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## Overview

This xCHIP forms part of the sensor modules, used for digital signal acquisition.

The converter is based on a successive approximation register architecture with an internal track-and-hold circuit that can handle input frequencies up to 11MHz. The ADC081C021 operates from a single supply which also serves as the reference. The device features an I<sup>2</sup>C-compatible serial interface that operates in all three speed modes, including high speed mode (3.4MHz). The ADC's Alert feature provides an interrupt that is activated when the analog input violates a programmable upper or lower limit value. The device features an automatic conversion mode, which frees up the controller and I<sup>2</sup>C interface. In this mode, the ADC continuously monitors the analog input for an "out-of-range" condition and provides an interrupt if the measured voltage goes out-of-range.

## Product Highlights

- Analog-to-digital converter
- Screw Terminal for easy connection
- It is equipped with a on board voltage divider to provide a wide input range from 3.3 to 24V

## Applications

- Test Equipment
- Peak Detection
- System Monitoring

## Specifications

- I<sup>2</sup>C-Compatible 2-Wire Interface Which Supports Standard (100kHz), Fast (400kHz), and High Speed (3.4MHz) Modes.
- Out-of-Range Alert Function
- Automatic Power-Down Mode While Not converting
- Resolution: 8 bits
- Conversion Time 1 μs (Typ)
- NL & DNL: ±0.2 LSB (Max)
- Throughput Rate: 188.9 ksps (Max)
- Temperature range -40°C to +105°C

## External Links

### Documents

- ADC081C021 From Texas Instruments (<http://www.ti.com/lit/ds/symlink/adc081c021.pdf>)

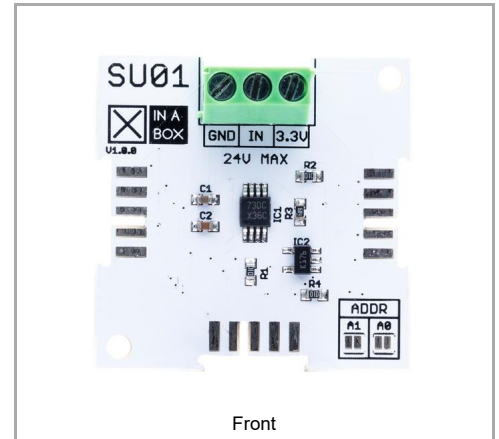
### Shop

- Buy SU01 (<https://xinabox.cc/products/SU01>)

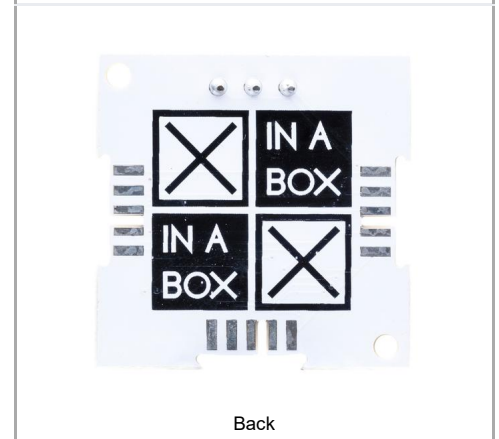
### GitHub

- SU01 on GitHub (<https://github.com/xinabox/xSU01>)

## SU01 - Advanced Universal Digital Input (ADC081C021)



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☒CHIP

<b>Main Category</b>	Sensor
<b>Sub Category</b>	Universal
<b>Introduced</b>	1 January 2017
<b>Current version</b>	1.0.0
<b>Current version date</b>	1 January 2017
<b>Dimensions</b>	
<b>Size</b>	2x2U (32x32mm)
<b>Weight</b>	4.4 g
<b>Height</b>	12.3/1.6/0 mm
<b>Non-☒BUS Connections</b>	
<b>North</b>	Terminal block
<b>Main Chip Set</b>	
<b>Main Chip</b>	ADC081C021
<b>I<sup>2</sup>C Configuration</b>	
<b>Default Address</b>	0x50
<b>Alternative Addresses</b>	0x51; 0x52; 0x54; 0x55; 0x56; 0x58; 0x59; 0x5A
<b>Change Setting</b>	Solder