

## 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.

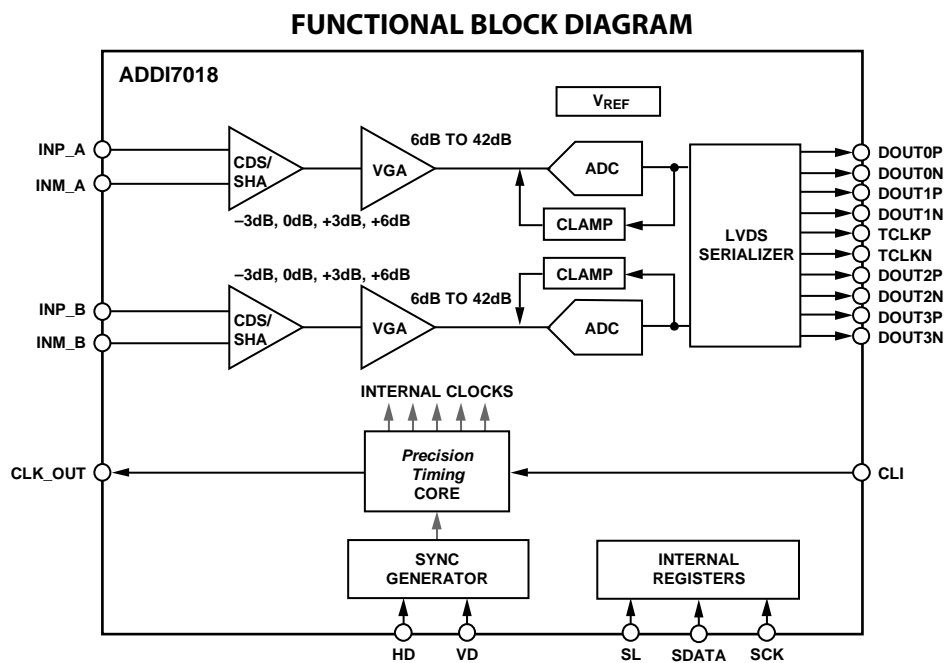


Figure 1.

For more information about the [ADDI7018](#), email Analog Devices, Inc., at [afe.ccd@analog](mailto:afe.ccd@analog).

### Rev. Sp0

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**NOTES**

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