FactoryTalk® Historian Machine Edition

Embedded Historian in the Controller Chassis

Rockwell Software

Advantages

- Embedded historian in the backplane
- Ten or more times faster data collection rates than traditional historians
- Lowers total cost of ownership – no dedicated computer or special client/ software needed to configure
- Robust and reliable data collection application
- Perform tasks in a rich, interactive browser experience for configuration and simple reports
- Allows OEM's to utilize a full-fledged historian in their skids for data collection

FactoryTalk® Historian ME speeds on-site installation, configuration and validation efforts helping machine builders to minimize downtime during machine installation and provide added value for end users. In the pharmaceutical, food, beverage and other highly regulated industries, the machine provides continuous uptime and excellent reliability to meet USDA or FDA requirements.

FactoryTalk® Historian Machine Edition

Fast, Easy, Reliable: Machine-level Historian

Improve Data Reliability and Minimize Downtime

Every moment a plant-floor machine is producing—but not tracking data—creates risk for the manufacturer. Accurate, real-time manufacturing information is critical to improving product quality, speeding time-to-market, and supporting regulatory compliance. FactoryTalk® Historian Machine Edition (ME) provides you with excellent availability, high-speed data capture, mitigating the risk of down-time and helping manufacturers reach their continuous process improvement goals.

FactoryTalk Historian from Rockwell Automation is an integrated tool for obtaining real-time process and production information. The Rockwell Software three-tiered distributed historian strategy is scalable; it supplies products for a single machine (FactoryTalk Historian ME) to a plant-wide system such as FactoryTalk® Historian Site Edition (SE) and extends across your global enterprise with the upcoming release of the FactoryTalk® Historian Enterprise Edition (EE). The series supplies critical insight into performance parameters from a single subassembly to a production line and across the enterprise, helping manufacturers meet and exceed their competitive performance goals.

FactoryTalk Historian ME provides robust, high-speed data collection reliably. It is an embedded, solid-state module hardened for on-machine data collection and with no moving parts. The unit's limited software footprint requires no server or Microsoft® Windows® PC, making the unit inexpensive to deploy and helps reduce the risk of data loss due

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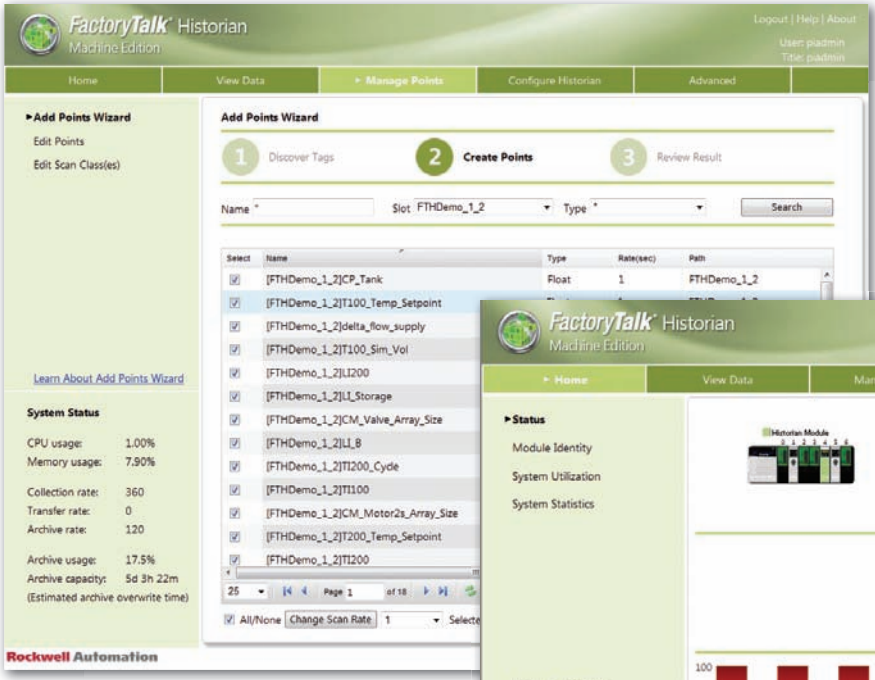

Configuring data collection is an easy three-step process using Auto Discovery and Auto Configuration of tags.

The FactoryTalk Historian ME home page give a quick and clear overview of module status.

to network or other system interruption. A stand-alone design makes the unit ideal for remote data capture in areas like drilling rigs and wells that were previously inaccessible due to unstable communications or a challenging machine environment. The unit's onboard memory maintains a continuous data buffer while its compatibility with FactoryTalk Historian SE and the OSIsoft® PI Server allows it to offload and forward that data; the web client interface can be leveraged for configuration and reporting on the data in the module.

By implementing FactoryTalk Historian ME in their machines, OEM machine builders can prequalify the historian module to speed onsite installation, configuration and validation efforts. This helps machine builders minimize downtime during machine installation and provide added value for end users. In the pharmaceutical, food, beverage and other highly regulated industries, the machine provides continuous uptime and reliability to meet USDA or FDA requirements. If connection to a plant historian is lost—due to server or network interruption, for example—the data is still stored in the embedded Historian and forwarded once the connection is restored. An Add-on Profile (AOP) used with FactoryTalk Historian ME makes it possible to develop control applications to identify how much storage remains to determine if the machine can complete a batch with all data intact, and the control application can use that information to stop data collection during idle operation if needed or to start and stop transfer of data to the plant historian for bandwidth control.

When paired with a plant system historian like FactoryTalk Historian SE or the OSIsoft PI System, operators can view historical data from machines and correlate and analyze operations against enterprise-wide corporate production parameters. The coordination of the two products provides enhanced visibility into the full breadth of enterprise data and helps locate and correct sources of inefficiencies quickly, allowing you to improve manufacturing consistency, energy use, first-pass quality and other factors that affect your overall manufacturing results.

Features

Visualize your enterprise using the powerful data collection and analysis engine of FactoryTalk Historian ME and the extensive series of Microsoft-compatible reporting tools in the FactoryTalk suite.

With FactoryTalk Historian ME, tasks are performed in a rich, interactive browser experience.

The module allows for simple reporting including trending of data in the Web UI.

EASY. Automated Install and Configuration

FactoryTalk Historian ME will automatically install and configure itself in a ControlLogix® backplane, communicating to the controllers in that backplane, helping reduce implementation time from hours, days or months to minutes. It auto-detects the Logix controllers and configures all relevant tags to be historized.

SCALABLE. Data Collection from Machine through Enterprise

FactoryTalk Historian ME is modular. It is rack-ready to stand alone or can easily be rolled up and configured into a plant-wide historian for full resolution data collection and transfer. It can capture data from up to four controllers in one backplane.

FAST. High-speed Data Collection

FactoryTalk Historian ME is not limited by network bandwidth. It leverages backplane communication to increase the speed of data collection and, with down to a 10 millisecond scan rate, the unit provides more granular data than is possible on a traditional, network-connected plant historian.

RELIABLE. Robust, Hardened Embedded Appliance

FactoryTalk Historian ME records data safely and accurately with solid-state data capture, no moving parts, and no required operating system or computer maintenance. It is not subject to downtime due to network outage or the need to perform maintenance on any subsequent firmware updates. It can be pre-qualified from an OEM in a Factory Acceptance Test, thereby significantly reducing overall validation efforts for end users.

Benefits

Help Reduce Time-to-Market

- Monitor and analyze operation and product quality in accord with specifications and operations and product constraints.
- Help reduce time to execute grade or product changes.
- Help reduce product waste, recycle and blending.
- Increase effective equipment capacity and positively impact materials cost management.
- Improve product development by collecting and evaluating data related to new operation actions, materials, equipment, equipment capabilities and procedures.

- Identify operation or production bottlenecks and improve operating efficiency to avoid unnecessary capital spending.

Help Increase Compliance

- Facilitate, validate and document performance within regulatory or permitted boundaries.
- Increase effective management.
- Reduce validation by including in OEM delivery and testing.

Help Enhance Performance

- Monitor or calculate effective equipment usage and performance. Detect degradation of performance, initiate alerts or requests for operations and maintenance actions.
- Provide real-time, time-stamped operation and production data.

Help Maximize Delivery Quality and Continuous Process Improvement

- Document actual vs. model production and identify deviations.
- Analyze for new process and operational boundaries when throughput, material or equipment changes occur.
- Identify sources of operation and product quality issues.
- Increase effective (downstream) capacity by identifying and isolating off-spec product earlier (upstream) in production.

ControlLogix Guidelines and Requirements

- ControlLogix version 13.*x* and up supported. AOP is supported with version 15.*x* and up
- Connect up to maximum four controllers in the same ControlLogix chassis
- Maximum two FactoryTalk Historian ME's in a single chassis

FactoryTalk Services

- Backplane data connector
- FactoryTalk® Security Integration
- FactoryTalk® Directory Integration

Get More Information

For ordering information, contact your local Rockwell Automation sales office or Allen-Bradley distributor.

Case Study

An OEM must often provide its customers with uptime guarantees without any real ability to control or monitor the use and maintenance of its machine in the end user's facility. Embedding a machine-level historian into its products allows high-speed, granular data collection for preventive and performance maintenance. Accurate data capture is a prerequisite for the performance analytics that enable an OEM to provide superior warranty and customer service. Of course, a demonstrable reputation for superior performance also represents significant revenue potential for the machine builder.

Recently an OEM to the pharmaceutical industry replaced multiple machine-based chart recorders with the FactoryTalk Historian Machine Edition application. In addition to ink and paper cost savings, the OEM found they could demonstrate significantly better results in speed, reliability and performance to its customers.

"Our customers really need both speed and pinpoint accuracy in processing their products. If a line goes down because of an error or malfunction, it can cost them millions of dollars in production costs, not to mention the damage it can do to their reputation in such a highly regulated industry," said Jack O'Brien, OEM plant manager.

"With the FactoryTalk Historian ME embedded in our machine, we were able to go onsite and install and configure our machine quickly and easily, saving our customer a significant amount of downtime. And, since the module is not server or network connected, we knew we could guarantee our customers 100% uptime—a key factor in our ability to meet their needs in this industry."

The customer used the module to track time-series information from more than 1,000 sensors. Compression and reporting features enabled by the FactoryTalk Historian ME application provided plant managers with data faster and with more granularity than they were ever able to achieve previously—all with minimal data loss.

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