

AI/ML platform for equipment health monitoring, predictive diagnostics, and performance optimization



From reactive repair to predictive uptime

DEEP collects sensor data, events, and proprietary signals from equipment via Cimetrix® CIMControlFramework and applies AI/ML to deliver **equipment health monitoring, predictive maintenance, and root cause diagnostics.**

Problem with Status Quo

Manual troubleshooting and reactive maintenance detect failures **only after they stop production.**

DEEP **continuously analyzes** equipment data to **increase uptime** and **accelerate root cause analysis.**

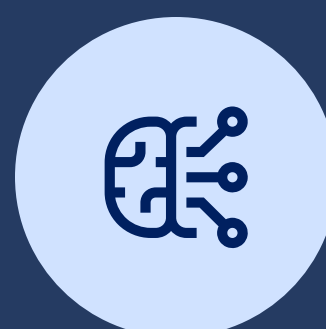
Solution Highlights



Golden fingerprinting technology to define normal behavior



No in-house AI/ML expertise required



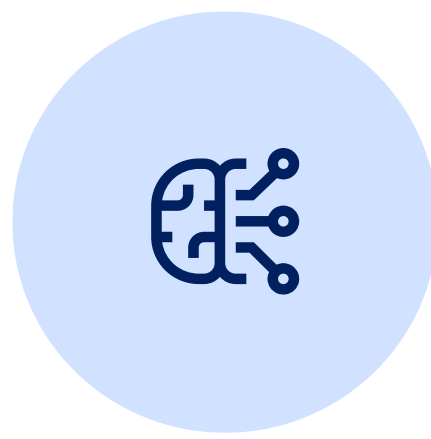
Real-time outlier detection and anomaly identification

Core Capabilities



Golden Fingerprinting

Builds a behavioral baseline per component and flags deviations that precede failure.



AI/ML Platform

UI, server, database, and middleware supporting built-in and custom AI/ML models.



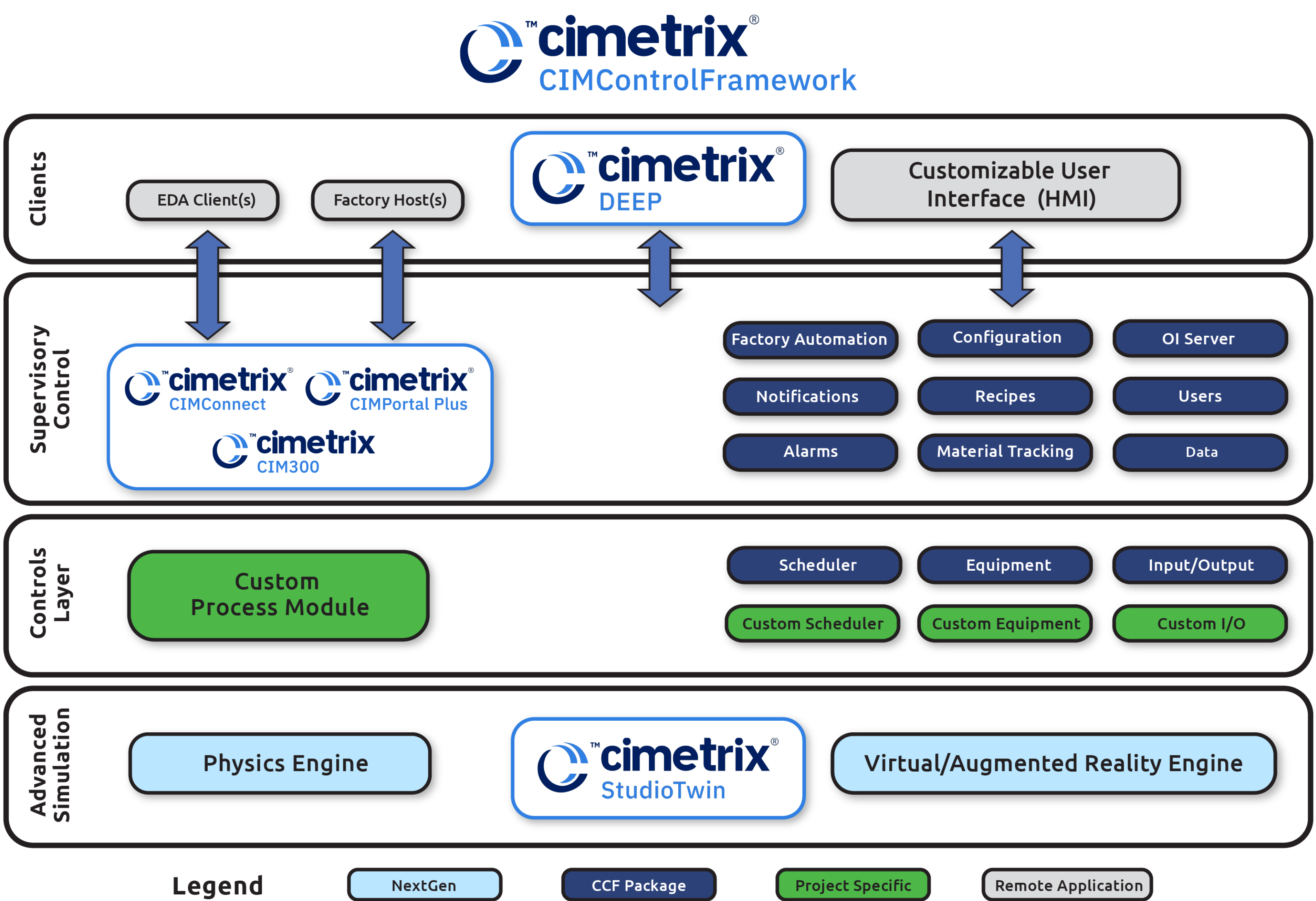
Use Case Template Library

Prebuilt templates for common factory use cases, minimizing in-house data science work.



Integration & Connectivity

gRPC and API connectivity to CCF, ECF, and third-party manufacturing systems.



Use Cases

Equipment Health Visibility

Cimetrix® DEEP fills a gap in current equipment monitoring by addressing the **lack of continuous, real-time visibility** into system health.

Without it, engineers rely on **manual, after-the-fact analysis** to understand equipment behavior. This makes it difficult to detect issues early or confidently assess performance.



Challenge

Engineers lack real-time insight into system condition and must rely on logs.



Result

DEEP provides continuous health monitoring and dashboards, enabling faster decision-making and issue resolution.



Challenge

Equipment Issues are normally detected only after failure occurs.



Result

Predictive maintenance identifies component degradation early, preventing costly downtime.

Predictive Maintenance and Downtime

DEEP addresses the limitations of traditional maintenance approaches that rely on **reactive, failure-driven** processes.

Without **predictive insight**, degrading components **remain undetected** until they disrupt production. This leads to avoidable downtime and inefficient service cycles.

Identifies **early signs** of component degradation

Compares **real-time data against baseline** behavior

Supports **multiple** programming languages

Runs on These Operating Systems

- 64-bit Microsoft Windows 11
- 64-bit Ubuntu 22
- ARM64 Ubuntu 22

Contact Us



PDF Solutions Corporate Headquarters
2858 De La Cruz Blvd
Santa Clara, CA 95050 USA

www.pdf.com +1-408-280-7900