



# 24bit ADC module

## MCP3561

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## Description

The ADC module is 1-channel, 24-bit, Delta-Sigma Analog-to-Digital Converters (ADCs), with programmable data rate of up to 35 kSPS. The device operate from a single 3.1V to 3.6V supply with a SPI compatible Serial Peripheral Interface.

## Features

- One Differential or Two Single-Ended Input Channels
- 24-Bit Resolution
- Programmable Data Rate: up to 35 kSPS
- Programmable Gain: 0.33X to 64X
- 20 MHz SPI-Compatible Interface with Mode 0,0 and 1,1
- Input Voltage Range: 0V to 3.0V
- Differential Voltage Reference Inputs
- Internal Oscillator
- Connects to the Attraction D0mini oscilloscope
- Extended Temperature Range: -40°C to +125°C

## Connection

The module can be connected to an Attraction Domini oscilloscope or other a control device. The module is controlled via the SPI interface. The ADC module uses the MCP3561 chip. The ADC is rated for 3.0 V input voltage, exceeding the voltage can lead to failure of the device.

## Control and power connector

<b>Top row</b>	<b>1. NA</b>	<b>2. GND</b>	<b>3. NA</b>	<b>4. GND</b>	<b>5. +3.3V</b>	<b>6. +5V</b>
<b>Bottom row</b>	7. GND	8. SCK	9. SDI	10. CS	11. SDO	12. GND

## Load connectors (numbering from the edge of the board)

<b>Top row</b>	<b>1. CH0</b>	<b>2. GND</b>	<b>3. CH1</b>	<b>4. GND</b>	<b>5. +3.3V</b>	<b>6. +5V</b>
<b>Bottom row</b>	7. GND	8. GND	9. GND	10. GND	11. GND	12. GND

## Electrical Characteristics

PARAMETER	MIN	TYP	MAX
Input voltage	0 V		3 V
Resolution	16 bit		24bit
Power supply voltage	3,1 V	3,3 V	3,6 V
Data Rate, SPS	12		35000



View module

