

# pALERT S303



Tri-axial MEMS Accelerograph

Be the frontier of environmental monitoring

[www.sanlien.com](http://www.sanlien.com)

## Introduction

Introducing the pALERT S303, an advanced iteration of the pALERT network accelerometer series, fortified with cutting-edge features for unparalleled seismic monitoring. With an IP67 protection rating, this device ensures durability in challenging environments, while a significant boost in computing speed and expanded internal memory for waveform storage elevates its overall performance. Developed in collaboration with Prof. Yih-Min Wu of National Taiwan University, the pALERT S303 embeds Pd technology, enabling it to determine seismic events within 3 seconds of capturing P-waves and issue warnings based on the estimated impact of subsequent S-waves, contributing to proactive earthquake damage reduction.

The pALERT S303 stands out with three triggering algorithms – Pd, PGA, and STA/LTA, providing users with customizable options for precise seismic detection. Offering configurable low pass filters, users can effectively eliminate high-frequency noise from non-seismic vibrations. The device supports various intensity scales, allowing flexibility in data representation. With event information storage capabilities, users can access crucial details such as triggering time, maximum intensity, PGA in each component, and 3-component acceleration in vector form.



## Key Features



Built-in Back Up Power



Built-in Web GUI



Edge Computing Capability



Modbus Protocol



Time Synchronization via NTP



Support International Standard of Intensity Scale

## Applications

- ✓ Seismic Monitoring Array
- ✓ Industrial Disaster Prevention
- ✓ Earthquake Early Warning (EEW)
- ✓ Rapid Structural Health Diagnostic (RSHD)

## Best Suited



Residential Buildings



Schools and Public Facilities



Factories and Plants

## Specifications

Sensor Type	Tri-axial MEMS Accelerometer
Optional	4th-axial vertical Geophone (built-in/externally)
Measuring Range	±2 g, ±4 g (customized)
Dynamic Range	>100 dB
Sample Rate	100 SPS, 200 SPS, 500 SPS, 1000 SPS (configurable)
Frequency Response	0.05 - 40 Hz (with 10Hz/20Hz/40Hz digital filters)
ADC	4 channels@24-bit
Trigger Algorithm	Pd, PGA, STA / LTA
Data Format	CSV / miniSEED
RTC Accuracy	±60 sec/year, GPS model available upon request
LED Display	2 lines x 20 characters
Storage	16 GB microSD Card (expandable)
Power Supply	10 - 30 VDC
Power Consumption	2W@12VDC
Operating Temperature	-20°C to 70°C
Waterproof	IP67
Dimension (L x W x H)	205 x 160 x 80 mm
Weight	1.8 kg

\*All prices, features, and specifications are subject to change without prior notice.

## Be the frontier of environmental monitoring

Sanlien Technology is committed to making environments safe for humans. Hence, we insist on continuing R&D investments, perfecting our manufacturing of monitoring systems, and expanding into Smart City and IoT monitoring. With more than 1,000 local and international customers, Sanlien is trusted by global customers with high standards. By working with renowned agents around the world, we ensure the optimal performance and reliability of our services. With 50 years of profound experience in Taiwan, Sanlien has become the most exceptional provider of measuring technologies in the Asia-Pacific region. Sanlien has conceptualized the idea of being a local partner into a three-in-one strategy: long-term deployment of globalization, integration of local resources, and localized operations. We shall march on step by step with the stamina for running a marathon.

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Sanlien Technology Corp.

+886-2-2708-1730 | www.sanlien.com | sales@sanlien.com