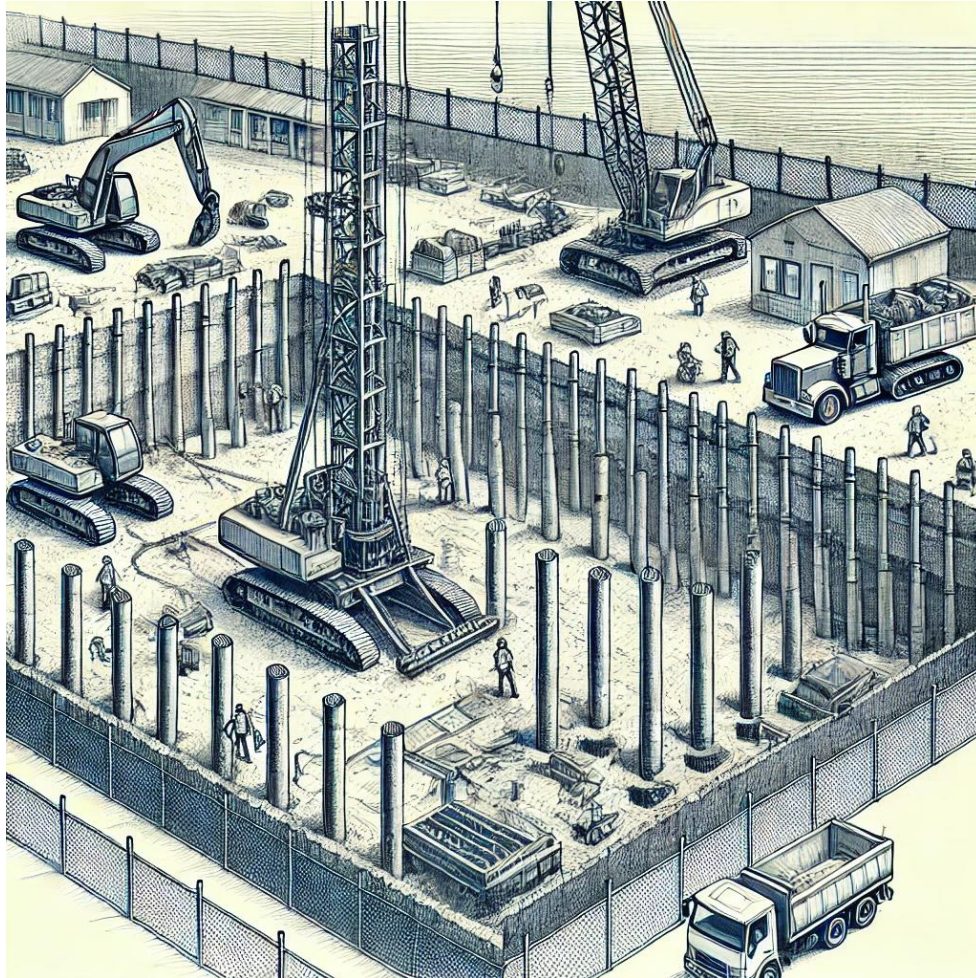


Adventum Tech Real-Time Monitoring Systems

Site knowledge



Introduction

Adventum Tech real-time structural monitoring systems provide continuous insights into structural behavior through wireless sensors and a cloud-based analytics platform. To ensure seamless data transmission and system functionality, customers must follow best practices regarding sensor placement, gateway installation, and data connectivity.



System Overview

When installed on-site, Adventum Tech's real-time monitoring system follows this data transfer sequence:

1. **Sensor Monitoring:** Sensors continuously track structural behavior in real-time.
2. **Data Transmission to Gateway:** Wireless sensors send collected data to the gateway.
3. **Cloud Upload via 5G:** The gateway transmits data to the cloud via a 5G network.
4. **Data Processing & Visualization:** The cloud processes received data and displays it in Liveload.app for real-time analytics.



Key Risks and Mitigation Strategies

1. Signal Blockage Due to Site Noise

- **Risk:** Heavy machinery, site containers, waste bins, and large equipment may obstruct the signal path between sensors and the gateway, causing data loss.
- **Solution:** Maintain a clear “corridor” between sensors and the gateway to prevent interference. Regularly check that no physical obstructions have been placed in the data transmission path.

2. Gateway Placement

- **Risk:** If the gateway is installed too far horizontally from the sensors, or at a low position, signal strength may weaken, resulting in incomplete data transfer.
- **Solution:** The gateway must always be positioned above the sensors, ideally at a height of up to 10 meters. Avoid placing the gateway at ground level or too far horizontally from the sensors.

3. Internet Connectivity Issues

- **Risk:** If the gateway loses its internet connection (via 5G or Wi-Fi), it will be unable to send data to the cloud.
- **Solution:** Ensure the gateway has an independent and stable internet connection or is consistently linked to an on-site Wi-Fi network. If connectivity issues occur, the gateway can store data for up to six months, but it must be reconnected to upload stored data.

4. Physical Damage to the Gateway

- **Risk:** Construction activities could damage or displace the gateway, leading to a complete data loss if it is destroyed or stolen.
- **Solution:** The gateway should be installed in a protected, elevated location where it is safe from site operations and potential vandalism. Regular inspections should be conducted to ensure its security.



Customer Support & Troubleshooting

In case of data loss, signal issues, or equipment damage, customers should contact Adventum Tech Customer Support immediately. The team can assist with diagnostics, troubleshooting, and potential system replacements to ensure uninterrupted monitoring.

For urgent support, reach out via: **Email:** info@adventum.lv

By adhering to these guidelines, customers can maximize the efficiency and reliability of Adventum Tech's real-time monitoring system, ensuring uninterrupted structural insights and operational safety.

Best Practices Summary

- **Keep the sensor-to-gateway corridor clear of obstructions.**
- **Install the gateway at a high position, ideally 10m above sensors.**
- **Ensure continuous internet connectivity for uninterrupted data transfer.**
- **Protect the gateway from physical damage or theft.**
- **Contact Adventum Tech support for assistance in case of issues.**

