

# Interfacing Analog to Digital Converter IC

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# ADC Converter



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- ❷ The Raspberry Pi has no built in analogue inputs.
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- ❹ We need an ADC Converter.
- ❺ In this tutorial we are using MCP3008 ADC IC.



# About MCP3008





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- ① MCP3008 is a successive approximation 10bit 8-channel Analog to Digital converter (ADC).



# About MCP3008

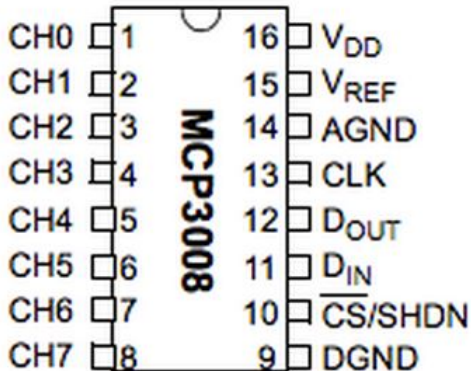
- ① MCP3008 is a successive approximation 10bit 8-channel Analog to Digital converter (ADC).
- ② It uses the SPI bus protocol which is supported by the RPi header.



# PINS of MCP3008



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# Experiment



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**Connect the LM35 temperature sensor to Channel 0 of MCP3008**



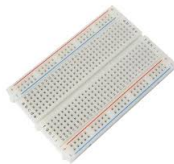
# Hardware Required



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1

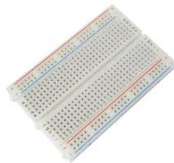
Breadboard





# Hardware Required

1 Breadboard

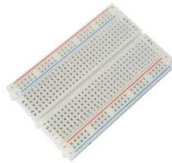


2 MCP3008 IC.



# Hardware Required

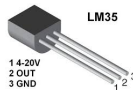
1 Breadboard



2 MCP3008 IC.



3 LM35 Temperature sensor



# Problem Statement



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**Interfacing an ADC with RPi to read the room temperature using LM35 (Temperature Sensor) connected to one of the channels of IC.**



# Thank You!

Post your queries on: <http://qa.e-yantra.org/>

