6-Channel, 10-Bit, 40 MSPS CCD Signal Processor

Data Sheet

ADDI7006

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°C to +85°C.

FUNCTIONAL BLOCK DIAGRAM

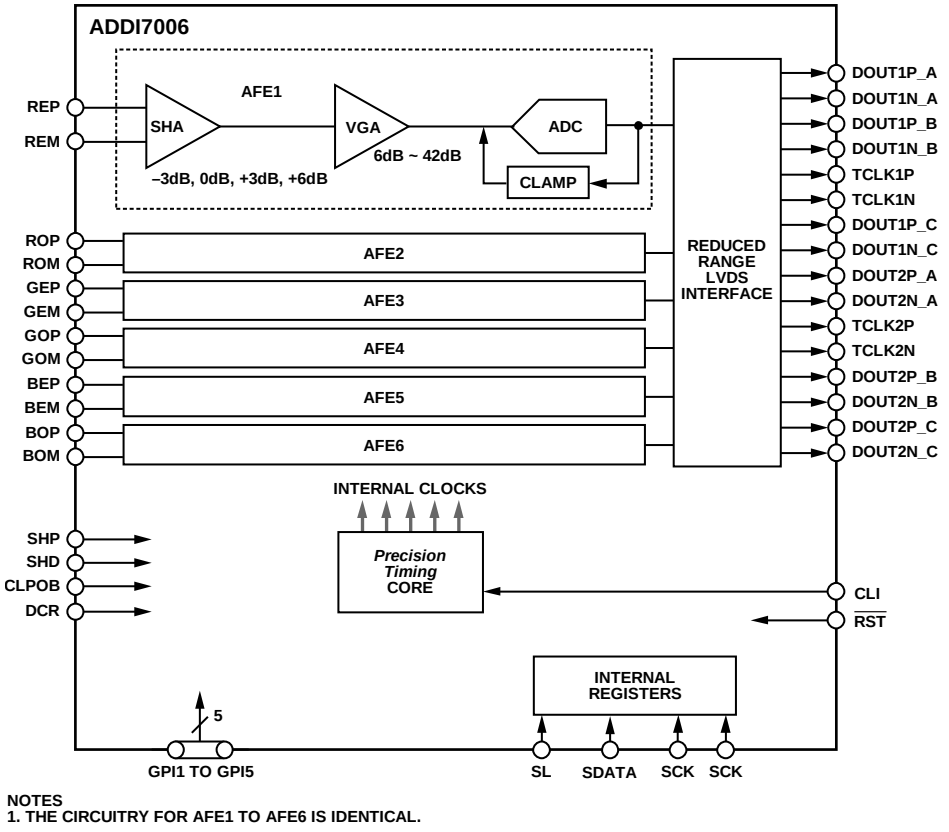

Figure 1.

For more information on the ADDI7006, email Analog Devices, Inc., at afe.ccd@analog.

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