

# PRODUCT OVERVIEW



## WM8016

### DUAL 8-BIT VOLTAGE OUTPUT DACS WITH NON-VOLATILE MEMORY AND SERIAL INTERFACE

WM8016 is a dual 8-bit voltage output digital to analogue converter (DAC) with on-chip non-volatile memory and a serial interface in a 16 pin wide body SO or DIP package. WM8016's non-volatile memory stores a setting for each DAC that is automatically recalled at power-up. This dual solid state potentiometer function enables factory set up of two reference voltages or signal attenuations. Non-volatile memory programming operates from the standard + 5V or  $\pm 5V$  supplies used with WM8016. WM8016 communicates with a controlling microprocessor via a three wire serial interface comprising Clock, Data and LatchB lines. A 12 bit command word containing 8 data bits, 2 DAC select bits and 2 instruction bits, is input on the rising edge of the clock to the Data pin. Instruction bits are executed when the LatchB input is pulsed low after the command word is clocked in. Instructions cause transfer of data between each DAC's data latch and memory, for storage or recall, or the direct transfer of serial input data to the DAC's data latches.

#### FEATURES

- Dual 8-bit voltage output DACs
- On-chip non-volatile memory
- 16-pin package: wide body SO and DIP
- Single 5V or dual  $\pm 5V$  supply operation
- Low power: 12.5mW at 5V
- Fast settling time: 3 microseconds to 1/2 LSB

The voltage reference inputs have high impedance input buffers feeding each DAC whose decoded outputs drives the OUTA and OUTB pins via a voltage output buffer. WM8016 is available in wide bodied small outline (SO) and dual-in-line plastic (DIP) packages for the extended (-25 to 85°C) temperature range.

#### ORDERING INFORMATION

DEVICE	TEMP. RANGE	PACKAGE
WM8016EN	-25 °C to 85 °C	16-pin Plastic DIP
WM8016EDW	-25 °C to 85 °C	16-pin wide-bodied Plastic SO

#### APPLICATIONS

- Replaces trim pots
- Programmable voltage source
- Programmable attenuator
- Mobile communications
- Automatic test equipment
- Industrial control

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