

### FEATURES

- Six 10-bit, 40 MHz analog front-end (AFE) channels
- 1.8 V analog and digital core supply voltage
- Serial data link with reduced range low voltage differential signaling (LVDS) outputs
- Input amplifier with  $-3$  dB,  $0$  dB,  $+3$  dB, or  $+6$  dB gain
- $6$  dB to  $42$  dB, 10-bit variable gain amplifier (VGA)
- Black level clamp with variable level control
- Low power consumption

### APPLICATIONS

- Digital copiers
- Multifunction copiers
- Industrial high speed scanners

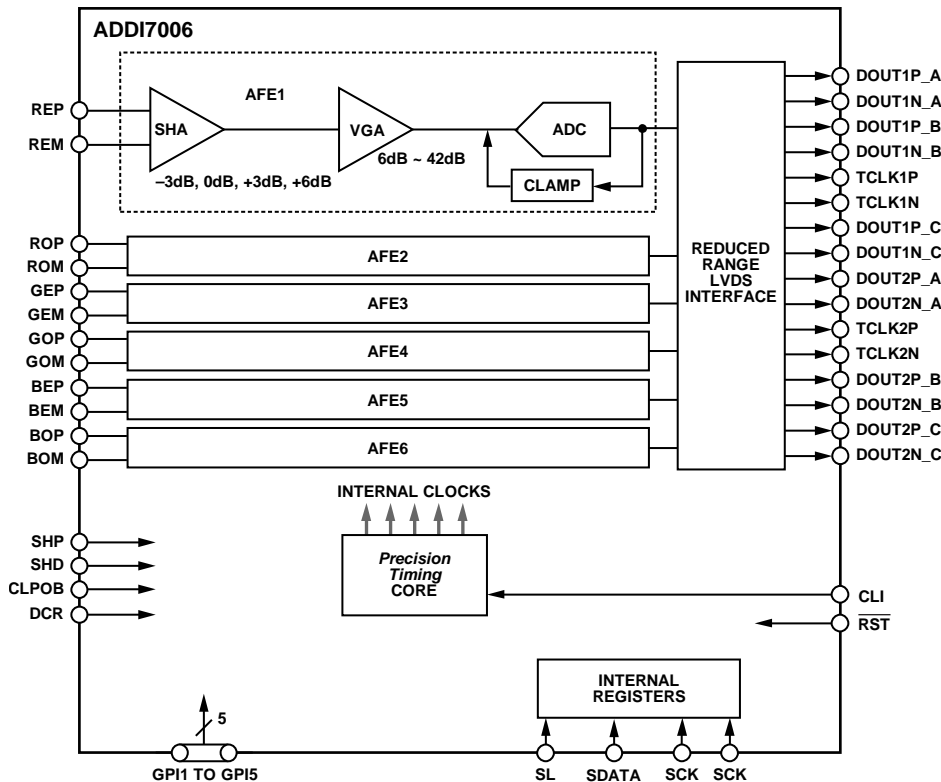
### GENERAL DESCRIPTION

The **ADDI7006** is a highly integrated 6-channel charged-coupled device (CCD) signal processor for high speed scanner applications. Each channel is specified at pixel rates of up to 40 MHz, and consists of six complete analog front ends with correlated double sampling, variable gain amplification, and 10-bit analog-to-digital conversion. The **ADDI7006** also contains a reduced range LVDS interface for the digital data output to reduce electromagnetic interference (EMI) concerns.

Each analog front end includes black level clamping, a VGA, and a 40 MSPS, 10-bit analog-to-digital converter (ADC). Operation is programmed using a 3-wire serial interface.

Packaged in a space-saving 80-lead TQFP package, the **ADDI7006** is specified over an operating temperature range of  $-25^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$ .

### FUNCTIONAL BLOCK DIAGRAM



NOTES  
1. THE CIRCUITRY FOR AFE1 TO AFE6 IS IDENTICAL.

Figure 1.

For more information on the **ADDI7006**, email Analog Devices, Inc., at [afe.ccd@analog.com](mailto:afe.ccd@analog.com).

Rev. SpA

[Document Feedback](#)

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.

One Technology Way, P.O. Box 9106, Norwood, MA 02062-9106, U.S.A.  
Tel: 781.329.4700 ©2012–2013 Analog Devices, Inc. All rights reserved.  
[Technical Support](#) [www.analog.com](http://www.analog.com)

**NOTES**