

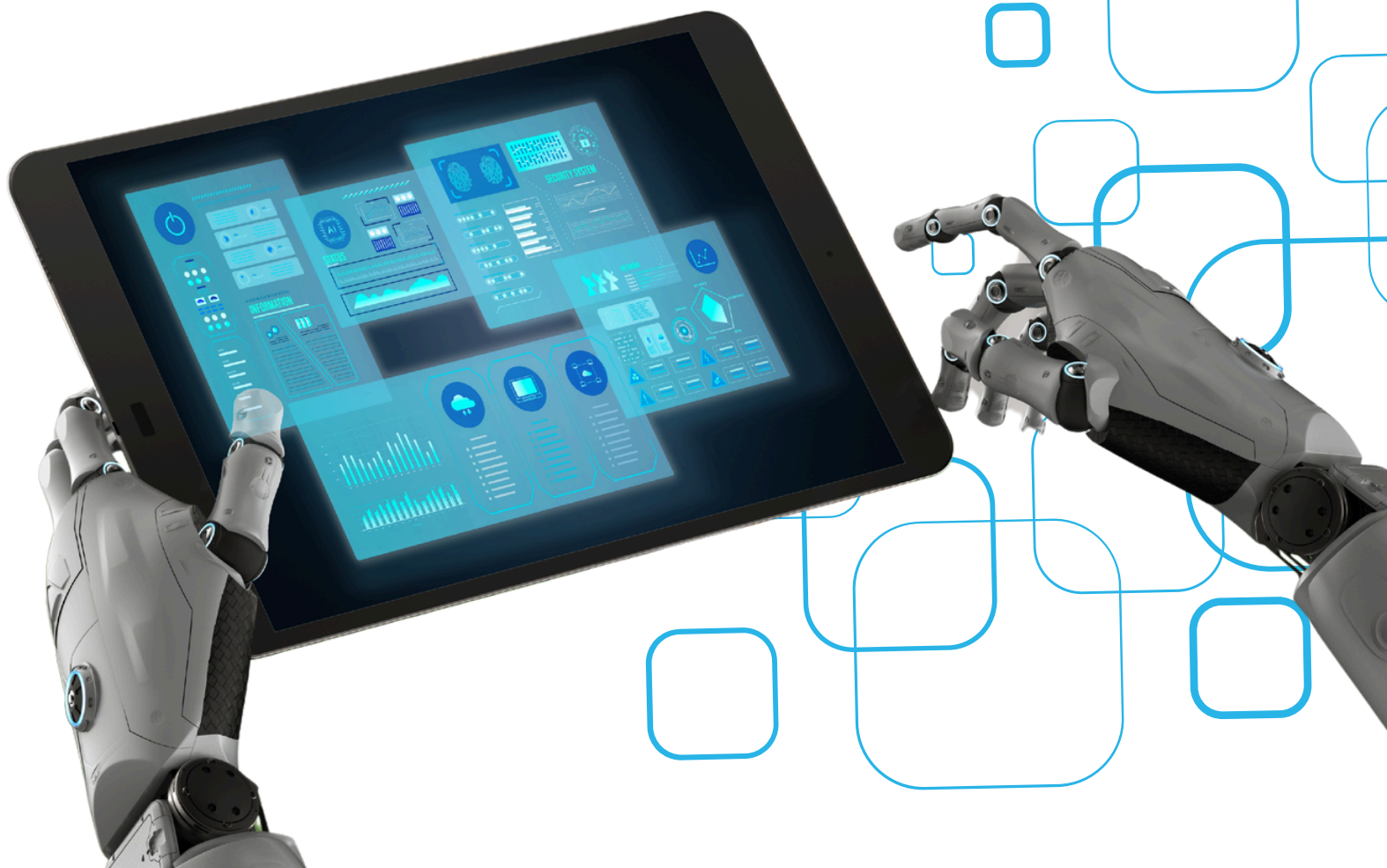


Cerexio IoT System

IoT Integration System

Interlock All Your Data Sources Via a Smart
Digital Nervous System

www.cerexio.com



Introduction

Think Smart with An Abundance of Insights Powered by Cerexio Smart IoT Integration Capabilities

The Cerexio IoT Integration System introduces a cohesive solution for the manufacturing domain, consolidating the infrastructure and processes under one stream to be connected, managed, and interpreted via a diverse range of embedded IoT devices and data through the framework driven by Industry 4.0 digital capabilities.



Production-centric Articulation through Scalable Data Streaming with Cerexio

@Cerexio Smart IoT Solutions

Industries We Serve



Automotive



Life
Sciences



Food



Beverage



Pharma



Medical
Devices



Aerospace



Defense



Electronics



Oil & Gas



Chemical



Metal



Retail



Fabrics



Printing

Key Highlights

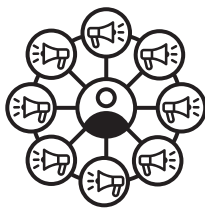
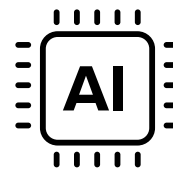


1. 5G-pioneered Connectivity

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Cerexio IoT Integration System, unleashing the potential of Industry 4.0 capabilities, including Hadoop, Big Data, and 5G, to provide seamless connectivity.

Utilise AI algorithms for instantaneous analysis, providing valuable insights into operational processes and building a unification of data as one manufacturing ecosystem.

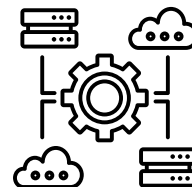


3. Diverse Protocols

Enable Big Data technology to offer support for diverse communication protocols and standards, including MQTT, CoAP, HTTP, and proprietary protocols, etc.

4. Middleware Orchestration

Cerexio solution establishes a powerful intermediary layer between devices and applications in order to support data processing, storage, and communication.



5. Application Enablement

Enables seamless connection with business applications, and the implementation of Analytics and Business Logic to encourage automated actions.

6. Step Smart Data Storage

Cerexio IoT Integration System backs up data storage, incorporating 5G technology, Streaming Data, and Hybrid Cloud solutions and empowers manufacturers.



Industry 4.0 Capabilities We Offer

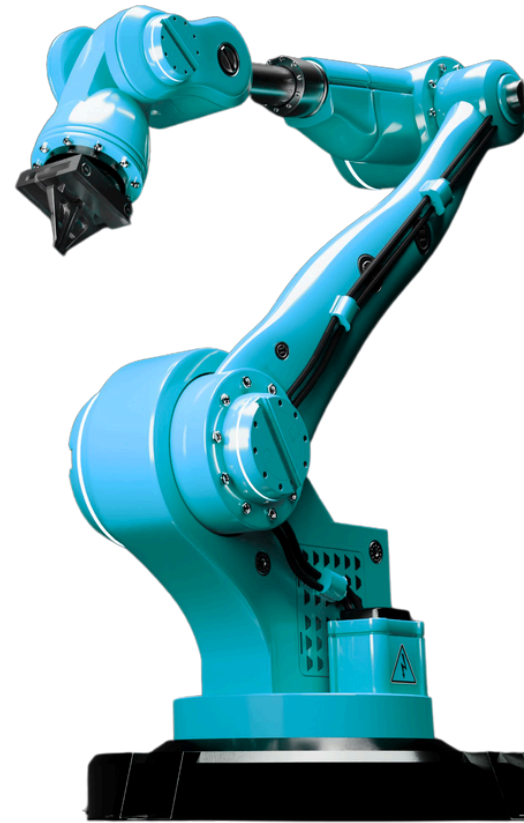
1 AI & Machine Learning

2 Big Data

3 GIS

4 AR/VR

5 Simulation



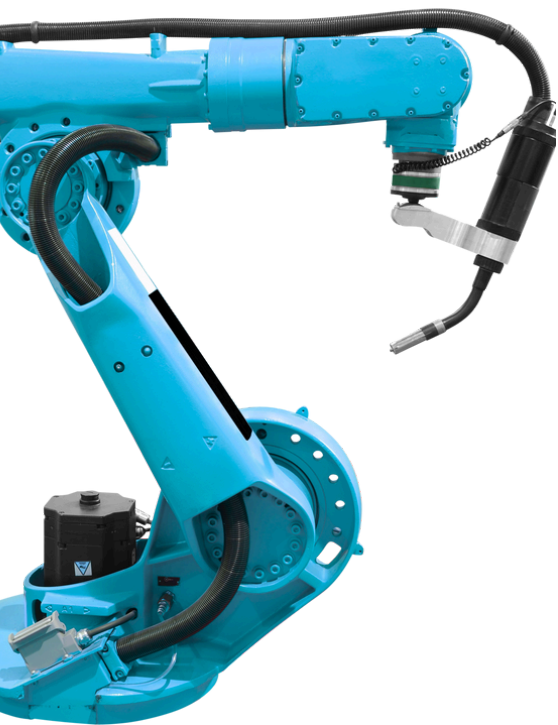
6 Satellite Remote Sensing

7 CCTV and Laser

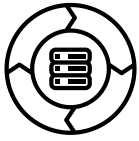
8 5G, IoT, Quantum Sensors

9 Digital Twin

10 Robotics and CPS



Cerexio IoT System Modules



Data Lifecycle Management

Cerexio IoT Integration System produces extensive real-time data streams, effortlessly integrated into a centralised system via embedded Big Data and Data Analytics. This supports the storage and processing of this substantial volume, extracting valuable information throughout the entire data lifecycle.



Compatibility Optimiser

As the Cerexio IoT Integration System is highly compatible with internal and external manufacturing systems such as HVAC, Edge, PLC, MES, ERP, and more, it ensures the establishment of a full-scale manufacturing ecosystem through robust synchronisation with industrial automation processes, showcasing 100% efficiency.



End-To-End Integration

Cerexio solution is dominated by Industry 4.0 advancements and permits effortless integration spanning traditional and modern manufacturing systems via robust APIs. Serving as a bridge between legacy systems and contemporary manufacturing technologies, it ensures seamless interoperability across the entire IoT ecosystem.



Flexible Web Dashboards

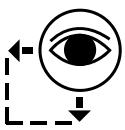
Our solution excels in providing adaptable web dashboards featuring an intuitive and user-friendly interface that allows the users to effortlessly add and manage devices, exercise control over IoT service access, and monitor usage, due to our platform's clean design and user-centric approach.

Cerexio IoT System Modules



Powerful Data Visualisation

Since our system is fueled by the robust capabilities of Industry 4.0 capabilities, it not only streams data but also presents it through robust visualisation techniques such as Digital Twin, AR & VR, and Hadoop via various dashboards, charts, and reports, ensuring that raw data is translated into meaningful insights.



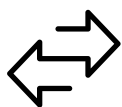
Real-Time Tracking

Cerexio solution attains real-time tracking, delivering live updates and actionable insights through interactive dashboards, allowing relevant parties to monitor and respond promptly to unfolding events. Our system offers a comprehensive and timely overview of the status within the overall manufacturing IoT ecosystem.



Responsive Communication Promise

The Cerexio IoT Integration System cultivates a responsive communication environment by swelling industry-standard protocols such as MQTT, CoAP, and HTTP. Through seamless integration with 5G connectivity. Our system ensures swift processing, transmission, and real-time comprehension of data, encouraging a responsive framework.



Shielded Data Transmission

The Cerexio system guarantees secure data transmission by employing cutting-edge Industry 4.0 data protection technologies. Utilising robust encryption protocols, authentication mechanisms, and secure channels, the system prioritises the safeguarding of data integrity and confidentiality throughout transmission.

Cerexio IoT System Modules



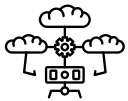
Smart Visibility into Malfunction

Cerexio IoT Integration System is powered by Predictive and Prescriptive Analytics, advanced features such as smart visualisation and alerting for communication errors between devices and the cloud, which ensure swift root cause analysis, significantly enhancing the resilience and responsiveness of the manufacturing IoT ecosystem.



Automated Firmware Updates

Cerexio IoT Integration System supports automated firmware and software updates across all connected devices, ensuring they remain secure and perform optimally. This reduces manual intervention, minimises downtime, and protects against emerging vulnerabilities throughout the device lifecycle.



Scalable Device Management

The system is designed for scalability, allowing seamless onboarding, configuration, and management of a growing number of IoT devices. Centralised control and standardised protocols enable efficient expansion of the IoT ecosystem without compromising performance or security.



Comprehensive Security Framework

Cerexio implements a robust security framework encompassing device authentication, encrypted data transmission, and secure decommissioning. This end-to-end security approach safeguards data integrity and privacy, mitigating risks across all stages of the IoT lifecycle.

Cerexio IoT System Benefits

Bringing Digital Efficiency to Your Doorstep

Our system ensures the smooth processing and transmission of raw data to be interpreted into meaningful and scalable insights via Industry 4.0 digital strengths. Preventing communication fencing in manufacturing, Cerexio solution unsheathes the clouded essence of data.

Change Data Capture

The Cerexio solution comes equipped with Change Data Capture (CDC), ensuring flawless data synchronisation to adeptly capture and identify real-time changes, facilitating rapid updates without causing disruptions to the overall system.

Facilitate Webhooks

Enabling seamless integration with webhooks, the Cerexio IoT Integration System empowers users to connect with SaaS platforms that trigger events or orders employing WebSockets and MQTT, which guarantee real-time connectivity.

Future-Proof Predictions

Real-time data analysis and thorough historical event scrutiny, machine learning, and advanced algorithms to skillfully identify patterns and trends, providing invaluable and future-proof insights that boost the resilience of the entire framework.

Hundreds of Pre-Built Integrations

An IoT system with numerous pre-built integrations, linking seamlessly with over 800 data sources through the connector library. This comprehensive approach facilitates plug-and-play connectivity, allowing for effortless integration with a wide array of data sources.

Cerexio IoT System Benefits

Cerexio IoT Integration System : Meet Your Digital Skylimit

The Cerexio IoT Integration System introduces a cohesive solution for the manufacturing domain, consolidating the infrastructure and processes under one stream to be connected, managed, and interpreted via a diverse range of embedded IoT devices and data through the framework driven by Industry 4.0 digital capabilities.

Real-Time Error Detection

It incorporates the file watcher functionality, it can actively monitor file modifications and trigger events as needed, while its 'Anomaly Detection' feature employs various methods, including fixed rules, custom algorithms, and ML/AI models, to analyse streaming data.

Robotic Automation

Employ sophisticated algorithms, deep learning (DL), and machine learning (ML) to automate the collection, processing, and interactions within the system, creating a tightly glued ecosystem, which boosts efficiency.

Industry Flexibility

Cerexio IoT Integration System is a full-scale solution for the manufacturing domain's data integrity requirements and real-time data streaming gaps. Wrapped with Industry 4.0 capabilities, our solution offers scalability, visibility, transparency, and efficiency engines to expedite the overall production process.

Modern Solutions for Faster Datafication

Cerexio initiated our state-of-the-art IoT solution coupled with Industry 4.0 digital capabilities in order to ensure a smooth flow of data from one end to the other, offering deeper levels of understanding via technological advancements. The following are some of this solution's central characteristics:

Cerexio Client Stories

Cerexio has been at the forefront of digital transformation in manufacturing, empowering companies to achieve operational excellence and sustainable growth. Through its flagship solutions, Cerexio has partnered with industry leaders to solve complex challenges, ranging from throughput optimisation to emission control, while delivering measurable business value.

A company that manufactures and fabricates precision parts, moulds, and dies.

1

Vertically-integrated manufacturing services since 1978. They had a challenge in digitally transforming factories to improve operational efficiencies and reduce labour costs.

CEREXIO MES improved the throughput by digitally transforming their factory of 200+ moulding machines while the same labour capacity was able to deliver a +10% profit

Cement Manufacturer

2

According to Forbes, this company was on the list of the 700 largest global public companies in 2015. They had challenges in achieving kiln stability and optimisation.

CEREXIO MES was utilised by them to prevent poor quality, suboptimal throughput, unhealthy emission rates and energy losses by predicting failures in cyclone infrastructure.

ARTC- Advanced Remanufacturing Technology Centre

3

A Singaporean government agency that researches to facilitate the advanced manufacturing ecosystem in the region.

CEREXIO MES Services and Modules optimised their hyper-personalisation Line- a solution that manufactures personalised products in a fully automated production line.

Contact Cerexio

Don't hesitate to get in touch with us for further clarification or to book a demo this week. The contact particulars of our company are as below:

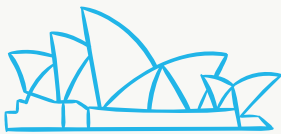


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