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FEATURES

- Dual AFE channels**
- 1.8 V analog and digital core supply voltage**
- Serial data output with reduced range LVDS outputs**
- Differential analog inputs**
- CDS or SHA configuration (CDS bypass) with**
 - 3 dB, 0 dB, +3 dB, and +6 dB gain
- 6 dB to 42 dB, 10-bit variable gain amplifier (VGA)**
- 14-bit, 65 MHz analog-to-digital converter (ADC)**
- Black level clamp with variable level control**
- Precision Timing* core with 240 ps resolution @ 65 MHz**

APPLICATIONS

- Digital video cameras**
- Digital still cameras**
- Digital copiers**
- Multifunction printers**
- High speed industrial cameras**

GENERAL DESCRIPTION

The AD9978 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 ADC conversion. The *Precision Timing*™ core allows adjustment of the correlated double sampler (CDS) and sample-and-hold amplifier (SHA) clocks with 240 ps resolution at 65 MHz operation. The AD9978 also contains a reduced range, low voltage differential signaling (LVDS) interface for the dual-channel data outputs.

Each analog front end includes black level clamping, a CDS, a VGA, and a 65 MHz, 14-bit ADC. Operation is programmed using a 3-wire serial interface.

Packaged in a space-saving, 6 mm × 6 mm, 40-lead LFCSP, the AD9978 is specified over an operating temperature range of –25°C to +85°C.

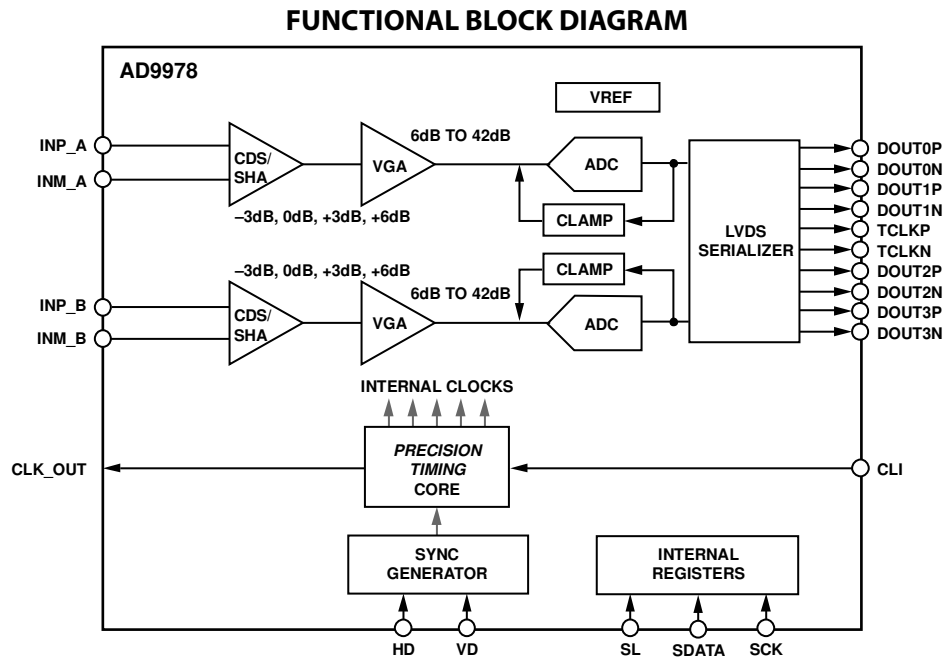


Figure 1.

For more information about the AD9978, contact Analog Devices via email at afe.ccd@analog.com.

Rev. SpB

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AD9978* PRODUCT PAGE QUICK LINKS

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COMPARABLE PARTS

View a parametric search of comparable parts.

DOCUMENTATION

Data Sheet

- AD9978: Dual-Channel, 14-Bit CCD Signal Processor with *Precision Timing Core* Data Sheet

DESIGN RESOURCES

- AD9978 Material Declaration
- PCN-PDN Information
- Quality And Reliability
- Symbols and Footprints

DISCUSSIONS

View all AD9978 EngineerZone Discussions.

SAMPLE AND BUY

Visit the product page to see pricing options.

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AD9978

NOTES