

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

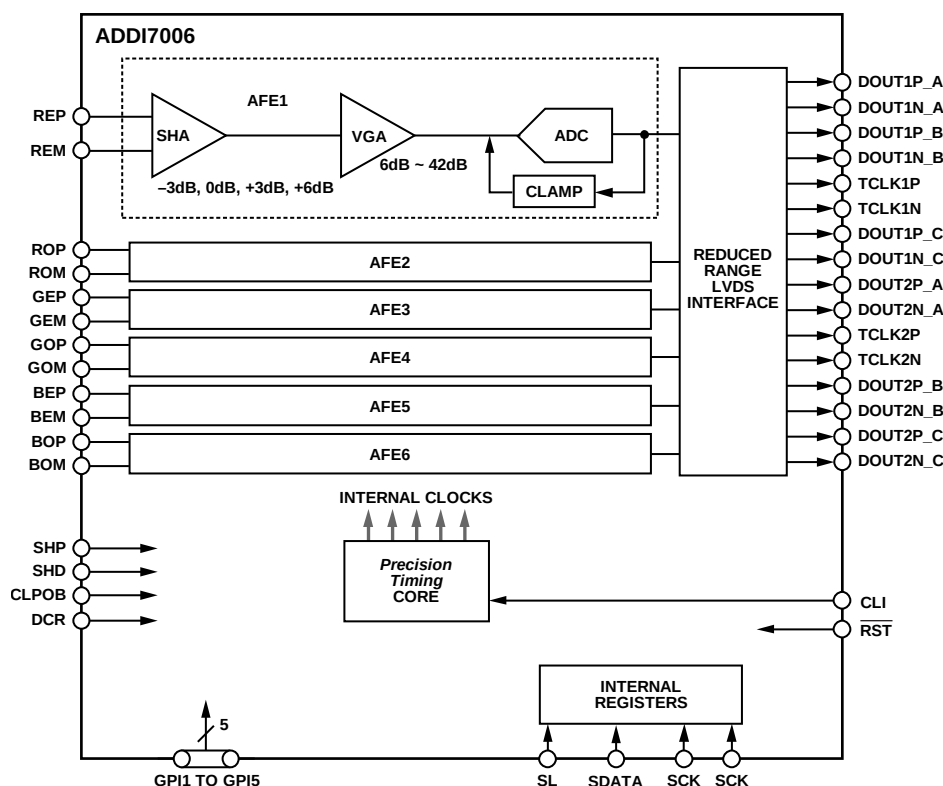
GENERAL DESCRIPTION

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 $+85^{\circ}\text{C}$.

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.

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