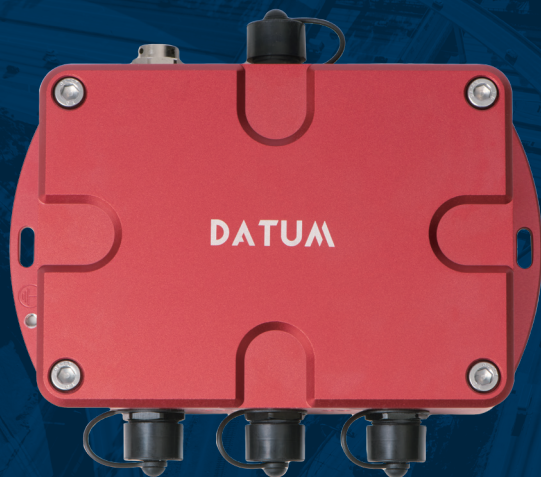




Sanlien Technology Corp.

DATUM EF410



Distributed Digitizer

Be the frontier of environmental monitoring

www.sanlien.com

Overview

The DATUM EF410 is a distributed digitizer leveraging EtherCAT technology, specifically designed for efficient data transmission in large-scale infrastructures like bridges, tunnels, and reservoirs. Its daisy chain design reduces cabling requirements, simplifying installation and lowering costs. The device integrates seamlessly with high dynamic-range force balance accelerometers (FBAs), offering an excellent signal-to-noise ratio for precise monitoring of structural movements and seismic activities. EtherCAT's distributed time synchronization ensures a minimal system time difference of 100 ns, which is crucial for structural health monitoring (SHM) systems that rely on synchronized, real-time data from multiple sensors.

Paired with SanDAS (Sanlien Data Acquisition Software), the DATUM EF410 delivers real-time data visualization, recording, and signal processing, making it a powerful tool for infrastructure monitoring. Ideal for seismic monitoring, structural health diagnostics, and industrial vibration analysis, this solution ensures safety and operational efficiency in critical environments.



Key Features



Daisy Chain with
EtherCAT Transmission



Distributed Clocks,
Accuracy of 100 ns



Precise Synchronized
Data Acquisition



High Dynamic Range (RMS)



Waterproof IP67

Applications

- ✓ Works seamlessly with monitoring sensors to provide precise, real-time data collection for infrastructure monitoring, including structural health assessments. By utilizing EtherCAT Daisy Chain technology, it guarantees high-speed, reliable data transmission and accurate synchronization between sensors, ensuring no signal degradation.

Best Suited



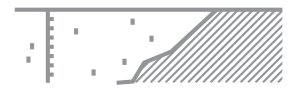
Cable-stayed Bridge Monitoring



Structural Health Monitoring



Dam Monitoring



Integrated Geotechnical Monitoring

Specifications

Application	Best for FBA sensor
Measuring Range	± 10 V
Bandwidth	DC - 500 Hz
Instrument Noise (RMS Dynamic Range)	>135 dB (Full Scale RMS sine wave to RMS noise, 0.01-500Hz band)
Instrument Noise (USGS CPSD Method)	>130 dB (above 1 Hz with 5V full scale) >124 dB (above 1 Hz with 10V full scale)
Embedded Filter	Notch (High Pass Filter, Low Pass Filter)
Communication Interface	EtherCAT network (100 Mbps)
Sampling Rate	1000 SPS
Sampling Time Accuracy	100 ns
Channels	4-channel simultaneous sampling
Resolution	24-bit
Power Supply	10 - 30 VDC
Power Consumption	2W@12V
Operating Temperature	-20 °C to 75 °C
Waterproof	IP67
Dimension (L x W x H)	180 x 112 x 47 mm
Weight	0.9 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 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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