

Belden Horizon™ Data Operations & Data Manager

Industrial Data Management Software

PRODUCT BULLETIN



BELDEN
HORIZON™
Data Operations

BELDEN
HORIZON™
Data Manager

Belden Horizon Data Operations (BHDO) addresses industrial data complexity through secure, managed data access, analytics and integration. Belden Horizon Data Manager (BHDM) manages distributed BHDO deployments.

- **300+ OT protocols supported** with dozens of integrations into IT systems.
- **Digital twins and analytics tooling** empowers users to collect, contextualize and analyze data at the edge.
- **Secure, reliable and flexible deployment architectures** from containers on edge devices to virtual machines (VMs) on servers.



Key Features

BHDO

- Provides everything required for Industry 4.0, including OT connectivity, machine analytics, data integration and application enablement.
- Gathers data from any OT asset and normalizes it into a standard, ready-to-use format for edge, cloud and enterprise applications.

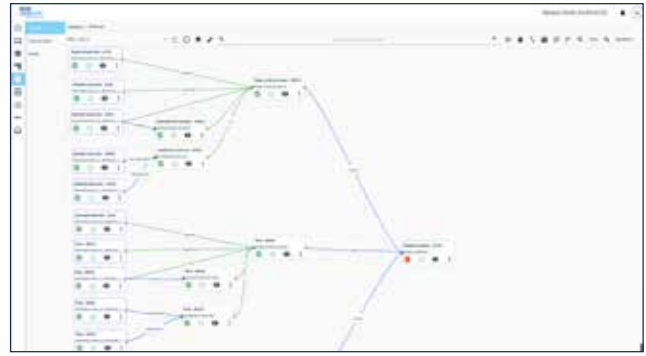
BHDM

- Simplifies management of large-scale industrial internet of things (IIoT) deployments, providing visibility and control of devices, data, applications and machine learning (ML) models.
- Centralizes control of hosting, deploying and updating of containerized applications on any device running BHDO.

With BHDO, you can collect OT data from the network edge and transfer it to IT destinations for analysis and action



Node-RED based flow editor for manipulating and visualizing OT and IT data



Analytics engine with pre-built algorithms and ML models to transform data into insights

Your Benefits

As IIoT adoption and Industry 4.0 advance, the volume of data available from connected OT devices grows. BHDO enables collection of OT data from 300+ data sources for contextualization and analysis at the edge, then transfers data from edge devices to IT systems for storage, visualization and analysis. BHDO empowers extraction of more insights from OT assets to simplify production processes, enhance operational efficiency and improve uptime.

BHDM works with BHDO — granting edge and enterprise teams visibility, access and complete control over their distributed BHDO deployments.

Applications/Markets

BHDO is ideal for varied industries that benefit from OT data collection at the network edge. It suits many applications, such as:

- Manufacturing: EtherNet/IP to MES
- Building automation: BACNet to building management systems.
- Oil and gas: Modbus to IoT platform.
- Transportation: CAN to fleet management systems.
- Energy: distributed network protocol (DNP3) to grid management systems.
- Utilities: DNP3 to supervisory control and data acquisition (SCADA) systems.

Belden Horizon

Belden Horizon™ is a collection of software-based services that empower users to transform their data into valuable insights. Users can leverage these services in two ways:

Belden Horizon Console: A dedicated user interface through which services are deployed that are either native to or integrated with the Belden Horizon platform

- Secure Remote Access (SRA)
- Persistent Data Network (PDN)
- Edge Orchestration



Belden Horizon Edge Applications: Software deployed via containers and/or virtual machines that, in the case of the former, may be hosted within the application repository in the Belden Horizon Console

- Data Operations (BHDO)
- Data Manager (BHDM)



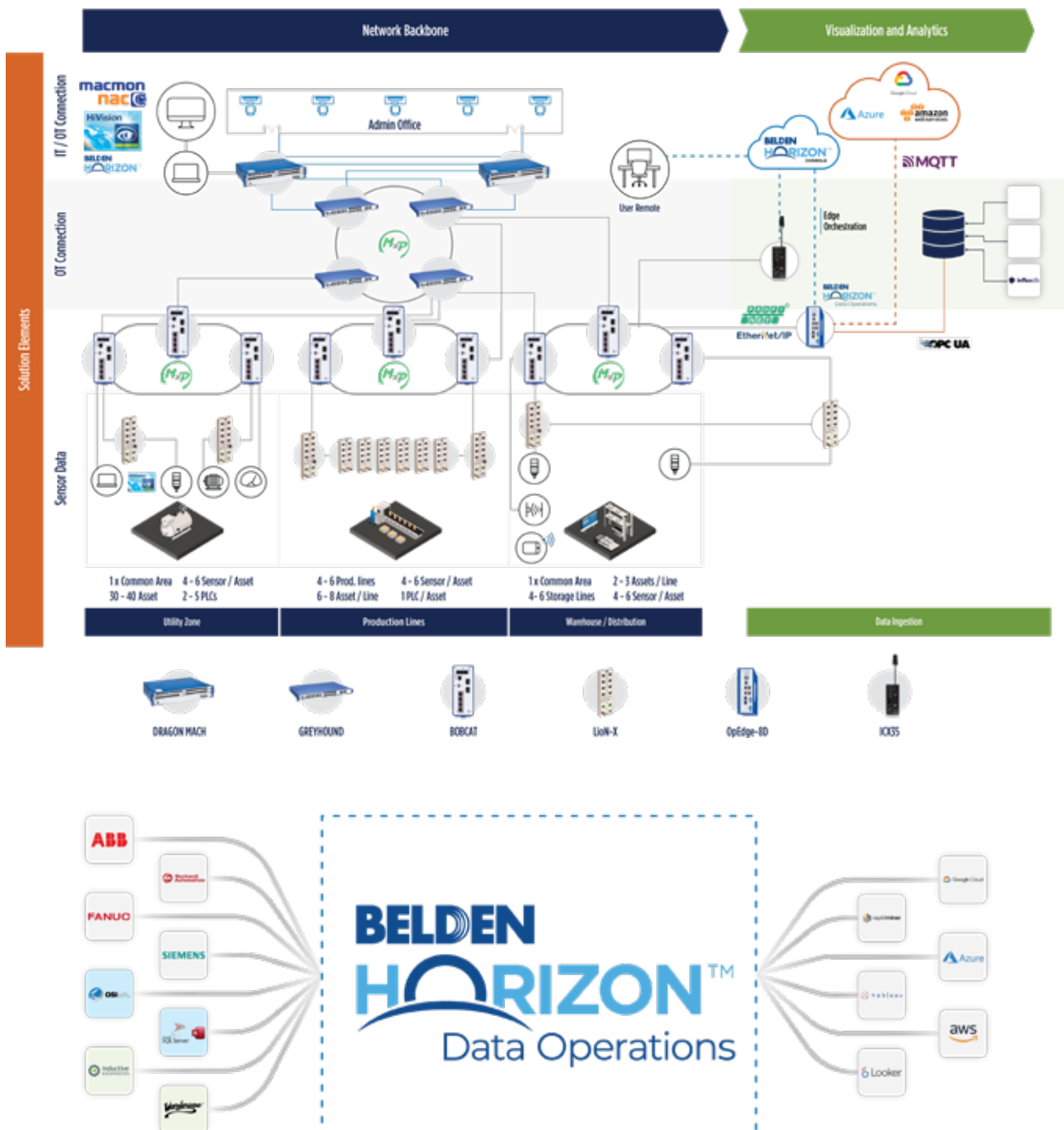
BHDO Data Ingestion Use Case

A robust data ingestion process efficiently and effectively connects various data structures — making sure the data is harmonized, is in the correct format and has the same level of quality. BHDO improves data ingestion by connecting to both new and existing systems, integrating seamlessly with cloud and enterprise applications, and sending data to any destination.

This use case demonstrates how BHDO facilitates data ingestion.

- OpEdge-8D sits on a Hirschmann network with BOBCAT HiOS managed switches in a media redundancy protocol (MRP) ring
- Sensors and stack lights connect to a Lumberg Automation LioN-X I/O module
- Running on the Hirschmann OpEdge-8D, BHDO is converting Ethernet protocol (EtherNet/IP) to MQTT or OPC-UA protocols and normalizing the data for ingestion by Azure, Amazon Web Services (AWS), Google Cloud Platform (GCP) and others.

Data Ingestion on Existing Infrastructure





PRODUCT BULLETIN

About Belden

Belden Inc. delivers the infrastructure that makes the digital journey simpler, smarter and secure. We're moving beyond connectivity, from what we make to what we make possible through a performance-driven portfolio, forward-thinking expertise and purpose-built solutions. With a legacy of quality and reliability spanning 120-plus years, we have a strong foundation to continue building the future. We are headquartered in St. Louis and have manufacturing capabilities in North America, Europe, Asia, and Africa.

For more information, visit us at belden.com; follow us on Facebook, LinkedIn and Twitter.



© 2023 | Belden, Prosoft Technology, NetModule, macmon secure and the Belden logo are trademarks or registered trademarks of Belden Inc. or its affiliated companies in the United States and other jurisdictions. Belden and other parties may also have trademark rights in other terms used herein.