

# Seamless Integration

Free Custom Yamaha Add-On Instructions For Allen-Bradley PLCs



- *Seamless integration using custom Yamaha AOIs*
- *Simple drag and drop ladder programming with Allen Bradley RS Logix 5000*
- *Teach and replay points in a Yamaha robot using your own HMI*



*No CIP motion required!*

# Seamless Integration

Free Custom Yamaha Add-On Instructions For Allen-Bradley PLCs



Compact Logix  
or Control Logix



**EtherNet/IP™**

## Ladder Logic Integration

- Seamless integration using custom Yamaha AOIs
- Simple drag and drop ladder programming with Allen Bradley RS Logix 5000
- Teach and replay points in a Yamaha robot using your own HMI
- Control Yamaha robots with RS Logix 5000 - no new training necessary
- Yamaha AOIs are exclusive to Allen Bradley 5000 series PLCs
- Tag-based AOI instructions directly move SCARA robots with Cartesian inputs
- Extensive library of 48 AOI function blocks available for the RCX family

The screenshot shows the RS Logix 5000 software interface. On the left is the Controller Organizer tree with folders for Motion Groups, Add-On Instructions, Data Types, and User-Defined. A custom AOI instruction, 'RCX MOVE mm', is highlighted. The main workspace shows a ladder logic network with an 'RCX MOVE mm' instruction block. A mouse cursor is shown dragging the instruction from the library to the ladder logic.

**RCX MOVE mm**

YamMOVEmm	YK250_MOVEP_mm	(EN)
XAxis1_mm	XAxis_mm	(DN)
	-154.25	
YAxis2_mm	YAxis_mm	(ER)
	354.87	
ZAxis3_mm	ZAxis_mm	(IP)
	36.75	
RAxis4_mm	RAxis_deg	
	90.0	
SpeedPercent	Speedmm	
	50	
map_RobotInput	YK250_I.Data	
map_RobotOutput	YK250_O.Data	
ErrorCode	16#0000	

**Drag and drop AOI!**

*Move robots with direct millimeter commands*

The screenshot shows a 'TS MOVE ABS' instruction block. The 'Distance' parameter is set to 0.0 mm. Below the block, a diagram of a robot arm is shown with a callout indicating '0.00 mm'.

**TS MOVE ABS**

YamTSMoveABS	TSS_MOVE1	(EN)
StoragePointNumber	Point	(DN)
	1	
Distancemm	Distance	(ER)
	0.0	
SpeedPercent	Speed	(IP)
	100	
AccelPercent	Accel	
	100	
DecelPercent	Decel	
	100	
map_RobotInput	TSS:I.Data	
map_RobotOutput	TSS:O.Data	
ErrorCode	16#0000	

0.00 mm

The screenshot shows a 'TS MOVE ABS' instruction block. The 'Distance' parameter is set to 75.5 mm. Below the block, a diagram of a robot arm is shown with a callout indicating '75.5 mm'.

**TS MOVE ABS**

YamTSMoveABS	TSS_MOVE1	(EN)
StoragePointNumber	Point	(DN)
	1	
Distancemm	Distance	(ER)
	75.5	
SpeedPercent	Speed	(IP)
	100	
AccelPercent	Accel	
	100	
DecelPercent	Decel	
	100	
map_RobotInput	TSS:I.Data	
map_RobotOutput	TSS:O.Data	
ErrorCode	16#0000	

75.5 mm

# Controllers and Robots



RCX240



TS-P



TS-X



TS-S2

Scara		Pick-n-Place	
Cartesian		360° Orbit Robot	

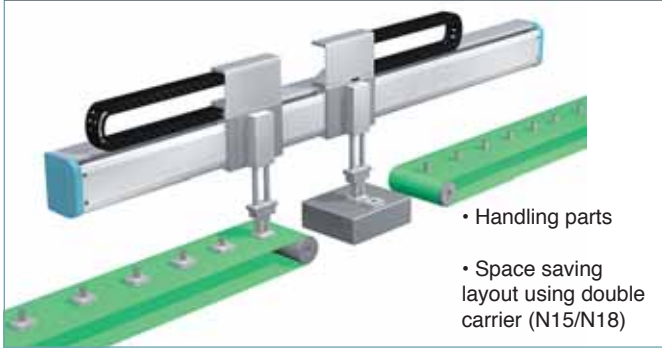
Phaser Linear Motor		Flip-X Ball Screw	
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SR-SRD Rod Type		RF Rotary	
SS Slide Type		BD Miniature Belt Drive	

STH Miniature Slide Type	
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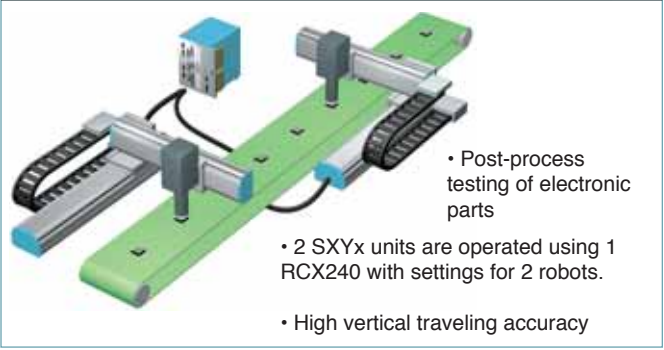


## CARRY AND TRANSFER EQUIPMENT



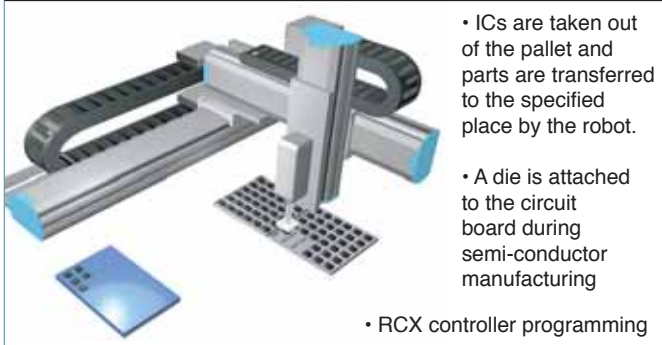
- Handling parts
- Space saving layout using double carrier (N15/N18)

## TESTER (2 cartesian robots controlled simultaneously)



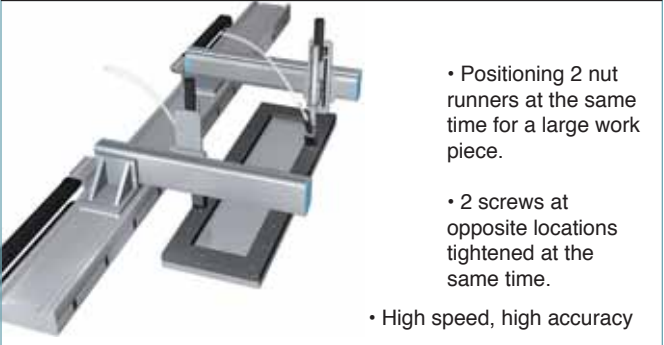
- Post-process testing of electronic parts
- 2 SXYx units are operated using 1 RCX240 with settings for 2 robots.
- High vertical traveling accuracy

## IC PALLETIZING WITHIN THE UNIT



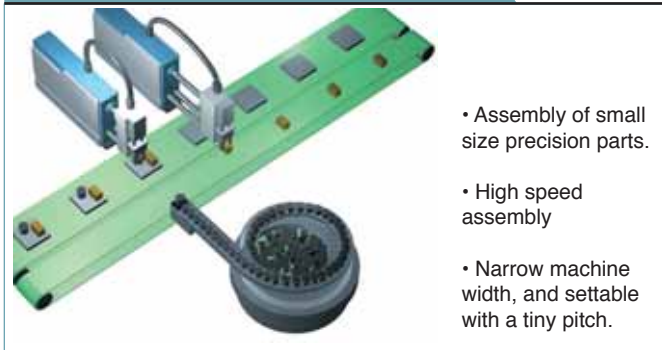
- ICs are taken out of the pallet and parts are transferred to the specified place by the robot.
- A die is attached to the circuit board during semi-conductor manufacturing
- RCX controller programming

## HIGH SPEED SCREW TIGHTENING



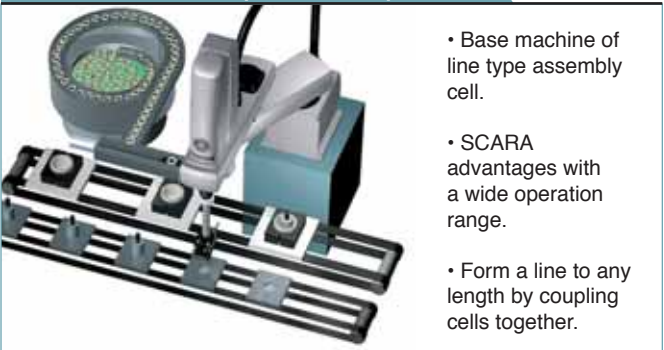
- Positioning 2 nut runners at the same time for a large work piece.
- 2 screws at opposite locations tightened at the same time.
- High speed, high accuracy

## PRECISION PART ASSEMBLER



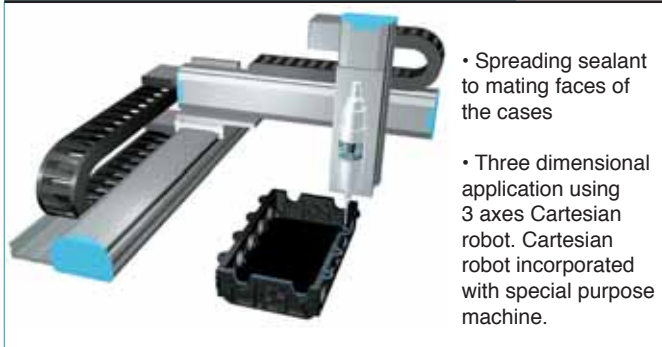
- Assembly of small size precision parts.
- High speed assembly
- Narrow machine width, and settable with a tiny pitch.

## ASSEMBLY CELL (LINE CELL)



- Base machine of line type assembly cell.
- SCARA advantages with a wide operation range.
- Form a line to any length by coupling cells together.

## SEALING



- Spreading sealant to mating faces of the cases
- Three dimensional application using 3 axes Cartesian robot. Cartesian robot incorporated with special purpose machine.



# YAMAHA

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