STEM Platform

Material Handling

KEY BENEFITS
- Pre-engineered solution designed for education and training programs in advanced manufacturing and robotics.
- Ideal for classrooms, labs and training centers.
- Platform can be used by schools participating in the MERIT certification program.
- Lightweight and fully integrated with a suite of industrial grade academic tools that meet the requirements of secondary educational programs.

COMPOUND

COMPONENT | DESCRIPTION
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Industrial-designed extruded aluminum cart | • Standard 34” width provides easy access through standard 36” doorway
• 6 mm (1/4”) thick composite work top is suitable for mounting class-specific peripheral equipment
• Clear poly-carbonate side panels
• Door safety interlock
• Controller shelf and storage shelf
• Integral, low noise air compressor
• Industrial grade casters with integral brakes
MH5F or MHJF robot | Play speed is limited to 25% for safety.
FS100 robot controller | Configured for 220/240 VAC single-phase power with 110/220 VAC step-up transformer.
Gripper package | Pneumatic and vacuum grippers, control interface.
MotoSim® EG-VRC for Education | Comprehensive software package that provides accurate 3D simulation of robot cells and simulates a fully functional production environment.
Learning Management System (LMS) | Yaskawa Academy on-line curriculum teaching tool for programming and operation provides best-in-class robotics education for industry, integrators, colleges, engineering schools, career/vocational centers and the local workforce to enable students to become proficient in robotics.
Education Software Bundle | Tailored specifically for the teaching/learning environment. Includes robot operating system, motion engine, INFORM programming language and seven software tools (collision detection, Ethernet FTP, multi-tasking, macro function, job interrupt, relative job, bilingual display for English plus choice of French or Spanish).
I/O Software Bundle | For Ladder and HMI programming. The FS100 Ladder Editor is a pendant-based graphical ladder rung software that allows the user to create I/O routines that run in parallel to the robot INFORM programming. The interface panel function allows the user to create up to ten HMI panels on the pendant for control; each panel features up to 32 buttons, switches, counters or status indicators.
Instructor Kit | Software and hardware teaching aids. Includes offline programming and online operator’s curriculum, I/O control box, teach pointer, TCP tool, block nest and set of ten blocks.

FACILITY REQUIREMENTS
Electrical: 220/240 or 110/120 single phase, 1 kVA
Air: maximum consumption 2 CFM @ 60-90 psi

Components provided by Yaskawa Motoman Education Consortium

YMEC

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Cognex

Schunk

Schmalz

QC Industries
OPTIONS

Extensions allow best use of MHSF and MHJ work envelopes. Extensions can be easily removed to transport through 36” doorway.

Vision kit – Cognex In-Sight® Micro camera and Yaskawa Motoman’s Pendant Vision application software. View images and receive information about camera status. Integrates communication directly into the robot programming language.

Conveyor kit – Free-standing conveyor, end-of-travel sensor and control interface.

Air compressor kit – Rated to provide compressed air for standard gripper package. Included if purchased as a cell assembly.