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Opcenter Execution Electronics IoT

Collecting oven data with Opcenter Execution Electronics IoT and KIC reflow data plugin

Benefits
- Help meet industry standards and customer compliance demands by collecting accurate, real-time oven data

- Provide insight into factory performance, including reflowing oven data, with an intuitive real-time PCBA performance dashboard

- Increase the effectiveness of all factory machines, including oven use, by automatically identifying bottlenecks based on predefined KPIs

- Track trends and errors as real-time events by managing oven sensor output extended to ODB++ Manufacturing

Features
- Monitors the reflow, wave solder and cure process in high resolution

- Generates thousands of readings from embedded sensors

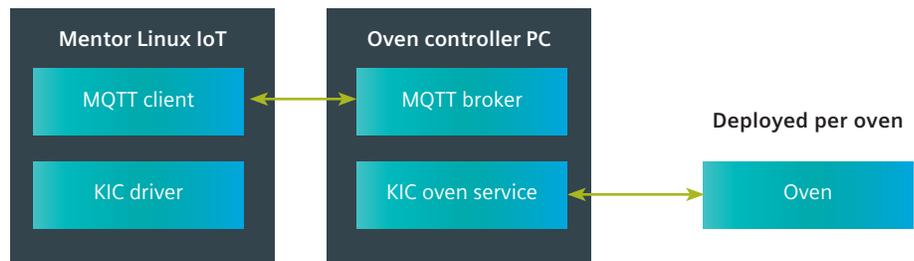- Leverages data to provide real-time advanced analytics and alerts

Summary
Opcenter™ Execution Electronics IoT software includes an integration with KIC's smart oven technologies, the reflow machine data plugin that keeps track of reflow oven settings and controls sensor readings. From the oven personal computer (PC) via the factory floor local area network (LAN), it provides real-time messaging of recipe and machine settings and sensor readings, giving Opcenter Execution Electronics IoT valuable reflow oven machine traceability.

It gives you confidence your machine is set properly and in control for every

production run. If something changes, Opcenter Execution Electronics IoT, which is part of Xcelerator, the comprehensive and integrated portfolio of software and services from Siemens Digital Industries, can be used to quantify and qualify the issue.

This solution uses KIC's smart oven technology to provide process transparency, traceability, consistent quality and reduced costs with a new level of automation.

With this combination of Opcenter Execution Electronics IoT and KIC oven technology, the comprehensive digital twin of your printed circuit board (PCB) manufacturing operation now includes the core reflow machine-level data to complete the traceability chain across the assembly line. Furthermore, it establishes the starting point to move to more comprehensive smart oven technologies, such as automatic temperature profile data (ramp rates, reflow time, peak temps) for every production board and automatic production changeover on the reflow oven.

Mentor Linux IoT	Oven controller PC	
MQTT client	MQTT broker	
		Deployed per oven
KIC driver	KIC oven service	Oven

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Opcenter Execution Electronics IoT

The cooperation between Siemens and KIC creates a unique, comprehensive offering for real-time PCBA data acquisition. It brings together two domain leaders to provide our joint customers with a complete, easy-to-implement connectivity solution, covering surface mount technology (SMT) assembly and inspection as well as thermal processes, taking us one step further toward a fully digitalized factory and implementation of the Industry 4.0 vision.

As the industry evolves beyond a machine focus toward using machine and process data to achieve a new level of factory effectiveness, this solution will help your organization move toward this goal.

With real-time data provided using the ODB++ Manufacturing interface, important and timely collection of recipes, zone temperature settings/readings, conveyor speed setting/readings and oven machine status can be done regardless of the brand since KIC smart oven technologies provide an agnostic solution.

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