Manufacturing Execution Systems Solution

Chroma MES is Your Best Choice!
The trend of modern factory is heading towards automated production as the development goes. A traditional Manufacturing Execution System (MES), which focuses on only gathering data and report analysis, cannot meet the requirements of this fast changing era. The new generation of MES is the core system of automatic factories that not only retains the existing service range but also covers the functions of CIM, EAP, equipment connectivity and integrating robotic arms to meet the objective factory automated control by gaining massive data analysis in real time to improve the product quality and customer satisfaction as well as to reduce the production cost and maximize the benefit of enterprise.

**THE NEW GENERATION OF MES – THE CORE SYSTEM FOR AUTOMATIC FACTORIES**

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**Key Features:**

- **Complete Production Process Trace** (Traceability)
- **Full Production Information Monitoring** (WIP Control)
- **Equipment /PLC Automatic Connectivity**
  - Computer Integrated Manufacturing : CIM
  - Equipment Automation Program: EAP
- **Professional Quality Control System**
  - Statistical Process Control : SPC
  - Corrective Action Report : CAR
  - Out of Control Action Plan : OCAP
- **Manufacturing Equipment Management**
  - Equipment Management System : EMS
  - Overall Equipment Effectiveness : OEE
- **Real-time Report**
  - Yield Rate Report
  - WIP Report

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**Model Sajet MES Series**

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**The New MES**
**SAJET MES – THE BEST CHOICE OF NEW GENERATION MANUFACTURING INFORMATION SYSTEM**

Chroma, not only the professional MES system provider but also the world-class test & measurement equipment and automated production line manufacturer, has abundant technology and experiences in MES and automated equipment integration that can provide you the best manufacturing execution system solution of new generation.

**COMPLETE PRODUCTION PROCESS TRACE - TRACEABILITY**

The manufacturing process information contained in Sajet MES can assist the factory to process work orders, monitor workstations, track and manage inventory as well as to conduct quality inspection and exception conditions management. The precision allows users to find out the lot number, delivery date and quantity of passive components used in a product from the supplier. It can also use the lot number to trace back the shipped products for locations and quantities to reduce the loss caused by defect components. The traceability feature can solve the problems rapidly is the best helper for factory management.
**FULL PRODUCTION INFORMATION MONITORING - WIP CONTROL**

Sajet MES provides flexible routing management that allows users to plan different routes based on the products, control the quantity of yield and defective goods, manage reworked products and calculate the pass-through rate. The complete traceability data collection and production line information are fully controlled by Sajet MES to increase the production efficiency and reduce production costs.

**EQUIPMENT/PLC AUTOMATIC CONNECTIVITY - CIM, EAP**

Besides offering the professional MES solution, Chroma as the world leading manufacturer of test & measurement instruments and system integration is able to combine the R&D resources with the ability of connecting various devices to provide an automated turnkey solution that includes both software and hardware. To cope with the trend of automation for manufacturing factories and to give customers a complete solution, Sajet MES will upgrade continuously to assure sustainable development and service.
PROFESSIONAL QUALITY CONTROL SYSTEM - SPC, CAR, OCAP

Sajet MES is not just a professional factory manufacturing management solution but also has specialized quality control system and on-line SPC control that allow users to check the data collected on-line. It can perform measurements, control chart analysis (ex: CPK, X-R, X-S Chart etc.), defect analysis and exception handling by setting up the channel for error notification via Email to supervisors and sending alerts in voice or chart colors to improve the quality of production as well as reduce the risks.

MANUFACTURING EQUIPMENT MANAGEMENT - EMS, OEE

Sajet MES is capable of collecting the workstation status to give the supervisor and on-site personnel to monitor the workstation status in real time, log its maintenance status and query the information of device, including:
- Device failure analysis,
- Device utilization rate,
- Failure frequency analysis,
- Device maintenance time analysis...etc.

Users can use PCs or display board to manage the processing workstation easily.

REAL-TIME REPORT - YIELD RATE REPORT, WIP REPORT

Sajet MES has powerful MES database technology in the industry that can be online in real time to administer every work item precisely. The report generator developed by Chroma is applicable for complete report query and real time report generation. Various mobile devices like smart phone, PDA and Pad can be used to query the report and get the factory status immediately. It can integrate into BI (Business Intelligence) in the enterprise so that the manager can view the report of production line thoroughly.
SAJET MES – YOUR BEST CHOICE

Experienced Experts
☑ More than a hundred manufacturers are implemented with Sajet MES in the last 9 years, and a 50 percent of them has annual turnover above 50 hundred millions.
☑ Our consultants have 7 years of consulting and engineering experiences in average, that can assure the implementation be done successfully.

Advanced Technology
☑ Partner of Oracle MES Embedded with technical certification and the database technology has been approved for a long time.
☑ Providing a turnkey solution with software and automatic equipment to solve the factory management problem.

Robust Organization
☑ Chroma ATE is a public company located in Taiwan, with branch offices setup in Suzhou and Shenzhen that can provide most convenient service for factory expansion needs.
☑ Capable of providing a total automated information integrated solution to customer by merging the R&D resource of Chroma group and various automatic products support.

Customized Requirement
☑ The system product is developed independently that can support customization service and report generator to maximize the flexibility of customer needs.
☑ Modular application enables the mounting of new modules easily and maintain simply as the action and process can be user-defined.
☑ Multiple data collection methods such as via wireless PDA and wireless barcode reader are applied in the system, also various test instruments and programs can be connected online for system integration.

Easy for Management
☑ Application structured in 3 tiers eases the version upgrade and database management with interface controlling the module and workstation access permission.
☑ The software supports multilingual switch, multi factories management, authority management and shared schema for batch and item management.

LIST OF SYSTEMS AND FUNCTIONAL MODULES

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COMPLETE HARDWARE INTEGRATED SOLUTION SATISFIES VARIOUS NEEDS

Integration of Various Devices
☑ Various test equipment of Chroma
☑ Manufacturing database online control program development and implementation

Optical Scanning
☑ Various handheld 1 & 2 dimension gun type barcode scanner
☑ RFID Reader, fixed barcode scanner system...etc.

Industrial Network Peripherals
☑ Data collector, IPC
☑ TCP/IP, RS232, USB signal converter...etc.

Barcode Printing Device and Sensor Switch
☑ Long/short range optical switching system
☑ Various industrial barcode printer

Display Device Management
☑ Various production efficiency kanban
☑ Factory notice kanban, Pick To Light...etc.

Mobile Application Management Device
☑ PDA, Tablet Computer
☑ Wireless Scanner, wireless Terminal...etc.

Other Electromechanics and Factory Devices
☑ Temperature controller, electronic scale
☑ PLC, connectable device (Scanner)...etc.

Automatic Equipment
☑ Automatic labeling machine, laser engraving machine...etc.
☑ Fully automatic test equipment solution