

Analog Devices, Inc. rozšíril ponuku precíznych analógových mikrokontrolérov ADuC o ďalšie tri kúsky. Ide o ADuC7023, ADuC7060 a ADuC7061.

Rodina MCU ADuC7xxx obsahuje ARM7TDMI® jadro, pričom sa ďalej líšia analógovým vybavením.

ADuC7023 využíva 12-bitové analógové periférie (ADC, DAC)

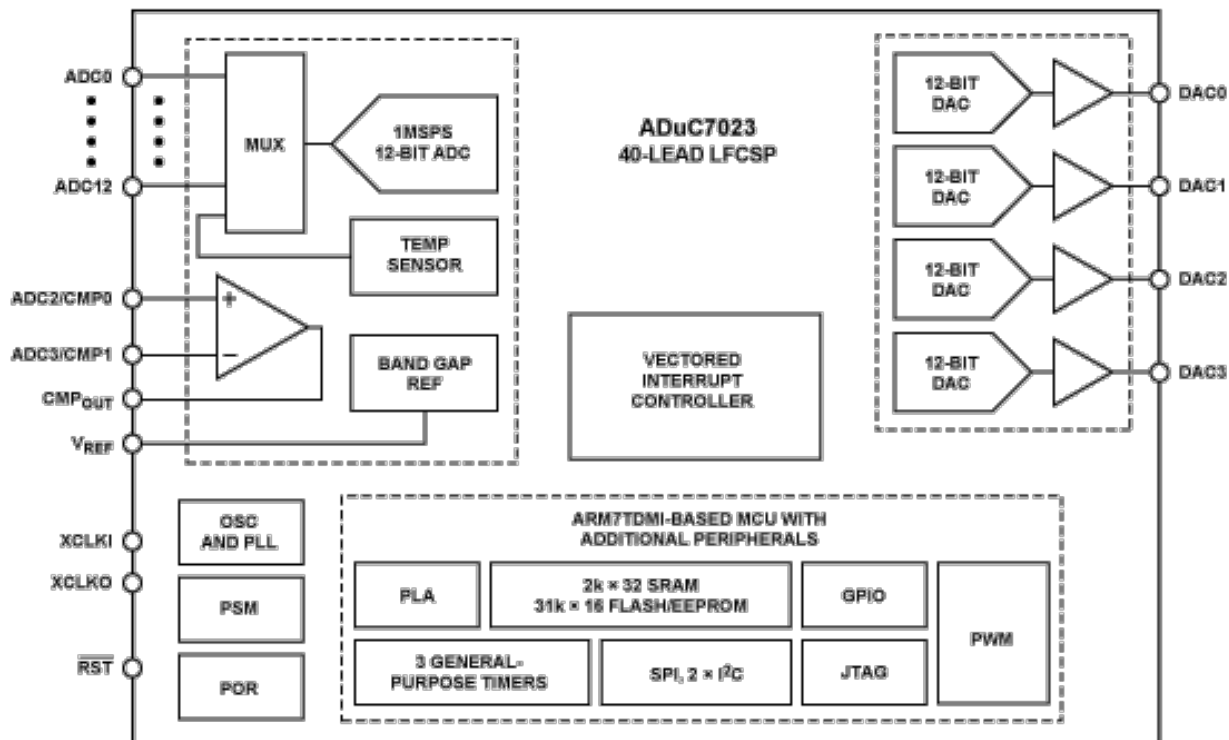
ADuC706x sú som svojím 8kSPS, 24-bitovým, viackanálovým sigma-delta ($\Sigma\Delta$) AD prevodníkom, určené na meranie a zber dát.

ADuC7023

Vlastnosti

- Analog I/O
 - Multichannel, 12-bit, 1 MSPS ADC; Up to 12 ADC channels
 - Fully differential and single-ended modes
 - 0 V to VREF analog input range
 - 12-bit voltage output DACs; 4 DAC outputs available
 - On-chip voltage reference
 - On-chip temperature sensor
 - Voltage comparator
- Microcontroller
 - ARM7TDMI core, 16-bit/32-bit RISC architecture
 - JTAG port supports code download and debug
- Clocking options
 - Trimmed on-chip oscillator ($\pm 3\%$)
 - External watch crystal
 - External clock source up to 44 MHz
 - 41.78 MHz PLL with programmable divider
- Memory
 - 62 kB Flash/EE memory, 8 kB SRAM
 - In-circuit download, JTAG-based debug
 - Software-triggered in-circuit reprogrammability
- Vectored interrupt controller for FIQ and IRQ
 - 8 priority levels for each interrupt type
 - Interrupt on edge or level external pin inputs
- On-chip peripherals
 - 2x fully I2C-compatible channels
 - SPI (20 Mbps in master mode, 10 Mbps in slave mode); With 4-byte FIFO on input and output stages
 - Up to 20 GPIO pins; All GPIOs are 5 V tolerant
 - 3x general-purpose timers; Watchdog timer (WDT)
 - Programmable logic array (PLA); 16 PLA elements
 - 16-bit, 5-channel PWM
- Power
 - Specified for 3 V operation
 - Active mode: 11 mA at 5 MHz, 28 mA at 41.78 MHz
- Packages and temperature range
 - 32-lead 5 mm x 5 mm LFCSP
 - 40-lead LFCSP
- Fully specified for -40°C to $+125^{\circ}\text{C}$ operation
- Tools
 - Low cost QuickStart development system
 - Full third-party support

Blokové zapojenie



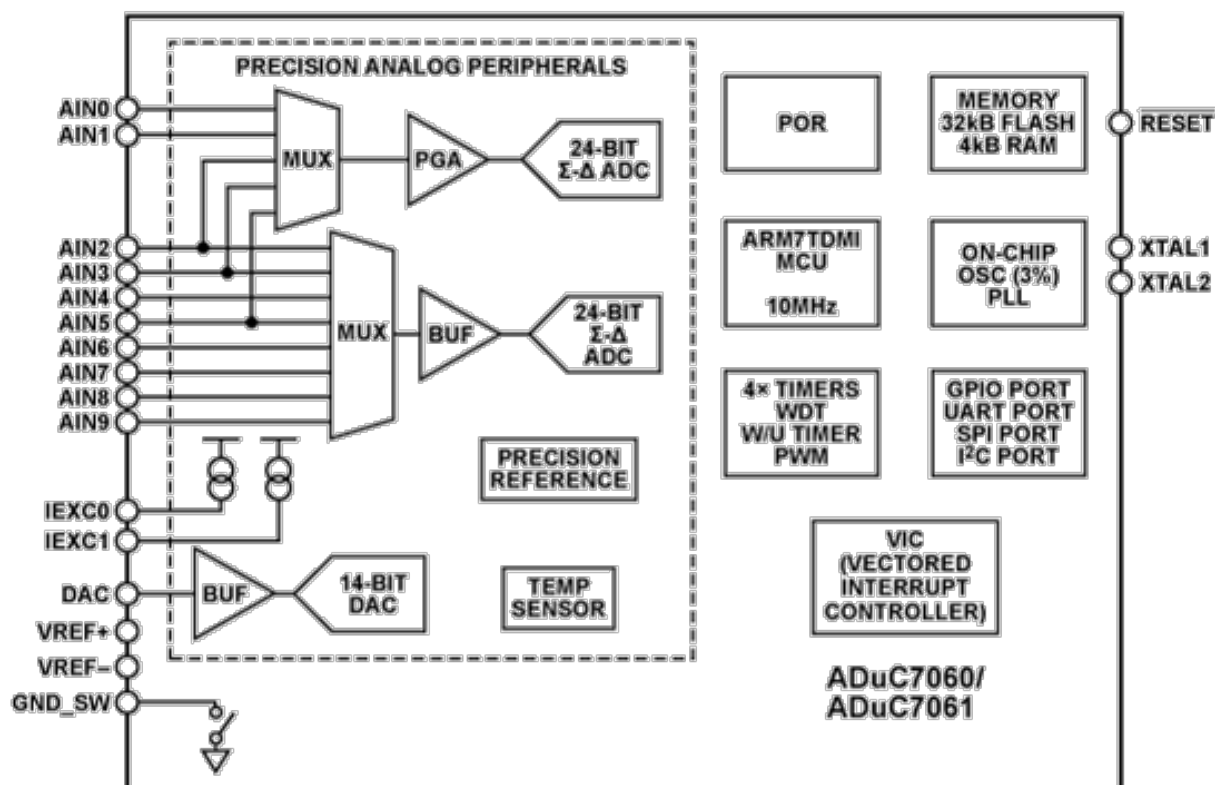
ADuC706x

Vlastnosti

- Analog input/output
- Dual (24-bit) ADCs
- Single-ended and differential inputs
- Programmable ADC output rate (4 Hz to 8 kHz)
- Programmable digital filters
- Built-in system calibration
- Low power operation mode
- Primary (24-bit) ADC channel: 2 differential pairs or 4 single-ended channels; PGA (1 to 512) input stage; Selectable input range: ± 2.34 mV to ± 1.2 V; 30 nV rms noise
- Auxiliary (24-bit) ADC: 4 differential pairs or 7 single-ended channels
- On-chip precision reference (± 10 ppm/ $^{\circ}$ C)
- Programmable sensor excitation current sources: 200 μ A to 2 mA current source range
- Single 14-bit voltage output DAC
- Microcontroller
- ARM7TDMI core, 16-/32-bit RISC architecture
- JTAG port supports code download and debug
- Multiple clocking options
- Memory:
 - 32 kB (16 kB $\times$ 16) Flash/EE memory, including 2 kB kernel
 - 4 kB (1 kB $\times$ 32) SRAM
- Tools
 - In-circuit download, JTAG based debug
 - Low cost, QuickStart™ development system
- Communications interfaces
 - SPI interface (5 Mbps); 4-byte receive and transmit FIFOs
 - UART serial I/O and I2C (master/slave)

- On-chip peripherals: 4× general-purpose (capture) timers including; Wake-up timer; Watchdog timer
- Vectored interrupt controller for FIQ and IRQ; 8 priority levels for each interrupt type; Interrupt on edge or level external pin inputs
- 16-bit, 6-channel PWM
- General-purpose inputs/outputs
 - Up to 14 GPIO pins that are fully 3.3 V compliant
- Power
 - AVDD/DVDD specified for 2.5 V ($\pm 5\%$)
 - Active mode: 2.74 mA (@ 640 kHz, ADC0 active)
 - 10 mA (@ 10.24 MHz, both ADCs active)
- Packages and temperature range
 - Fully specified for -40°C to $+125^{\circ}\text{C}$ operation
 - 32-lead LFCSP (5 mm $\times$ 5 mm)
 - 48-lead LFCSP and LQFP
- Derivatives
 - 32-lead LFCSP (ADuC7061)
 - 48-lead LQFP and 48-lead LFCSP (ADuC7060)

Blokové zapojenie



Cena

ADuC7023 začína od 4.59 USD (@100 ks)

ADuC7060 začína od 5.45 USD (@100 ks)

ADuC7061 začína od 4.00 USD (@100 ks)

Odkazy

[ADuC7023 Homepage](#)

[ADuC7060 Homepage](#)

[ADuC7061 Homepage](#)

[ADuC7023 Datasheet](#)

[ADuC7060, ADuC7061 Datasheet](#)

Distribúcia

[vid'. Adresár](#)