



Storage Silo Inventory Management

Solution benefits

- Cost-effective remote inventory management
- Up-to-date inventory information
- Immediate reporting of critical inventory levels
- Local inventory information on multi-language integrated display
- Remote equipment monitoring
- Automated data transfer of inventory information to customer ERP-system

AnyBridge offers a cost-effective and comprehensive solution for managing the inventory of bulk goods stored in silos. Based on the AnyBridge M2M Controller's wireless communication capabilities, the AnyBridge Storage Silo Inventory Management solution achieves substantial benefits that allow end-to-end automation of the supply chain.

The AnyBridge Silo Inventory Management is based on the AnyBridge M2M Controller in combination with suitable sensors from various vendors (one sensor per monitored silo). The AnyBridge M2M Controller supports the wired connection of two sensors and the wireless connection of up to sixteen sensors. The AnyBridge M2M Controller connects to the AnyBridge M2M Platform using its integrated GPRS communication interface, making it independent of on-site communication facilities.

In most situations, ultrasonic sensors are a cost-effective way to measure the level of the bulk goods stored in the silo. From the level signal, the AnyBridge M2M Controller accurately calculates the inventory volume using an advanced algorithm that is based on the silo dimensions. Typically, the silos e.g. on a cattle farm, are placed at spread locations on the farmyard. Making use of the AnyBridge Wireless Sensor Modules, all silo sensors reliably send their level signals to the AnyBridge M2M Controller, thus avoiding the costly installation efforts involved with wired sensor connections. If the application requirements allow low-frequent measurement of the silo inventory, the solar-powered version of the AnyBridge Wireless Sensor

Module can be employed as completely self-powered hub for the silo sensors.

The AnyBridge M2M Controller continuously measures the silo inventory and logs the values at a programmable interval. The measured volumes are compared with the programmed critical levels, in which case a report is sent out immediately. Also, the AnyBridge M2M Controller verifies the integrity of the sensor signals and reports an error in case of fault conditions. For local users, the AnyBridge M2M Controller presents the current silo inventory and other relevant information on its integrated alphanumeric display, in a selectable language.

The services of the AnyBridge M2M Platform, besides the automated reporting of inventory information and events, provide features such as remote configuration of all AnyBridge M2M Controller parameters and remote software updating. The AnyBridge M2M Platform can deliver the inventory records to e.g. an ERP-system, which allows end-to-end automation of the supply chain.

Solution details

Recommended M2M devices

AnyBridge M2M Controller with RF interface option
AnyBridge Wireless Sensor Module

Recommended sensor

Ultra-sonic distance sensor, with 4-20 mA process interface

M2M application functions

- Measurement of fill levels and calculation of silo inventory
- Inventory temperature monitoring (optional)
- Presentation of inventory information on integrated display
- Periodic logging of silo inventory at configurable intervals
- Periodic data transfer per GPRS of logged inventory information to M2M application database according to a configurable schedule
- Immediate reporting of critical inventory events, based on configurable inventory levels
- Remote configuration of application parameters
- Remote software updating
- Automated, frequent data transfer of inventory information to back-office (e.g. ERP) applications

