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Specifications and appearance are subject to change without prior notice.

Yamaha’s new universal robot control system offers speedy, efficient, and low cost construction of fully automated manufacturing lines.

Advanced Robotics Automation Platform

Space saving inside control panel by YHX controller

Comparison of the number of electrical wiring in a control panel a 16-axis configuration as shown below (Excluding robot cables).

Current system

Universal Controller YHX system

The LCM-X slider can be controlled by the same commands for other robots. The control is flexible so that all sliders move in the same manner or any particular slider actuates differently from others, for instance.

The built-in PLC can unified-control the status and motion of all robots and peripheral devices. Using these collective pieces of information enable to easily configure a system for monitoring and commanding at anytime from a host system.

Cuts down the space required in a control panel by up to 65%
Yamaha’s own unique universal robot control concept offers
Total Optimization in your production line.
Integrating robots, integrating peripheral devices and integrating operations

Helps building automated production line efficiently at lower cost in a short period of time. YAMAHA’s Advanced Robotics Automation Platform in the product lineup is a good match with IoT. Fully renewed Yamaha robot line up for automated processes such as transport, handling, assembly, and image recognition.

Yamaha is proud to offer this new product lineup providing solutions to the challenges in today’s manufacturing scenes, and dramatically accelerate automated production to maximize your return of investment.

**PRODUCTS**

**Universal Controller**

**YKX series**

Superb expandability, compact design, and reduction in component and setup time.

YAMAHA’s Advanced Robotics Automation Platform offers coordinated motions and synchronized control of all robots, and peripheral devices in the system.

**Industry first stacking modular unit**

The stacking module structure including motor drive and a motor drive power supply dramatically reduces the number of electrical wiring. Stacking all control power supply, motor drive power supply, high-speed network communications, and safety circuits eliminates electrical wiring between units while reducing the costs and man-hours for electrical installation to 30% to 50% of those for previous models.

Integrating PLC complying with international standards, All set for IoT compatibility

Integrating a high performance, high speed general purpose PLC and capable of handling 5 languages that comply with IEC61131-3, the Universal Controller can control entire automated units and devices including robots and peripheral devices. Besides, it has a flexibility and expandability to further become compatible with IoT and Industry4.0.

**Accuracy**

Accuracy is about two times better than the previous. This highly accurate positioning accuracy repeatability improves yield, too. In addition, the unit is quieter with a longer service life.

**Rich lineup**

<table>
<thead>
<tr>
<th>Type</th>
<th>Model</th>
<th>Variation</th>
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<tbody>
<tr>
<td>6</td>
<td>69</td>
<td>180</td>
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Made to the clean specification in a standard industry

Accuracy to C5

**Linear conveyor module**

**LCM-X**

Transition from “passive flow” to “active movement”.
Increasing competitive edge in manufacturing from optimum performance.

High speed and high accuracy transport capability of the linear conveyor module LCM-X significantly improves the productivity. Tasks directly on the slider and bi-directional motion of the slider are few of LCM-X’s features that boost the work efficiency.

The bridge pier structure enables speedy setup.

The connection units allow highly accurate mechanical connection of the modules. All you have to do is tighten the bolts. The mechanical connection also completes the electrical connection at the same time without additional connection cables. Considerably easy setup saves you a lot of time.

**Accuracy**

Linear structure motor equipped directly with reduction gear

Hollow structure motor

Reduction gear (harmonic drive)

**Standard cycle time**

0.28s

**Robot camera**

**YFAEYE**

A single robot camera manages a series of processes from capturing photographs to image processing.

Special knowledge on image processing is not required. Camera automatically sets up appropriate parameters that would require skilled personnel. Extremely user friendly camera makes image processing far easier than anyone could imagine.

Compatible with a variety of image processing tasks

**Inspection for presence/absence**

**Position detection**

**Character code identification**

**Measurement**

**Color identification**

**Universal Controller**

**YKX series**

High speed, high accuracy, and high rigidity leading industry

Direct drive (no belt) design and reinforced drive mechanism enabled industry’s shortest cycle time.

**Positioning**

Accurate to C5

**Acceleration**

5G

**Stop position repeatability**

±5 μm

**Span between sliders**

210 mm

**Low profile**

n=85 mm

**Robot camera**

**YFAEYE**

High performance

Achieves high speed processing at high frame rate

5 million pixels

70 fps (static)

105 fps (moving)

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