

INTELLIGENT CONTROL FOR YOUR MANUFACTURING FUTURE



TIEMAC

# TAAIB - vCPPS PLATFORM

SEAMLESS INTEGRATION OF AI, SENSORS, AND ACTUATORS  
FOR INDUSTRY 4.0



Step into the future of manufacturing with TAAIB - vCPPS Platform, where AI transforms sensor data into intelligent, agentic control through PLCs. Our platform blends virtual simulation with real-world operations, allowing for effortless transitions to optimize your production line.





# SENSORS, ACTUATORS, AND AI: THE CORE OF INTELLIGENT MANUFACTURING

## TIEMAC WHAT IS TAAIB – vCPPS PLATFORM?

TAAIB - vCPPS IS YOUR GATEWAY TO INDUSTRY 4.0, OFFERING



### REAL-TIME DATA INTERACTION

Continuous streaming from sensors and actuators feeds into AI models for dynamic process control.



### INTELLIGENT AGENTIC CONTROL

AI interprets data to make real-time adjustments to PLC logic, optimizing machine settings without human intervention.



### VIRTUAL TO PHYSICAL TRANSITION

Easily switch between vCPPS simulations and CPPS operations, ensuring your strategies are tested virtually before physical implementation.

## 11 MODULES FOR SEAMLESS MANUFACTURING OPTIMIZATION

### + Production and Planning

Uses sensor data to dynamically adjust production schedules and resource allocation.

### + Energy Efficiency Optimization

Real-time sensor data informs AI models to adjust for energy savings.

### + Dynamic Bottleneck Detection

Sensors detect inefficiencies, with AI providing agentic control to resolve them.

### + Environmental Impact Analytics

Integrates sensor readings to minimize environmental footprint through AI-driven decisions.

### + User Training and Simulation

Simulates real sensor and actuator behavior for hands-on training without production risk.

### + Security and Compliance

Ensures secure handling of sensor data, maintaining compliance with industry standards.

### + Advanced Simulation

Simulates sensor and actuator interactions, allowing for testing of new configurations in a virtual environment.

### + Real-Time Profitability

Sensor data feeds into AI algorithms to assess profitability on-the-fly, adjusting processes to maximize gains.

### + Advanced Dynamic Bottleneck

Extends this control across multiple production lines, using sensor data to optimize flow.

### + System Health and Maintenance

Predictive models analyze sensor data to preemptively schedule maintenance.

### + Continuous Improvement Feedback

Uses data from all modules to refine AI models, enhancing control over time.





# WHY TAAIB - vCPPS PLATFORM STANDS OUT

## UNIQUE MARKET DIFFERENTIATION:



### + DATA-DRIVEN AGENTIC CONTROL

Our platform goes beyond monitoring; it actively controls your manufacturing environment based on sensor inputs.



### + SWITCHING MECHANISM

Transition between virtual simulations and physical operations seamlessly, minimizing risk and downtime.



### + MODULAR AI INTEGRATION

Each module uses sensor data uniquely, providing a comprehensive, interconnected AI control system.



### + PRIVACY AND SIMULATION

Start with historical data in simulation to demonstrate value, then scale to real-time data integration at your pace.

## BENEFITS FOR MANUFACTURING COMPANIES



### + ENHANCED EFFICIENCY

Real-time adjustments to machine settings based on sensor data lead to optimal production speed and quality.



### + SUSTAINABILITY

Optimize energy and material use with precise sensor data feedback.



### + COMPETITIVE ADVANTAGE

Gain an edge with a platform that not only analyzes but acts on manufacturing data.



### + PREDICTIVE MAINTENANCE

AI models predict equipment issues before they occur, reducing unexpected downtime.



### + QUALITY CONTROL

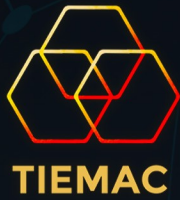
Ensure product consistency with AI monitoring and control of all production parameters.



### + SKILLED WORKFORCE

Train employees using real data in a safe, simulated environment, preparing them for advanced manufacturing roles.





# EMBRACE THE FUTURE: FROM SIMULATION TO REALITY

Ready to Upgrade Your Manufacturing?



## Pilot with Precision

Use your data to simulate and validate before full-scale deployment.



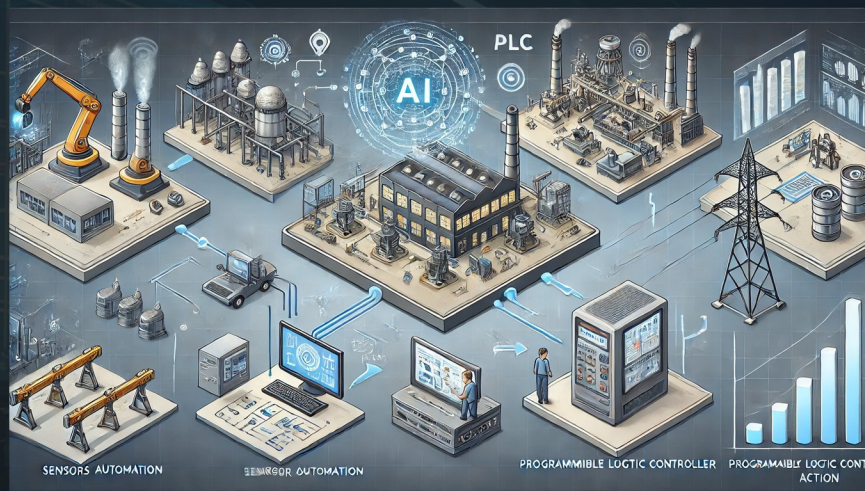
## Scale with Confidence

Transition from virtual to physical operations when you're ready, with our support.



## Expert Guidance

Our team is here to guide you through every step, from simulation to real-time control.



**TRANSFORM YOUR MANUFACTURING OPERATIONS WITH TAAIB –  
VCPDS PLATFORM. SCHEDULE A DEMO TO SEE HOW WE CAN MAKE YOUR  
PRODUCTION LINES SMARTER, MORE EFFICIENT, AND ADAPTABLE.**

Innovation in manufacturing is no longer just about building better machines; it's about empowering them with intelligence. AI transforms data into decisions, turning complexity into opportunity and factories into frontiers of possibility."

**CONTACT US**

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