# MCP4912

The MCP4912 is a Dual 10-Bit Voltage Output DAC (Digital to Analog Converter) that operates from a 2.7 V to a 5.5V supply and are SPI compatible.

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**Fig 1**: MCP4912 pinouts.

**Pin Function Table**:

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**Pin Descriptions**:

1. **CS**: Tells the peripheral that data is ready to be sent and allows the user to select the peripheral it want to talk to. The Chip select pin is HIGH by default and becomes LOW when data is ready to be sent thereby activating the peripheral. After data has been sent it returns to HIGH.
2. **LDAC**: Transfer input latch registers to their corresponding DAC registers (VOUT).
   1. When LOW both Vouta and Voutb are updated simultaneously with their input register contents..
   2. When tied to VSS, Vout is updated at the rising edge of the CS pin.
   3. Or can be driven by an external control device (MCU I/O pin)
3. **SHDN:** When LOW, both DAC channels are shut down. No DAC output available during the shutdown.
4. **Vouta, Voutb:** output pins each with its own amplifier. The output amplifier of each can drive the output pin with a range of VSS to VDD.
5. **Vrefa, Vrefb:** Determines the reference voltage that will be used by the DAC to determine the output voltage. If the input value is 50%, the output voltage will be 50% of Vref.