YASKAWA

MLX300 Software Option

Robot and PLC Integration

Key Benefits

Program in PLC environment, knowledge of robot programming language is not required
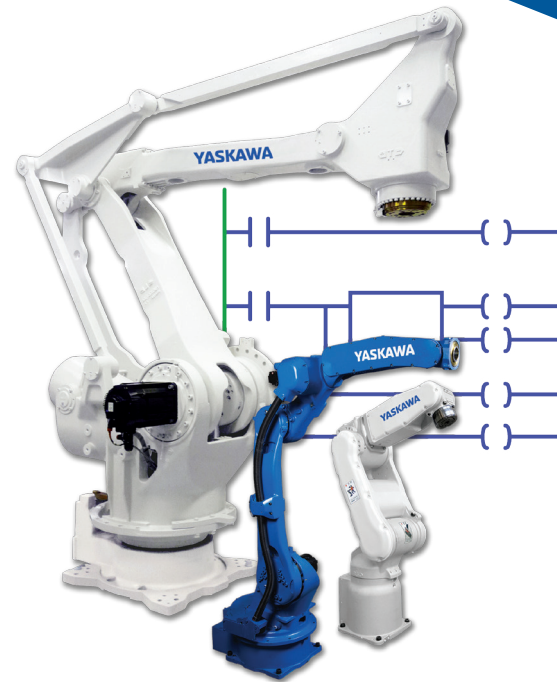
Single programming language for entire system

Easy to use library of function blocks and sample programs

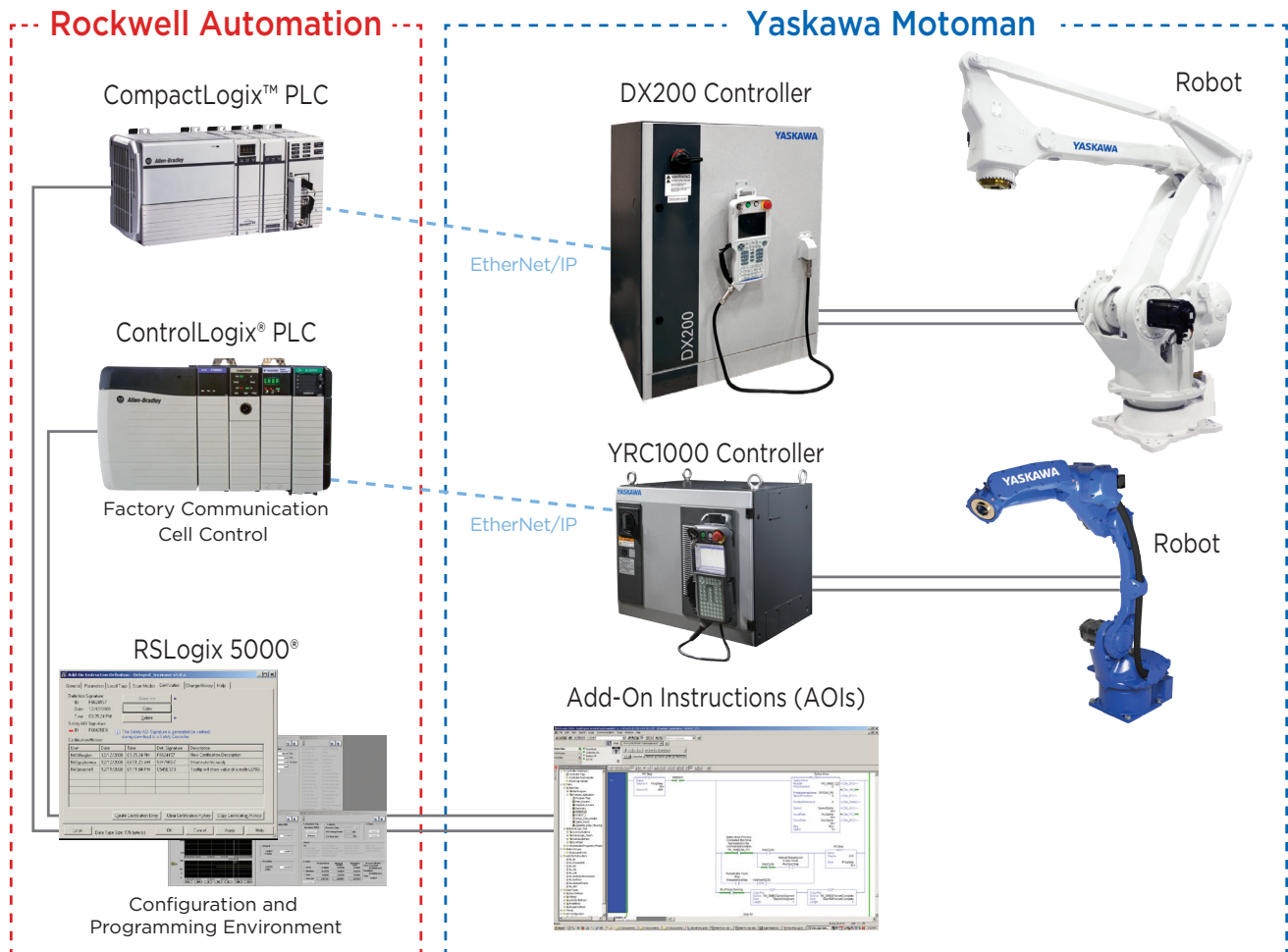World-class Functional Safety Unit available

Compatibility

YRC1000 GP-series robots

DX200 material handing robots

- Next generation of integration for robots and Programmable Logic Controllers (PLCs).

- Enables operator to control and program Yaskawa Motoman robots in a standard PLC programming environment; knowledge of specialized robotic programming language is not required.

- All program execution performed by the PLC. Supported PLCs include:
  - CompactLogix™
  - ControlLogix®
  - GuardLogix®

- Motion control is executed through the superior kinematic algorithms of the robot controller.

- Combination of up to four robots and positioners can be connected to a single MLX300 system.

- Simplifies system design and environment due to reduced I/O boards, hardware and networking requirements.

- Simplified safety design eliminates redundant electrical interfaces and consolidates hardware to optimize floorspace.

- Familiarity of controls among maintenance technicians enables faster troubleshooting.

- Robust set of Add-on Instructions (AOIs) and HMI screens that are specific to robot configuration and motion control.

- All peripheral devices - including sensors, cameras and conveyors - are connected through the PLC.

- MotoSim® EG-VRC can be used to create offline simulations to verify robot reach and evaluate cycle times.

- The robot workcell can be redeployed in a non-PLC mode.

Rockwell Automation

CompactLogix™ PLC

ControlLogix® PLC

Factory Communication
Cell Control

RSLogix 5000®

Configuration and
Programming Environment

Yaskawa Motoman

DX200 Controller

Robot

EtherNet/IP

YRC1000 Controller

Robot

EtherNet/IP

Add-On Instructions (AOIs)

The MLX300 system components include PLC and HMI software, an Add-On Instruction set and interface hardware for use with optional pendants or a PanelView™ display.

Comprehensive Set of PLC Function Blocks

- Motion instructions
  - Linear, Joint and Incremental
  - Jogging

- System commands
  - Enable, Abort, Hold, etc.
  - Error handling
  - I/O handling

- Robot configurations
  - Tools, userframes
  - Interference zones
  - Absolute data (home positions)

Specifications

- Compatibility
  - All YRC1000 GP-series robot models
  - All DX200 material handling robot models

- A combination of up to four non-coordinated robots and positioners can be supported by a single MLX300 system (e.g. 3 robots, 1 positioner)

- The number of motions, userframes or tools is limited only by PLC memory

- Functional Safety Unit (FSU) is available as an option

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