What's new in **Opcenter Execution Semiconductor 8.6**

Integrating an in-line SPC module and delivering single-item tracking capabilities using HPE transactions

Benefits

- Integrate new in-line SPC module using MOM SPC components to replace third party SPC engine

- Build and implement HPE transactions with genreal release of HPE framework

- Support two-level lot starts and processing, multi-dimensional carrier position definition and usage and mutli-container closure

- Use automation inquiry services for tools, carrier family and recipes

Summary

Opcenter™ Execution Semiconductor software (formerly known as Camstar™ Semiconductor suite) is a comprehensive manufacturing execution system (MES). It enables wafer fabrication factories and assembly and test sites to meet traceability requirements, control production and integrate the shop floor into their enterprise resource planning (ERP) system and extended enterprise. Opcenter Execution Semiconductor addresses your needs on a configurable, scalable and modular production platform.

New integrations in version 8.6 include an in-line statistical process control (SPC), a high-performance engine (HPE) framework with 10 out-of-the-box (OOB) transactions and a recommended data replication extract, transform and load (ETL) solution for operational data store (ODS). The original replication does not support HPE transactions. It also offers single-item tracking enhancements for two-level lot start and processing, multi-dimensional carrier position configuration and utilization, a multi-container closure feature and three automation inquiry services.

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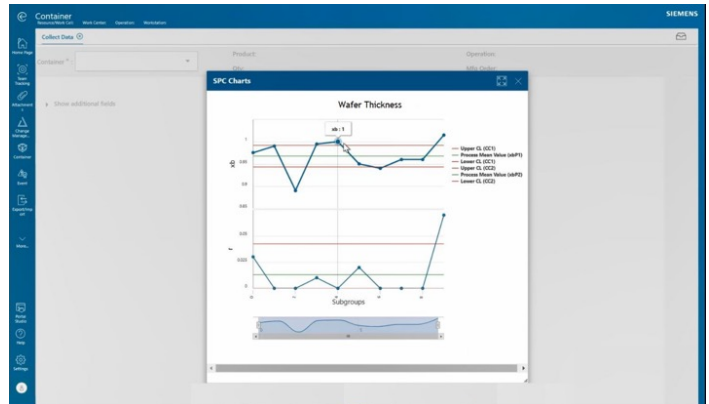
Features

In-line SPC module integration
- Deliver real-time SPC analysis as production and collect quality data with configurable automatic dispositions on failures
- View and interact with real-time charts that provide an immediate SPC analysis of the collected data
- Eliminate third party eServer (Statit) engine with new manufacturing operations management (MOM) common component SPC module
- Support the same available capabilities as previous module with in-line SPC module
- Perform offline analysis via third party CustomQC tool
- Integrate configuration in SPC and basic SPC setup
- Integrate chart parameter override capability into work-in-progress (WIP) data setup and SPC matrices
- Incorporate total functional capability for:
  – WIP main, WIP main advanced and equipment WIP dispatch
  – SPC records
- Seamlessly migrate existing SPC chart configurations to support the new in-line SPC functionality

HPE availability
- Support high-performance transaction creation to support high-volume transactions
- Process large lists of items (for example, list of containers or parent lot with 5000 child lots) in a fraction of the transaction time
- Perform transaction processing with stored procedures on the database

- Deliver 10 OOB HPE framework transactions of most common high-volume transactions that support core and/or semi
  – Use HPE transactions for specific use cases. They may not match their equivalent standard OOB transaction. Reference HPE technical documentation for transactional details
  – Reference HPE fact sheet for additional information
  – Avoid running the HPE framework with the current replication mechanism to the ODS, which will be supported with ETL recommendation

Single-item tracking enhancements

New carrier feature and functionality:

- Configure multi-dimensional carrier positions (2D or 3D) with position availability
- Load and unload child containers into carrier positions, including the ability to change positions with a carrier – new user interface (UI) and transaction
- Create carrier container for tracking and processing purposes
- Track the carrier and the contents of child containers
- Configure carrier loading verifications
- Access by automation layer

Work order dispatching feature:

- Start and schedule semi lots under a two-level lot relationship using HPE
- Maintain relationship between work order and quantity of lot starts
- Use an HPE compound transaction to start and schedule a two-level lot with children lots

Multi-container closure feature:

- Terminate multiple lots simultaneously
- Display child lots with attributes – individual, carrier or parent lots
- Select lots to terminate
- Terminate selected items
- Terminate carrier with additional automation feature

Semi feature enhancements

Three new automation inquiry services:

- Each new service returns the configured instances based on criteria passed to the inquiry service
  - Recipe
  - Tool plan
  - Carrier family

PR fixes

- For the list of PRs addressed, please see the release notes
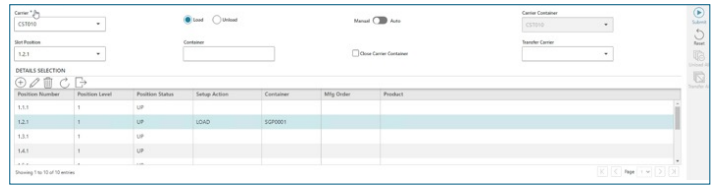

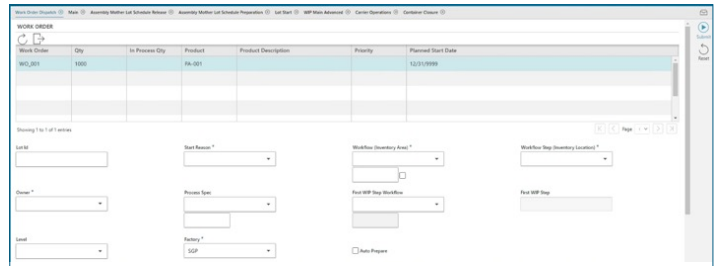Figure 1. New carrier feature and functionality.
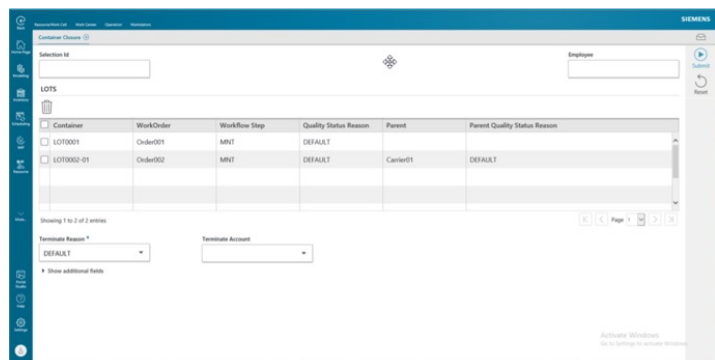

Figure 2. Work order dispatching.

Figure 3. Multi-container closure.

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