Dual-Channel, 16-Bit HD Image Signal Processor with *Precision Timing* Core

Data Sheet **ADDI7018**

FEATURES

Pin-compatible with the AD9978A
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)
16-bit, 75 MHz analog-to-digital converter (ADC)
Black level clamp with variable level control
***Precision Timing* core with 210 ps resolution at 75 MHz**

APPLICATIONS

HD broadcast cameras
High speed industrial cameras
Professional digital cameras
Digital copiers

GENERAL DESCRIPTION

The ADDI7018 is a highly integrated, dual-channel, charge-coupled device (CCD) signal processor for high speed digital video camera applications. Each channel is specified at pixel rates of up to 75 MHz and consists of a complete analog front end (AFE) with ADC conversion. The *Precision Timing*® core allows adjustment of the correlated double sampler (CDS) and sample-and-hold amplifier (SHA) clocks with 210 ps resolution at 75 MHz operation. The ADDI7018 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 75 MHz, 16-bit analog-to-digital converter (ADC). Operation is programmed using a 3-wire serial interface.

Packaged in a space-saving, 6 mm × 6 mm, 40-lead LFCSP, the ADDI7018 is specified over an operating temperature range of −25°C to +85°C.

FUNCTIONAL BLOCK DIAGRAM

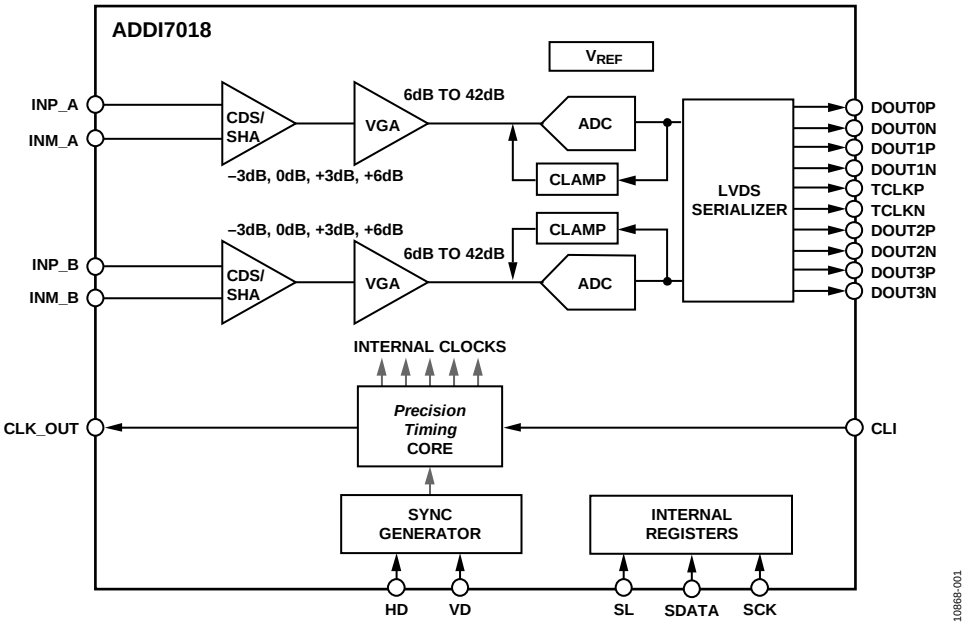

Figure 1.

For more information about the ADDI7018, email Analog Devices, Inc., at afe.ccd@analog.

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ADDI7018* Product Page Quick Links

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Comparable Parts

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Documentation

Data Sheet

- ADDI7018: Dual-Channel, 16-Bit HD Image Signal Processor with Precision Timing Core Data Sheet

Design Resources

- ADDI7018 Material Declaration
- PCN-PDN Information
- Quality And Reliability
- Symbols and Footprints

Discussions

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NOTES

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