H1 to H4. Operation is programmed using a 3-wire serial interface.

Packaged in a space-saving 6 mm × 6 mm, 84-ball CSP\_BGA, the AD9973 is specified over an operating temperature range of -25°C to +85°C.

### FUNCTIONAL BLOCK DIAGRAM

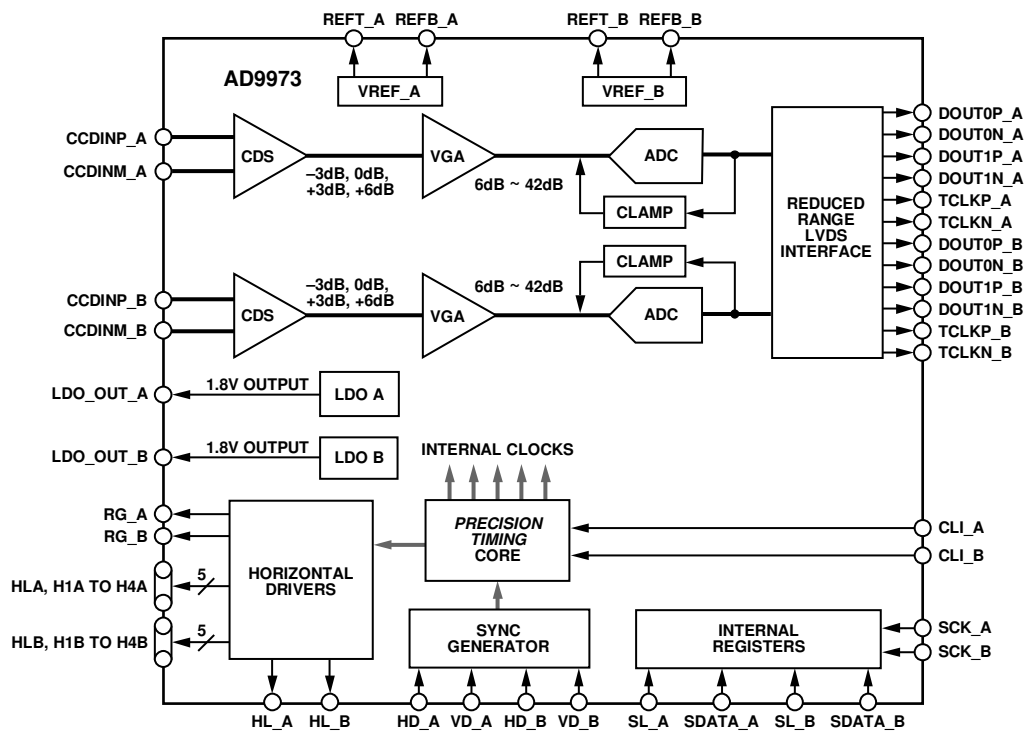


Figure 1.

For more information about the AD9973, contact Analog Devices, Inc. via email at [afe.ccd@analog.com](mailto:afe.ccd@analog.com).

### Rev. SpA

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# AD9973\* PRODUCT PAGE QUICK LINKS

Last Content Update: 02/23/2017

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## COMPARABLE PARTS

View a parametric search of comparable parts.

## DOCUMENTATION

### Data Sheet

- AD9973: Dual-Channel, 14-Bit CCD Signal Processor with *Precision Timing Core* Data Sheet

## DESIGN RESOURCES

- AD9973 Material Declaration
- PCN-PDN Information
- Quality And Reliability
- Symbols and Footprints

## DISCUSSIONS

View all AD9973 EngineerZone Discussions.

## SAMPLE AND BUY

Visit the product page to see pricing options.

## TECHNICAL SUPPORT

Submit a technical question or find your regional support number.

## DOCUMENT FEEDBACK

Submit feedback for this data sheet.

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**AD9973**

**NOTES**