

## 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

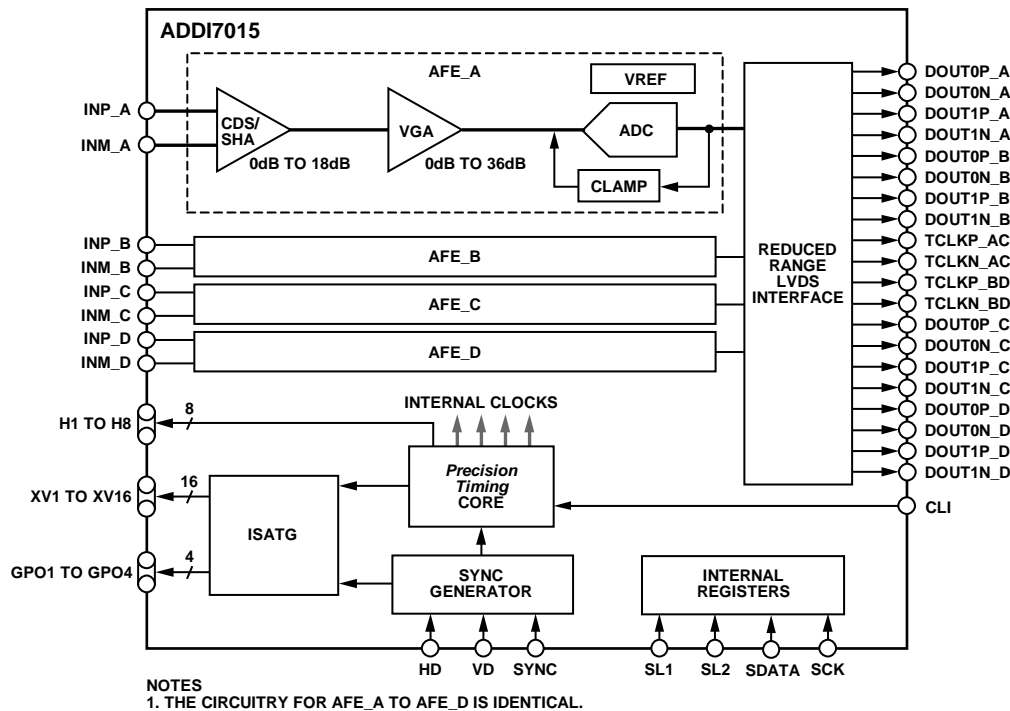


Figure 1.

For more information on the **ADDI7015**, email Analog Devices, Inc., at [afe.ccd@analog](mailto:afe.ccd@analog).

### Rev. Sp0

Information furnished by Analog Devices is believed to be accurate and reliable. However, no responsibility is assumed by Analog Devices for its use, nor for any infringements of patents or other rights of third parties that may result from its use. Specifications subject to change without notice. No license is granted by implication or otherwise under any patent or patent rights of Analog Devices. Trademarks and registered trademarks are the property of their respective owners.

# ADDI7015\* Product Page Quick Links

Last Content Update: 11/01/2016

---

## [Comparable Parts](#)

View a parametric search of comparable parts

## [Documentation](#)

### **Data Sheet**

- [ADDI7015: Quad-Channel, 16-Bit CCD Signal Processor with Precision Timing Core Data Sheet](#)

## [Design Resources](#)

- [ADDI7015 Material Declaration](#)
- [PCN-PDN Information](#)
- [Quality And Reliability](#)
- [Symbols and Footprints](#)

## [Discussions](#)

View all ADDI7015 EngineerZone Discussions

## [Sample and Buy](#)

Visit the product page to see pricing options

## [Technical Support](#)

Submit a technical question or find your regional support number

---

**NOTES**