

DeepIQ DataStudio vs Rockwell FactoryTalk DataMosaix

FactoryTalk DataMosaix is Rockwell's new IT-OT integration platform. It is similar to the DeepIQ platform since both SaaS platforms focus on industrial DataOps. However, there are significant advantages to DeepIQ technology, along with complementary features for FactoryTalk customers. In this article, we deep dive into these differences. It is important to note that the following information on DataMosaix is derived from the current publicly available documentation. Firstly, DeepIQ's DataStudio has been in the market for several years. As a result, it has more comprehensive support for data sources, including a wide range of native protocol support for historians and SCADA systems. DeepIQ is available on multiple cloud platforms, including AWS, Azure, and Google, while DataMosaix is available only on Azure. Similarly, DeepIQ has certain features that DataMosaix does not provide. These differences are illustrated in Table 1 and explained in the next section.

<i>Feature</i>	DeepIQ	DataMosaix
<i>OT Data Ingestion</i>	Yes	Yes
<i>Contextualization Support</i>	Yes	Yes
<i>Self Service and Developer tools</i>	Yes	Yes
<i>Data Residency Control</i>	Yes	No
<i>Streaming Support for Contextualization</i>	Yes	No
<i>Highly scalable Machine Learning-based Contextualization</i>	Yes	No
<i>Geospatial Analytic Support</i>	Yes	No
<i>Natural Language Support</i>	Yes	No
<i>Highly scalable Timeseries Data Engineering</i>	Yes	No
<i>3D Model Rendering</i>	No	Yes
<i>Cost</i>	\$	\$\$

Table 1:Feature Comparison

Product Features

Live Data Lake support



Most industrial companies have already chosen a data lake platform available on one of the public cloud environments as the central hub for all their enterprise data needs. DeepIQ extends this existing data lake platform to include IT-OT convergence. By leveraging your existing data lake, DeepIQ maintains a unified and streamlined approach to managing and analyzing data across your entire enterprise ecosystem. In contrast, DataMosaix employs a proprietary data model hosted by it, introducing the need for additional integration efforts with your established data lake or vice versa.

Data Residency Control

While DeepIQ operates as a SaaS platform, its architecture ensures that data consistently resides within your tenant. By separating DeepIQ's control and data planes, computing processes and data remain within your designated cloud network. As a third-party single-plane platform, DataMosaix transfers data outside your cloud tenant.

Streaming Support for Contextualization

As you develop data contextualization workflows, the next step is integrating the results into your real-time applications. For example, you might want to incorporate data from your SCADA system with readings from handheld devices to execute real-time predictive health models. With DeepIQ, you can seamlessly access your contextualization results directly within streaming workloads, achieving sub-second latency.

Machine Learning-based Contextualization:

In numerous contextualization scenarios, rule-based mappings can prove cumbersome. DeepIQ offers a workflow grounded in statistical and machine learning principles, utilizing temporal, geospatial, numerical, and textual properties of entities/events to establish mappings across diverse systems. In practical applications, DeepIQ has consistently achieved over 95% accuracy in automated mappings. Furthermore, the system is engineered to scale seamlessly to accommodate millions of entities.

Geospatial Analytic Support

Whether you're actively involved in real-time tracking and optimizing vehicle routes or seeking to improve the effectiveness of globally distributed supply chains, certain situations necessitate the integration of your IT-OT datasets with geospatial data sources. DeepIQ offers comprehensive support for seamlessly ingesting and analyzing geospatial data sources at scale. This support encompasses handling various geospatial data formats and executing sophisticated geospatial transformations, including resampling to different resolutions, noise removal, and integrating disparate sources. Additionally, DeepIQ provides robust support for geospatial queries, empowering users to extract valuable insights from spatial data. DataMosaix does not support geospatial capabilities.

Time-Series Data Engineering



Managing statistical and machine learning analytics on distributed time-series data is intricate due to challenges in data synchronization, consistency, and the necessity for advanced algorithms capable of capturing temporal dependencies, trends, and seasonality. DeepIQ offers native no-code support for distributed time-series data transformation workflows. This distinctive feature enables scalability to handle terabytes of data and process millions of messages per second. It sets DeepIQ apart in its ability to address the complexities of distributed time-series analytics.

Natural Language Support

Following the integration of IT-OT data, the crucial next step is to support the generation of insights at scale utilizing this integrated data. DeepIQ offers native Gen AI support, enabling users to query the integrated datasets using natural language. DeepIQ's proprietary technology, combined with comprehensive traceability of results, has demonstrated high response accuracy, approaching human-like performance, in current fielded applications. This approach goes beyond traditional canned reports, empowering users to extract insights at scale through intuitive and conversational interactions with the data. Current versions of DataMosaix do not support a natural language interface.

3D Model Rendering

The DeepIQ software is dedicated to DataOps, enabling users to visualize dynamic and static data. Notably, 3D plots are currently not a supported feature. DataMosaix facilitates 3D model rendering for visualizing physical assets.

Cost

The final consideration is cost. DataMosaix is based on multiple factors, including users and data points analyzed. DeepIQ's pricing does not increase with the volume of data analyzed. As your usage scales up, DeepIQ costs stay consistent and are determined solely based on licensed users. This transparent pricing structure ensures easy observation and control, preventing unexpected and high costs.

Conclusion

Beyond these advantages, DeepIQ provides other benefits to DataMosaix customers. Being an open platform, DataMosaix allows users to transfer data to their established data lake for cross-functional analytics. DeepIQ DataStudio can be used to orchestrate this transfer, ensuring the availability of comprehensive enterprise data, including IT-OT convergence data in a single platform. With DeepIQ, you also gain a user-friendly natural language interface for subject matter experts to access this data, along with robust support for cross-functional analytics, including real-time capabilities.



DeepIQ is on a mission to transform industrial processes by digitizing industrial expertise. Our vision is to drive end-to-end automation, enabling systems such as self-running power plants or drilling rigs using generative AI as the higher order reasoning layer operating over existing industrial automation technology stack.

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