

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.

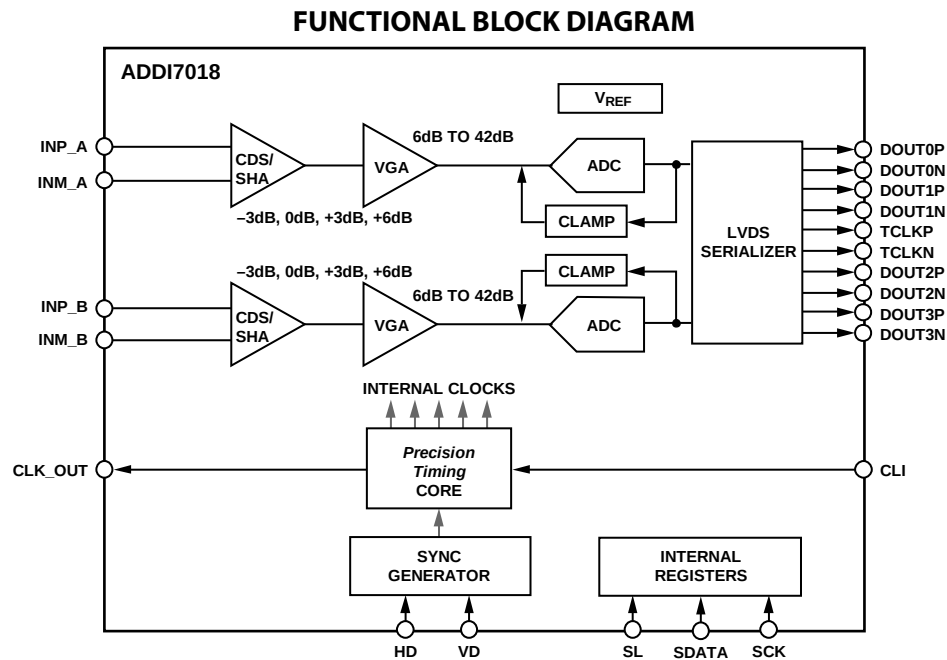


Figure 1.

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

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