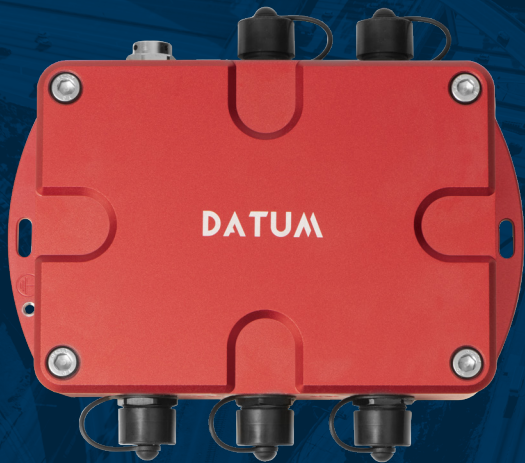




Sanlien Technology Corp.

# DATUM EB410



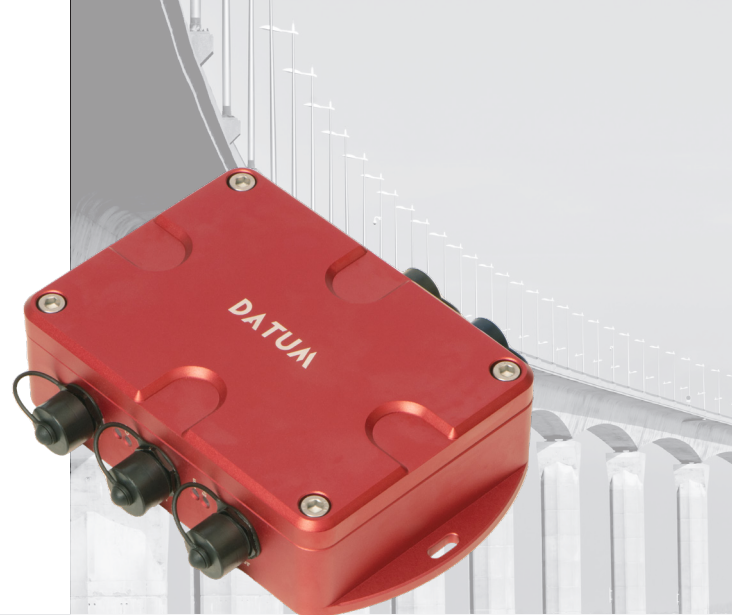
Strain Signal Acquisition Module

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## Overview

The DATUM EB410 is a high-precision dynamic data acquisition device designed for various types of strain gauges and strain signal sensors, and is widely used in bridge monitoring and structural health monitoring. The device supports quarter-bridge, half-bridge, and full-bridge configurations, with a bridge resistance range from 120  $\Omega$  to 1000  $\Omega$ , allowing it to adapt flexibly to different measurement requirements. The strain signal calibration coefficient can be easily adjusted via EtherCAT, ensuring accurate and reliable data. Additionally, it features multiple configurable filters, including notch, low-pass, and high-pass filters, which effectively enhance signal quality and stability, resulting in more reliable and precise measurement outcomes.



## Key Features



Daisy Chain with  
EtherCAT Transmission



Distributed Clocks  
Accuracy < 1 $\mu$ s



High Dynamic Range



Distributed data  
acquisition



Precise Synchronized  
Data Acquisition



Waterproof IP67

## Applications

- ✓ Through distributed data acquisition and EtherCAT Daisy Chain technology, the DATUM EB410 provides high-precision, real-time data for monitoring large-span structures, ensuring stable and reliable measurement results.

## Best Suited



Bridge Monitoring



Seismic Hazard Control



Structural Health Monitoring



Dam Monitoring

## Specifications

|                              |                                                                                                       |
|------------------------------|-------------------------------------------------------------------------------------------------------|
| Application                  | Various types of strain gauges                                                                        |
| Measuring Range              | $\pm 20$ mV/V                                                                                         |
| Dynamic Range                | 130 dB                                                                                                |
| Bandwidth                    | DC - 500 Hz                                                                                           |
| Resolution                   | 24-bit                                                                                                |
| Channels                     | 4-channel simultaneous sampling                                                                       |
| Sample Rate                  | 1 SPS, 2 SPS, 5 SPS, 10 SPS, 50 SPS, 100 SPS, 200 SPS, 500 SPS, 1000 SPS                              |
| Sampling Time Accuracy       | > 1ms                                                                                                 |
| Compatible Bridge Resistance | Quarter-bridge (2-wire, 3-wire) 120 $\Omega$ , Half-bridge, full-bridge 120 $\Omega$ to 1000 $\Omega$ |
| Calibration Coefficient      | 2                                                                                                     |
| Bridge Excitation            | 2 VDC                                                                                                 |
| Power Supply                 | 10 - 30 VDC                                                                                           |
| Power Consumption            | 3W                                                                                                    |
| Waterproof                   | IP67                                                                                                  |
| Operating Temperature        | -20 $^{\circ}$ C to 75 $^{\circ}$ C                                                                   |
| Embedded Filter              | Notch (50Hz, 60Hz)                                                                                    |
| Interface                    | EtherCAT network (100 Mbps)                                                                           |
| Weight                       | 0.8 kg                                                                                                |
| Dimension (L x W x H)        | 180 x 112 x 47 mm                                                                                     |

\*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 investment, perfecting our manufacture 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 optimal performance and reliability of our services. With 50 years profound experience in Taiwan, Sanlien becomes the most exceptional provider measuring technologies in the Asia-Pacific region. Sanlien has conceptualized the idea of being a global 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](http://www.sanlien.com) | [sales@sanlien.com](mailto:sales@sanlien.com)