

Cerexio PYOS

Production Yield Optimiser System



Optimise Your Production Centres Smarter and
Faster with Cerexio

www.cerexio.com



Introduction

Quality and Quantity–Centric Magnified Resource Utilisation with Cerexio

Our system is a comprehensive digital luminosity to assist in sidestepping the risks, waste, and inefficiencies extensively under one dashboard. It integrates all aspects into a cohesive interface, providing a comprehensive visualisation of the production landscape while enhancing the production framework and maintaining an environmentally friendly footprint on the industrial map.



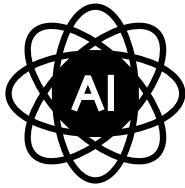
Smoother, Smarter, Risk-free Production

@Cerexio Smart Production Solutions

Industries We Serve



Key Highlights



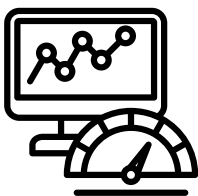
2. A Sustainability Promise

Integrated with a diverse range of Industry 4.0 technologies to ensure that manufacturing businesses are adhering to the manufacturing environmental promises.



4. Smart Engineering Framework

Excels in innovation by seamlessly integrating with cutting-edge technologies such as PLC, ML, process simulation, Edge computing, etc., to enhance design and engineering frameworks.



6. A Virtual Sneak Peek

Comprehensive visibility supports virtual prototyping, collaborative design, real-time process optimisation, and performance monitoring.

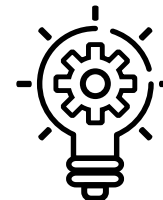
1. AI-Powered Visibility

Consolidate every facet of the production line into a unified dashboard, serving as a digital tool for informed decision-making.



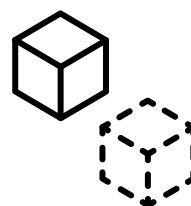
3. Magnified Quality/Quantity

Identifying potential deviations and optimising the manufacturing process to guarantee the consistent and efficient utilisation of raw materials.



5. Smart Tracking

Advanced sensors and a laser-embedded tracking system to enhance the manufacturing domain by promptly identifying underperforming elements.



Industry 4.0 Capabilities We Offer

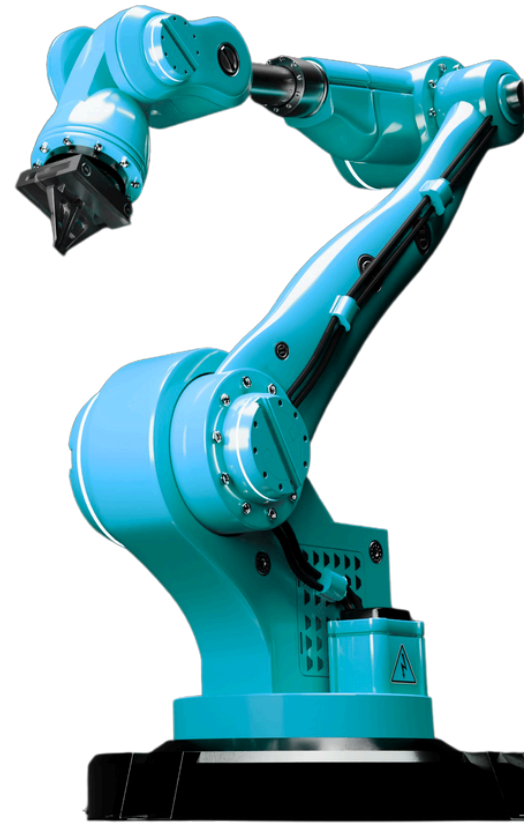
1 AI & Machine Learning

2 Big Data

3 GIS

4 AR/VR

5 Simulation



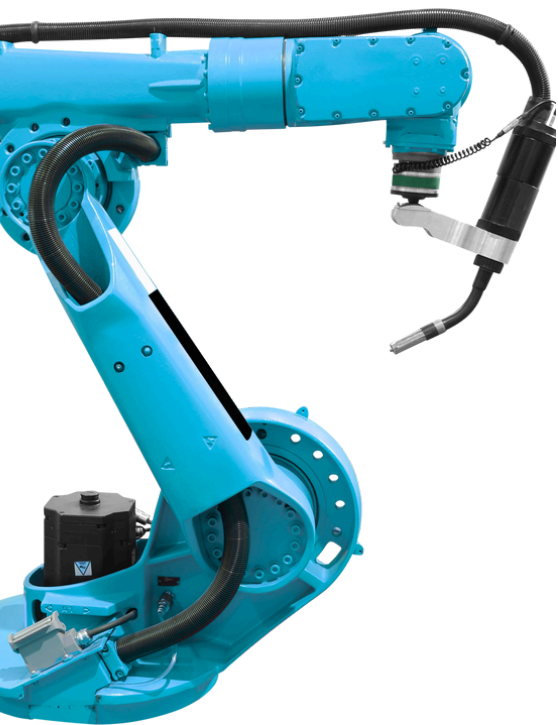
6 Satellite Remote Sensing

7 CCTV and Laser

8 5G, IoT, Quantum Sensors

9 Digital Twin

10 Robotics and CPS



Cerexio PYOS Modules



Accurate and Reliable Insights

Utilising cutting-edge ML algorithms and advanced analytics driven by Industry 4.0 digital capabilities, our Cerexio solution delivers precise insights into manufacturing processes by analysing production performance data and pinpointing weaknesses and areas for enhancement to achieve peak levels of yield.



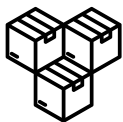
Adherence to the Sustainability Promise

This solution aids manufacturers in putting more weight on their sustainability goals through the robust capabilities of Industry 4.0. Cerexio encourages optimising resource efficiency, controlling waste, and managing energy consumption to build a more eco-conscious manufacturing ecosystem.



End-To-End Integration

Cerexio lays a path based on AI models to collect data on diverse production elements such as raw materials, chemicals, extruders, machinery, and systems while gathering them into a unified screen in order to achieve maximum yield levels under the single screen.



Batch Control and Tracking

Cerexio Production Yield Optimiser System utilises Industry 4.0-backed sophisticated algorithms, integrated sensors, and laser tracking devices, such as RFID scanners and IoT-enabled devices, to continuously provide detailed, uninterrupted reports on batch-wise production, ensuring an effective batch process framework.

Cerexio PYOS Modules



Concentrated Quality Control

Cerexio empowers manufacturers to dynamically adjust control parameters using advanced algorithms to guarantee optimal production yield, maintain quality standards, and minimise waste. By swiftly detecting deviations, our system sends timely notifications to the concerned parties, facilitating accurate and flexible adjustments.



Pinnacle of System Integration

Coupling with robust Industry 4.0 capabilities, the Cerexio system is a technological pinnacle, seamlessly integrating with current and future manufacturing systems. Its advanced features make it flexible for effortlessly aligning with existing and prospective systems within the manufacturing domain.



Remote Production Dominance

Offering controlled access to authorised users, Cerexio's solution encourages remote monitoring and management of manufacturing processes from any location, consolidating control through a unified platform. Our system ensures seamless yield operations, allowing authorised users to stay connected in real-time.



Uninterrupted Data Streaming via IoT

Cerexio solution is integrated into manufacturing processes and embedded IoT sensors capture real-time data, providing unprecedented insights in real-time. Our system efficiently processes this information, eliminating challenges related to latency or inaccuracies through the power of 5G-backed-up IoT strength.

Cerexio PYOS Modules



Virtual Representations

This Cerexio solution is fueled by Digital Twin technology, it can offer a proactive approach to yield optimisation. It extends support by allowing a virtual exploration of optimisation initiatives before implementation in the real world, saving time and money.



Predictive Maintenance

Cerexio Production Yield Optimiser System leverages predictive analytics and machine learning to anticipate equipment failures before they occur, minimising unplanned downtime and maintenance costs. This proactive approach ensures continuous production flow, enhances equipment lifespan, and significantly reduces operational disruptions.



Supply Chain Synchronisation

The solution integrates seamlessly with supply chain management systems, utilising real-time data from IoT devices and advanced analytics to synchronise inventory, logistics, and production schedules. By providing instant visibility into supply chain dynamics, Cerexio empowers manufacturers to respond swiftly to demand fluctuations.



Enhanced Data-Driven Compliance

Cerexio's platform automates compliance monitoring and reporting by consolidating data from various manufacturing processes and regulatory checkpoints. With built-in analytics and customisable dashboards, manufacturers can easily track compliance with industry standards, generate audit-ready reports, and ensure adherence to environmental and safety regulations, minimising the risk of non-compliance penalties.

Cerexio PYOS Benefits

The Production-Centric Paramount Output, Extraction of Underlying Values, and Powerful Insights

The Cerexio Production Yield Optimiser System paves the path for superior production quality and quantity with a collaborative accessibility platform in the manufacturing realm to unmatched competitive heights through the pinnacle of Industry 4.0 technology. The Cerexio Solution empowers unparalleled control over yield investigation, planning, and design enhancement, utilising this comprehensive optimisation grandstand.

Design to Execution

Cerexio solution functions as a resilient yield management tool that oversees every facet of the manufacturing process, encompassing design, planning, and dynamic adjustments for optimal yield optimisation, offering end-to-end visibility across the entire production lifecycle.

Global Accessibility

Our Cerexio system provides worldwide access through its versatile compatibility with web and mobile platforms. As the solution is enriched with 5G connections, Hadoop, Middleware, and IoT, it exhibits high adaptability, being compatible with Android, Windows, and Mac.

Guarantee Product Quality

Smartly embedded Digital Twin technology integration in the Cerexio solution ensures product quality by conducting thorough analysis and emulation. Creating virtual replicas of the manufacturing environment, Digital Twin meticulously compares them with the actual production processes efficiently.

Marking a Green Dot

This empowers optimal management of raw materials, reducing unnecessary consumption, and fostering ethical sourcing through the capabilities of Industry 4.0 while assisting manufacturing companies in responsibly steering towards a greener tomorrow.

Cerexio PYOS Benefits

Gain the Maximum Benefit of Each Element via the Best Yield Optimising Technology 4.0

Utilise the powerful integration with Industry 4.0 digital capabilities and the smart features of Cerexio Production Yield Optimiser System in order to acquire the best essence of each manufacturing element under a singular vision. Our solution is enriched with various strengths to offer a magnified outcome through this fusion of technologies. The following are some of this solution's primary characteristics:

Offering Customised Production

By incorporating IoT and intelligent technologies, the Cerexio solution customises production processes to align with individualised demands in the dynamic market. It systematically evaluates customer requirements and dynamically adjusts parameters for personalised outputs.

Optimal Resource Allocation

Our solution walks down a methodical path to evaluate production variables to ensure the strategic allocation of resources, including raw materials, energy, and machinery, by optimising the utilisation of key resources and offering optimal production.

Predictive Maintenance

Harnessing advanced predictive analytics and AI-driven insights, Cerexio PYOS proactively identifies potential bottlenecks and maintenance needs, minimising unplanned downtime and ensuring uninterrupted production flows.

Seamless Supply Chain Integration

Cerexio PYOS seamlessly integrates with supply chain partners and upstream systems, enabling real-time data exchange and synchronised operations for enhanced collaboration, traceability, and compliance across the manufacturing ecosystem.

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:

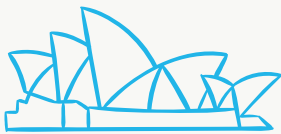


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