

MES SERVER SYSTEM

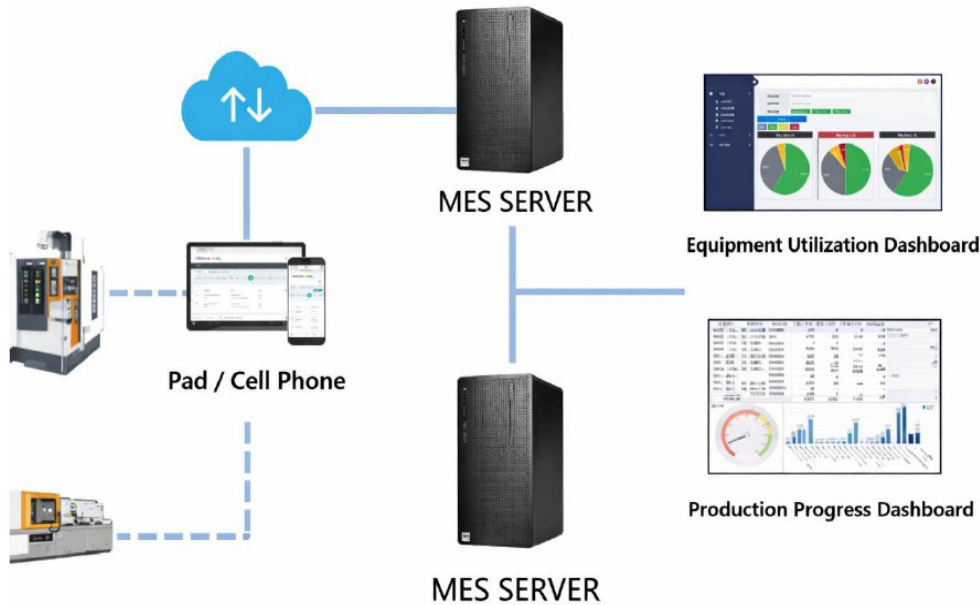


PHOTO: MES Server System
(image for reference only, actual product may differ)

SYSTEM OVERVIEW

The **MES (Manufacturing Execution System) Server** is a centralized smart-factory software and hardware platform designed to manage, monitor, and optimize production-line operations. The system enables integrated control of manufacturing activities by collecting real-time data from automation equipment, IoT sensors, inspection devices, and production resources.

The MES platform supports production monitoring, quality tracking, maintenance management, resource allocation, and performance analysis through a unified interface. It is designed for smart-factory education and industrial training environments, enabling visualization of production processes on a large-format display and providing real-time decision-making support.

The system includes MES application software, database server, OPC server, display hardware, wireless connectivity, and mobile client access. It enables real-time monitoring, process simulation, and data-driven optimization while supporting IoT-based communication and integration with PLC, SCADA, and industrial equipment.

All supplied hardware and software components are brand-new and designed for reliable smart-factory operation and training applications.

TECHNICAL SPECIFICATIONS

Sl.	Item Name	Technical Specifications	Qty
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Note: Specifications are subject to change, Photos shown above are Indicative, Actual Product can Vary.



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No.			
1	MES Display Hardware	Screen size $\geq 59.8''$ (≥ 1520 mm); resolution 3840 \times 2160 (UHD); Clear Motion Rate 240 Hz; UHD definition engine; I/O: audio mini jack, component (Y/Pb/Pr) $\times 1$, composite AV $\times 1$, Ethernet $\times 1$, RS-232C $\times 1$, USB $\times 3$, optical $\times 1$, HDMI $\times 4$; includes wall/ceiling mount hardware.	1 ea
2	MES Application & Database Server	CPU Intel Xeon E3-1270 v6 (3.8 GHz); RAM 16 GB DDR4; storage HDD 2 TB + SSD 250 GB; graphics NVIDIA Quadro P600; LAN 10/100/1000 Mbps; monitor $\geq 22''$ LED; mouse & keyboard included.	1 set
3	Wireless Access Point	IEEE 802.11 ac/n/g/b; dual band 2.4–5 GHz; ≥ 300 Mbps; PoE input; supports SNMP, WDS, WPA2; Android mobile support.	1 ea
4	MES Middleware Software	Real-time data acquisition from IoT sensors, inspection devices, and process equipment; automatic/manual data collection; database storage; RESTful JSON API for data communication and integration.	1 set
5	MES Client Software (C#/.NET)	Real-time process monitoring with alarms; resource allocation monitoring; production history and quality monitoring by date/process/LOT; throughput and defect tracking.	1 set
6	MES Database	Resource allocation and status tracking; process and IoT data collection; WIP tracking and traceability; quality and production history; maintenance records and history.	1 set
7	MES PC Management Client	Resource management and scheduling; job prioritization; detailed production planning; dispatch and batch management; document control; labor and productivity tracking; process and quality monitoring; maintenance tracking; performance analysis.	1 set
8	MES Mobile Client (Android)	Real-time monitoring; alarms; resource tracking; production and quality monitoring by date/process/LOT; mobile-based smart-factory supervision.	1 set
9	OPC Server Software	PLC and HMI (GOT) data integration via OPC client/server; connectivity with MES and SCADA systems for real-time data exchange.	1 set
—	Accessories	All connection accessories; MES PC client & mobile client set; educational source files.	1 lot

RANGE OF EXPERIMENTS

- Smart-factory production monitoring
- MES–PLC–SCADA data integration
- Real-time process data acquisition and analysis
- Production scheduling and dispatching simulation
- Resource allocation and utilization monitoring
- Quality management and defect tracking
- Maintenance and performance analysis
- IoT-based manufacturing optimization
- Mobile-based production monitoring

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MES SERVER SYSTEM

- Database and OPC communication implementation

FEATURES

- Centralized MES platform for smart-factory management
- Real-time monitoring and large-format visualization
- Integrated OPC server for PLC and SCADA connectivity
- Production, quality, and maintenance tracking
- Resource and scheduling management tools
- RESTful API for system integration
- Mobile-based monitoring and alerts
- High-performance server hardware configuration
- Suitable for Industry 4.0 and smart manufacturing education

SERVICES REQUIRED

- Standard AC power supply for display and server
- Network infrastructure for MES and OPC communication
- Installation and configuration of MES software
- Operator training for MES operation and monitoring

➤ **Note: All specifications are subject to revision without notice. Depicted images are for reference only and may not represent the actual product.**

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