

FEATURES

- 4 independent AFE channels
- 1.8 V analog and digital core supply voltage
- Complete on-chip ISATG timing generator with 16 XV outputs and 4 general-purpose outputs (GPO)
- Differential analog inputs
- CDS or SHA (CDS bypass) with 7 gain settings
- 0 dB to 36 dB, 10-bit variable gain amplifier (VGA)
- 16-bit, 65 MSPS analog-to-digital converter (ADC)
- Precision Timing* core with 240 ps resolution at 65 MHz
- 8 programmable H-clock outputs
- On-chip sync generator with external sync input
- 8 mm × 8 mm CSP_BGA package with 0.65 pitch

APPLICATIONS

- Industrial cameras
- Surveillance cameras
- Medical imaging
- Professional photography

GENERAL DESCRIPTION

The **ADDI7015** is a highly integrated, quad-channel, CCD signal processor for high speed digital imaging applications. Each channel is specified at pixel rates of up to 65 MHz and consists of a complete analog front end (AFE) with analog-to-digital 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. There are eight independent horizontal clock outputs to support a variety of CCD timing requirements. The **ADDI7015** also features a programmable ISATG for vertical timing generation.

Each analog front end includes black level clamping, a CDS, a VGA, and a 65 MSPS, 16-bit analog-to-digital converter (ADC). Operation is programmed using a 4-wire serial interface.

Packaged in a space-saving, 8 mm × 8 mm, CSP_BGA, the **ADDI7015** is specified over an operating temperature range of -25°C to +85°C.

FUNCTIONAL BLOCK DIAGRAM

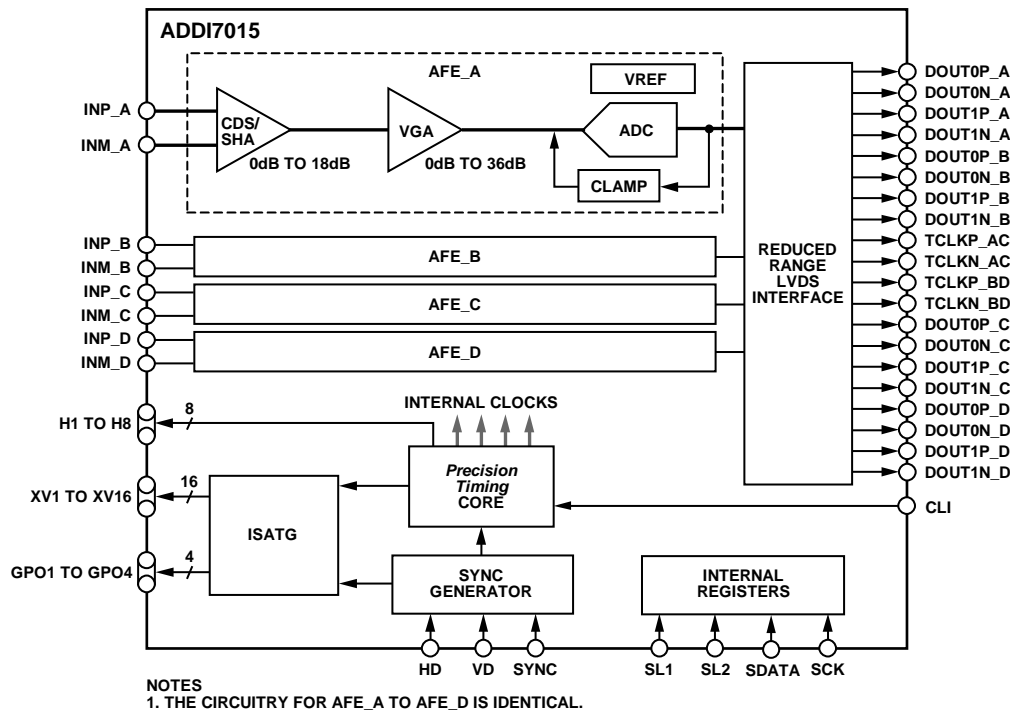


Figure 1.

For more information on the **ADDI7015**, email Analog Devices, Inc., at afe.ccd@analog.

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Data Sheet

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