PRODUCT DETAILS

The Grove AS3935 Lightning sensor is an easy-to-use sensor built around the AS3935 IC, which can detect both cloud-to-ground and intra-cloud types of lightning for up to 30 or 40 km. It is programmable with I2C or SPI communication and supports 3.3V and 5.0V power supply.

Features

- **Lightning Sensor:** Detect both cloud-to-ground and intra-cloud types of lightning, based on the electric fields
- **Wide Range:** Sense in a range up to 30 – 40 km the front of a storm with lightning
- **Programmable Detection Parameters:** Achieve threshold setting level for optimal control
- **Support I2C or SPI communication**
- **Support both 3.3V and 5.0 V power supply**

Description

The Grove AS3935 Lightning sensor is an easy-to-use sensor built around the AS3935 IC, which can detect both cloud-to-ground and intra-cloud types of lightning, for up to 30 or 40 km. It is programmable with I2C or SPI communication and supports 3.3V and 5.0V power supply.

This sensor evaluates the electric fields in the air and verifies the specific characteristic waveform of Lightning, finally sending the output to the development board. It represents a great application of electric field processing, which can be used to create alert systems for Lightning or violent storms approaching and for making complete forecast meteorological stations with adverse conditions alert. It belongs to the Grove ecosystem and shares the same simple connection and simple operation. It is easy to use, requiring no preliminary warm-up time. It supports both 3.3V and 5.0V power supply, offering low power consumption. This will be your great tool to get started with electric field processing.

The designer DAVIDE COGLIATI , the owner of a solution company SOFTSYSCO GENTECH, has years of experience in special electronics R&D. He believes well-working concepts don't need to be complicated but linear and can be easily manufactured. Therefore, he is focusing on the exploration of those projects that show simplicity but with great power.

The AS3935 lightning sensor has been licensed to Seeed to sell. DAVIDE COGLIATI will provide the tech support and Seeed will fulfill the order with hardware quality guaranteed. If you want to become the next success story with Seeed Fusion Licensed Products Program, please click to find out more. We are glad to see your idea become a reality.

Application

- Alert forecasting for dangerous lightning storms approaching
- Weather stations

- Portables, Global positioning systems (GPS) to go in power down to prevent injuries to electronic boards.
- Automated protection systems to prevent damage to electrical equipment.

Specification

Parameter	Detail
Size	40 x 20 mm - height 7 mm
Power	5 Volt or 3.3 Volt(through jumper selection)
Communication	I2C or SPI
Current in	max 70 uA down to 2 uA with Vreg off and
Power down mode.	
On state	Yes through green led ON
Resonance	
frequency	500 kHz

Part List

Grove lightning detection sensor	x1
Grove cable	x1

FAQ

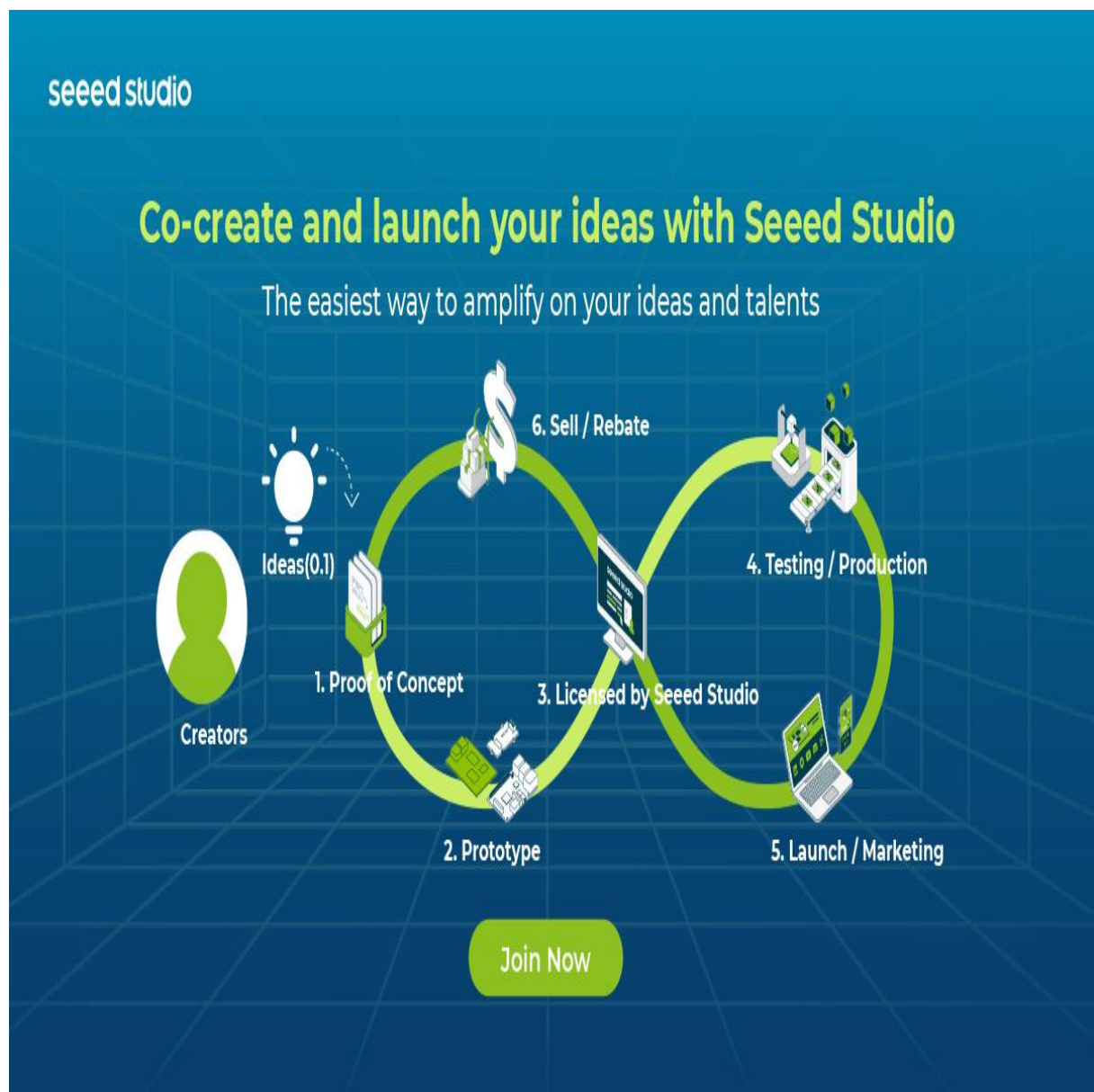**How does the Lightning sensor work?**

The working principle of the sensor is based on the electric fields that are present in the air during lightning events or plugging in your stereo or electric wave cooker in common life. On the board, there is an LC circuit tuned to work to 500 kHz with a narrow band centered on this central frequency. This seems the best way to make a preliminary selection of existing electric signals in the air.

Why do some mistakes usually occur?

Some human activity will be captured as a lightning-front storm if they produce similar pulsed electromagnetic waves.

What Is Seeed Fusion Licensed Products Program ?

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