

Contents

- 1 Overview
 - 1.1 Product Highlights
 - 1.2 Applications
- 2 Specifications
- 3 External Links

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 I²C-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 I²C 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

- Universal Analog Input, Accepts from 0 - 3.3V DC
- Screw Terminal for easy connection
- Screw terminal position available for implementation of voltage divider network
- Analog-to-digital converter

Applications

- Test Equipment
- Peak Detection
- System Monitoring

Specifications

- I²C-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 μ s (Typ)
- NL & DNL: ± 0.2 LSB (Max)
- Throughput Rate: 188.9 ksps (Max)
- Temperature range -40°C to $+105^{\circ}\text{C}$

External Links

Documents

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

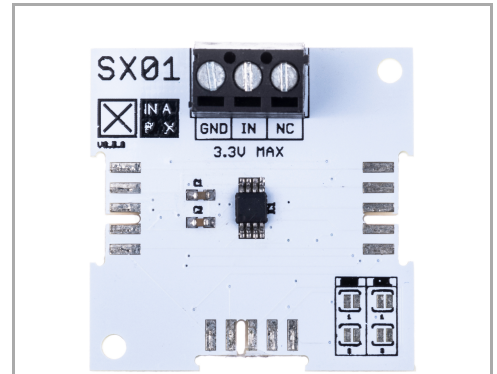
Shop

- Buy SX01 (<https://xinabox.cc/collections/sensors/products/SX01>)

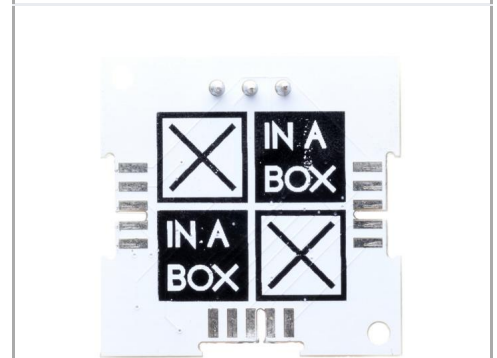
GitHub

- SX01 on GitHub (<https://github.com/xinabox/xSX01>)

SX01 - Advanced Universal Analog Input (ADC081C021)



Front



Back

CHIP

Main Category	Sensor
Sub Category	Universal
Introduced	1 January 2017
Current version	1.0.0
Current version date	1 January 2017
Dimensions	
Size	2x2U (32x32mm)
Weight	4.3 g
Height	12.3/1.6/0 mm
Non-<input checked="" type="checkbox"/>BUS Connections	
North	Terminal block
Main Chip Set	
Main Chip	ADC081C021
I²C Configuration	
Default Address	0x50
Alternative Addresses	0x51; 0x52; 0x54; 0x55; 0x56; 0x58; 0x59; 0x5A
Change Setting	Solder