

# CD74HC

## 16Ch Analog/Dig Multiplexer Breakout Module



- The CD74HC4067 High-Speed CMOS 16-Channel Analog/Digital Multiplexer Breakout Module is a breakout board for the very handy 16-Channel Analog/Digital Multiplexer/Demultiplexer.
- This chip is like a rotary switch – it internally routes the common pin (COM in the schematic, SIG on the board) to one of 16 channel pins (CHANxx).
- It works with both digital and analog signals (the voltage can't be higher than VCC), and the connections function in either direction.
- To control it, connect 4 digital outputs to the chip's address select pins (S0-S3), and send it the binary address of the channel you want (see the datasheet for details).
- This allows you to connect up to 16 sensors to your system using only 5 pins!
- Since the mux/demux also works with digital signals; you can use it to pipe TTL-level serial data to or from multiple devices.
- For example, you could use it to connect the TX pins of 16 devices to one RX pin on your microcontroller.
- You can then select any one of those 16 devices to listen to.
- If you want two-way communications; you can add a second board to route your microcontroller's TX line to 16 device's RX lines. By using multiple boards, you can create similar arrangements for I2C, SPI, etc.
- The CD74HC4067 internal switches are bidirectional, support voltages between ground and VCC, have low "on" resistance and low "off" leakage, and to prevent crosstalk, perform "break-before-make" switching.
- The board also breaks out the chip's "enable" pin, which when driven high, will completely disconnect the common pin (all switches "off").