ADVANCE INFORMATION

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MAXIM

Octal, 8-Bit, Serial DAC

General Description

The MAX528 is an octal, 8-bit, voltage-output digital-to-analog converter (DAC) with serial interface and two sets of reference inputs. It operates from single +5V to +15V supplies or split supplies including +5V/-5V, and +5V/-15V.

Three output modes are serially programmable for each of eight analog outputs. The unbuffered mode connects the internal R-2R DAC network directly to the output pin, reducing power consumption and avoiding buffer DC errors. The full-buffer mode inserts a buffer between the R-2R network and the output, allowing +5mA to -2mA output currents to be generated. The half-buffer mode inserts a buffer allowing +5mA output drive and 0mA sink current. This mode uses less power and provides output swings to ground with single supply operations.

Serial data can be "daisy-chained" from one chip to another. On power-up, all data bits are set to zero and analog outputs are put in the unbuffered mode. The MAX528 has a shutdown pin to reduce current consumption to under 50µA, while retaining all internal register data.

Applications

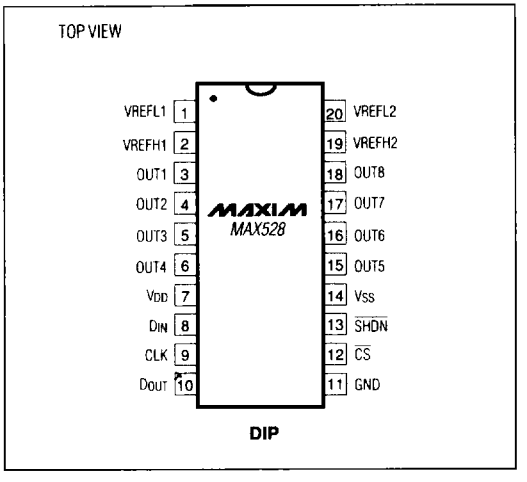
Digital Gain and Offset Adjustment

Microprocessor-Controlled Set Points

Digital Calibration

Trimming

Pin Configuration



Features

- ♦ **8 Outputs**
- ♦ **2 Reference Inputs**
- ♦ **Serial Interface I/P and O/P**
- ♦ **Shutdown with Memory**
- ♦ **DAC or Buffered DAC Outputs**
- ♦ **Single or Dual Supplies**
- ♦ **CMOS and TTL Compatible Inputs**
- ♦ **±1/2LSB Full-Scale Error**
- ♦ **20-Pin or 24-Pin SO Package**

Ordering Information

PART	TEMP. RANGE	PIN-PACKAGE
MAX528CPP	0°C to +70°C	20 Plastic DIP
MAX528CWG	0°C to +70°C	24 SO
MAX528C/D	0°C to +70°C	Dice*
MAX528EJP	-40°C to +85°C	20 CERDIP
MAX528EWG	-40°C to +85°C	24 SO
MAX528MJP	-55°C to +125°C	20 CERDIP

** Contact factory for dice specifications.*

Functional Diagram