YAMAHA
Revs your Heart
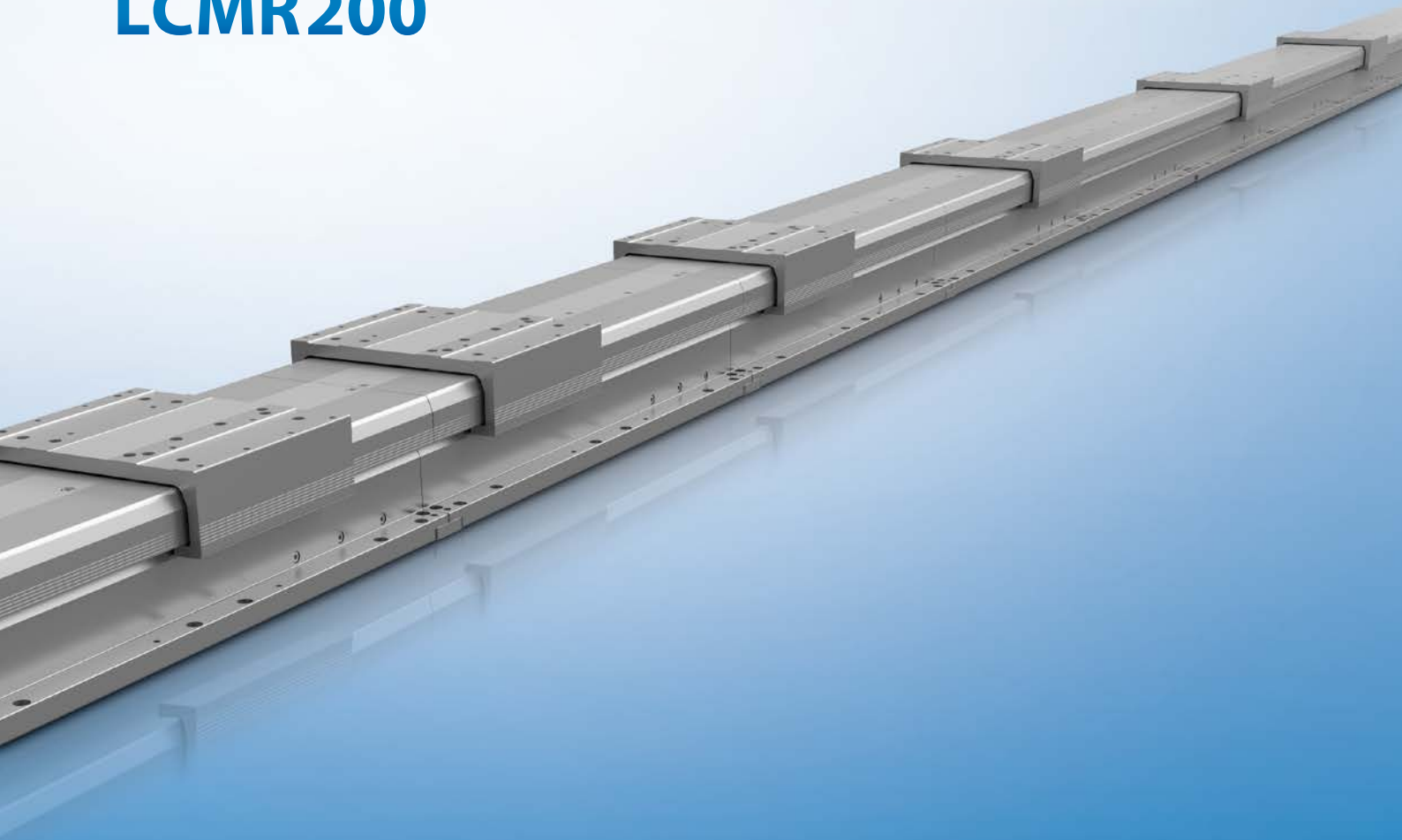
Efficiency of time and space in production

Linear Conveyor Module
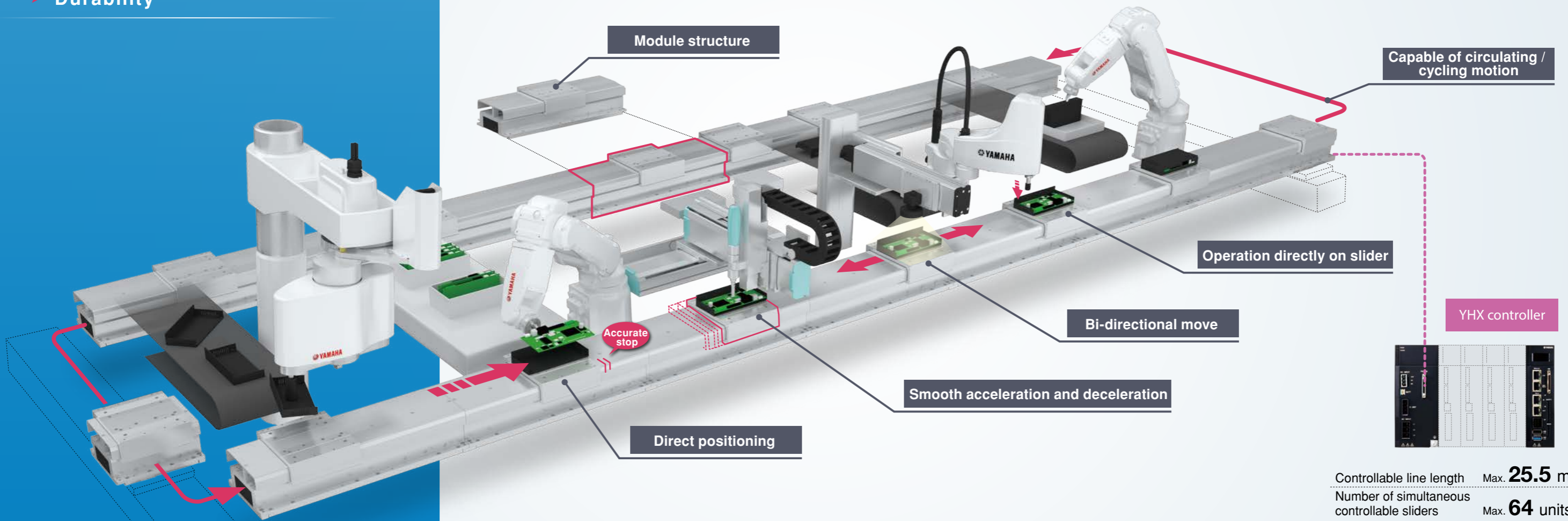## LCMR200

Yamaha's answer to Next Generation of Production Line design

- ➤ **Reduction of Tact Time in transportation**
- ➤ **Flexibility in line design**
- ➤ **Easy maintenance**
- ➤ **Low operation cost**
- ➤ **Improved Productivity**
- ➤ **Reduces line design time**
- ➤ **Space saving design**
- ➤ **Durability**

Adding productivity to transportation process

Convert transfer process into "value-added" assembly process

Improve productivity.

Reduce transport time.

Production line using **LCMR200**

Cost reduction

Save space.

Module structure

Capable of circulating / cycling motion

Operation directly on slider

YHX controller

Bi-directional move

Accurate stop

Smooth acceleration and deceleration

Direct positioning

Controllable line length   Max. **25.5** m *

Number of simultaneous controllable sliders   Max. **64** units *

*It may differ depending on the system configuration.

New

LCMR200
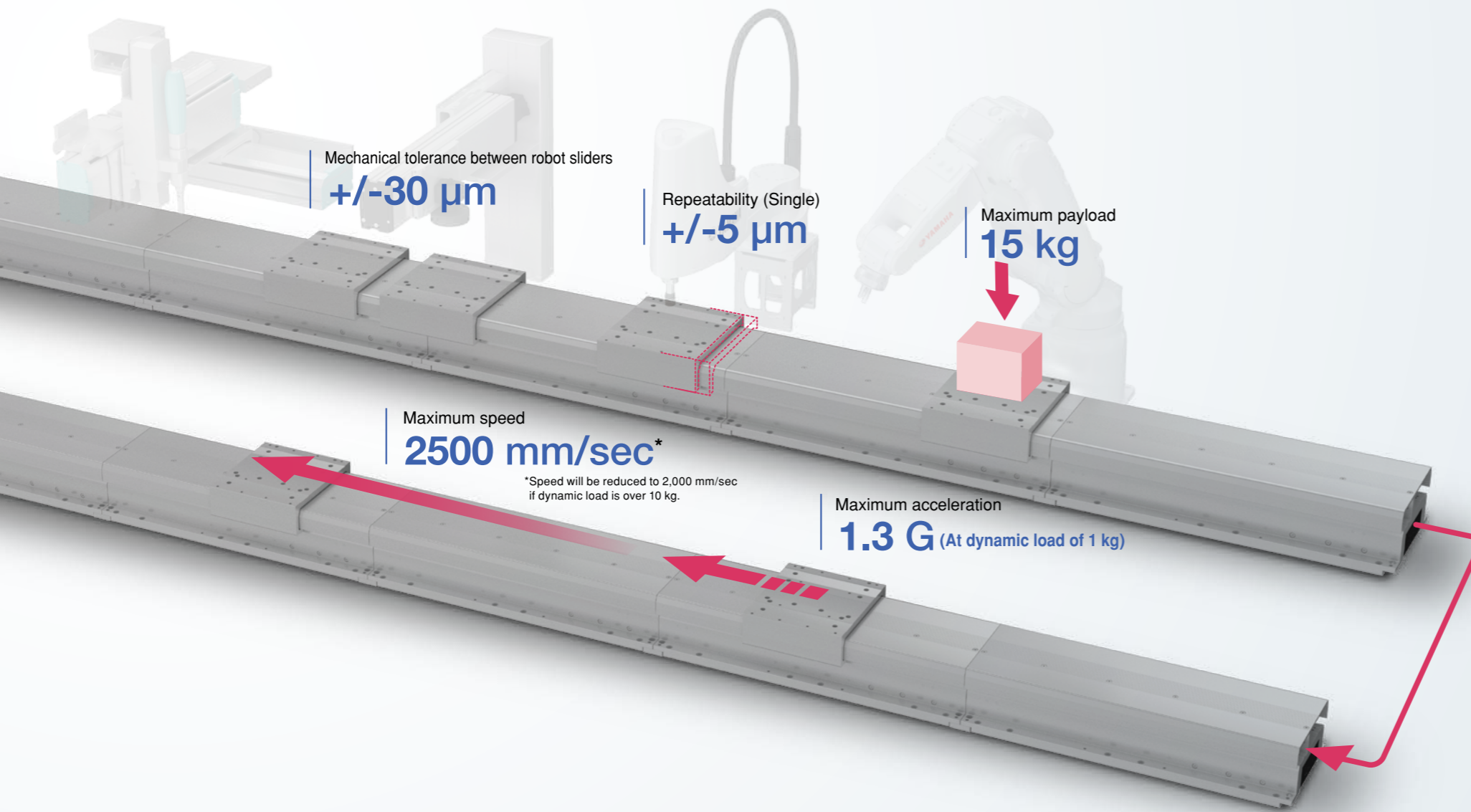## Linear Conveyor Module

Able to perform narrow pitch and high speed transport.
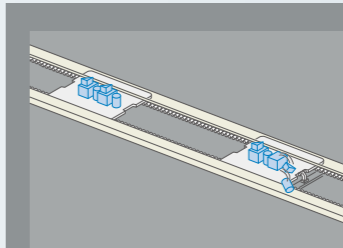
Individual ID recognition.

Complete absolute position system. No origin process needed.

Built-in driver and reduced wiring.

Advanced linear conveyor module with high speed transport.

Mechanical tolerance between robot sliders
+/-30 µm

Repeatability (Single)
+/-5 µm

Maximum payload
15 kg

Maximum speed
2500 mm/sec*
*Speed will be reduced to 2,000 mm/sec if dynamic load is over 10 kg.

Maximum acceleration
1.3 G (At dynamic load of 1 kg)

From ordinary "passive flow" to "active position transport".

By converting conveyor flow into active production process improves profitability.

LCMR200 vs Conventional Conveyor System

Conventional type conveyors
- Mechanical stoppers or sensors are required at each stop position.
- Complicated control due to various conveyor components.
- Stopper adjustments are required each time the stop position is changed.
- Fixed productivity rate.
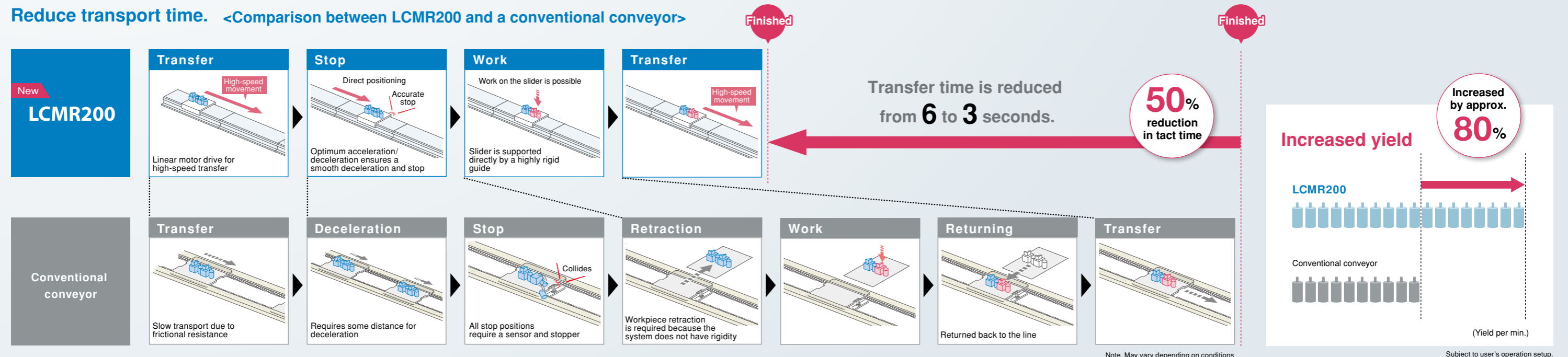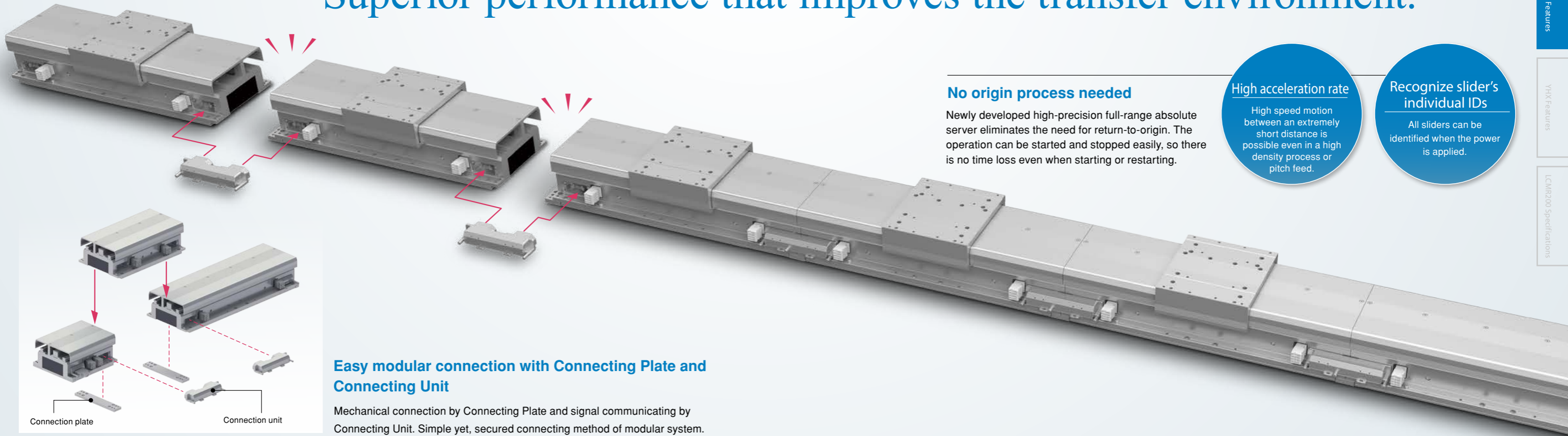- Various adjustments required
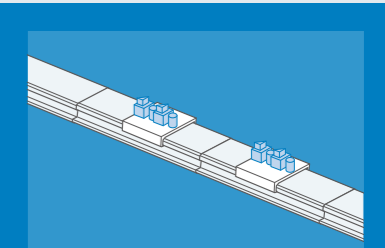
New LCMR200
- Direct driving of the slider.
- Stop positions are controlled with position data in program.
- No mechanical stoppers or external sensors required.
- Maximum speed of 2.5 m/sec for better transfer time.
- Adjustable transfer speed for total line flow coordination.
- Actual task times can be easily monitored.

	Conventional type conveyors	LCMR200
Speed control	△ Same speed required on entire conveyor	◎ Able to specify the speed and acceleration speed individually.
Operation control	✕ One (fixed) direction	◎ Bi-directional and distance can be set individually for each carriage
Travel / Stops	✕ Physical impact at mechanical stop	◎ Smooth servo-controlled acceleration, deceleration, and incremental move
Number of system components	✕ Stopper or sensor required at each stop position	◎ No mechanical components required for stop position
Accuracy	△ Additional support is required to increase accuracy	◎ Mechanical tolerance between sliders (between total sliders) +/- 30 µm
Rigidity	△ Additional support is required to ensure rigidity	○ Assembly work can be performed directly on carriage supported by high-rigidity guides
Line flow changes	✕ Requires stopper adjustments at each line flow change	◎ Simple modification of line layout by modular design. Stop position can be changed in program
Footprint	△ Certain space is required	◎ Space saving design

Reduce transport time. <Comparison between LCMR200 and a conventional conveyor>

New LCMR200

Transfer	Stop	Work	Transfer
High-speed movement	Direct positioning / Accurate stop	Work on the slider is possible	High-speed movement
Linear motor drive for high-speed transfer	Optimum acceleration/deceleration ensures a smooth deceleration and stop	Slider is supported directly by a highly rigid guide	

Finished

Transfer time is reduced from **6** to **3** seconds.

50% reduction in tact time

Conventional conveyor

Transfer	Deceleration	Stop	Retraction	Work	Returning	Transfer
Slow transport due to frictional resistance	Requires some distance for deceleration	All stop positions require a sensor and stopper	Workpiece retraction is required because the system does not have rigidity		Returned back to the line	

Collides

Finished

Note. May vary depending on conditions

Increased yield

Increased by approx. 80%

LCMR200

Conventional conveyor

(Yield per min.)

Subject to user's operation setup.

Superior performance that improves the transfer environment.

No origin process needed

Newly developed high-precision full-range absolute server eliminates the need for return-to-origin. The operation can be started and stopped easily, so there is no time loss even when starting or restarting.

High acceleration rate

High speed motion between an extremely short distance is possible even in a high density process or pitch feed.

Recognize slider's individual IDs

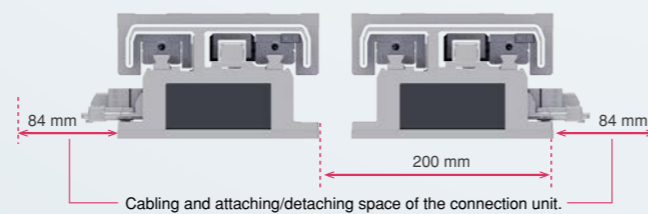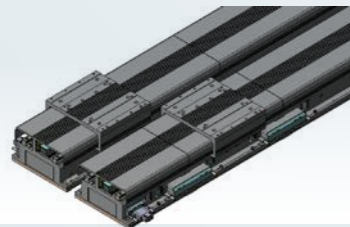All sliders can be identified when the power is applied.

Easy modular connection with Connecting Plate and Connecting Unit

Mechanical connection by Connecting Plate and signal communicating by Connecting Unit. Simple yet, secured connecting method of modular system.
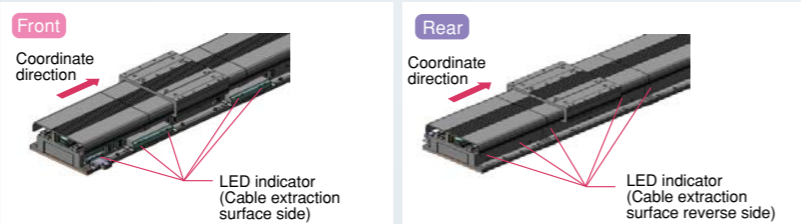
Connection plate   Connection unit

Saves space through proximity installation of forward and returning modules

<Cable extraction direction can be selected Front Rear >

84 mm   84 mm

200 mm

Cabling and attaching/detaching space of the connection unit.

The cable extraction direction of a module can be selected. When installing on a device, it increases the flexibility of electrical wiring layout. Especially in the horizontal circulation layout, by making the cable extraction direction reverse in the forward and returning modules, the modules can be positioned as close as 200 mm apart at most, and therefore, cycle time reduction is possible at circulation and installation space can be reduced. The LED indicator that shows the module state can be visually checked from both front and rear side of the module.

Front
Coordinate direction

LED indicator
(Cable extraction surface side)

Rear
Coordinate direction

LED indicator
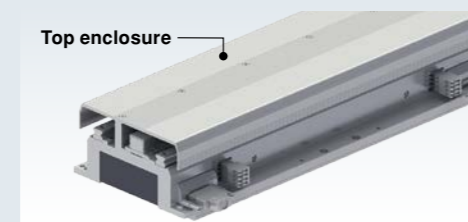(Cable extraction surface reverse side)

All the sliders can be operated / programmed independently.

Speed and acceleration can be programmed by each move. All carriages can be controller individually.
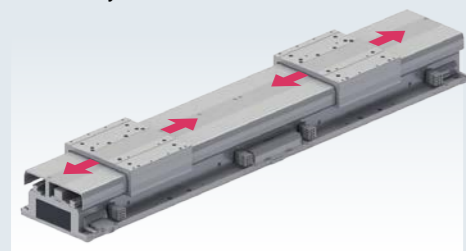
Top enclosure design for protection.

Top enclosure was designed to protect internal mechanism from any fallen object during line setup process.

Top enclosure

Mechanical tolerance between sliders +/-30 μm (Dowel hole standard)

Due to tis machined accuracy, each carriage has own tolerance at one stopping point, however, LCMR200 can limit the slide machine difference to +/-30 μm, and is suitable for high precision process. As RFID, etc. is not necessary, cost reduction is possible.
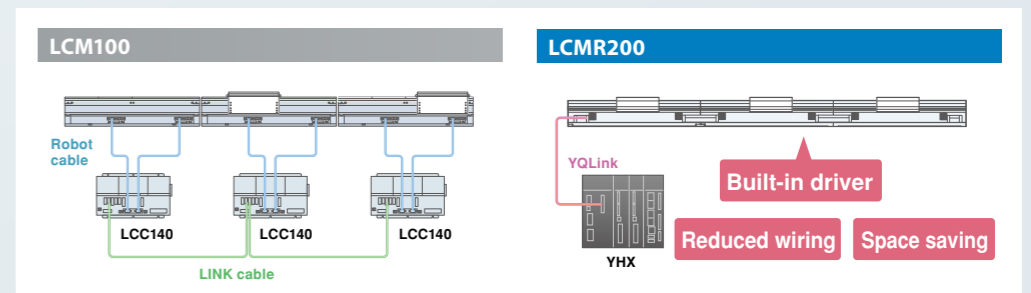
Low profile structure

By adopting a newly developed linear motor, the module height is approx. 30 % down compared to LCM100. The space under the frame can be effectively utilized.

LCM100

LCMR200

101

155

136.5

About 30% reduction

175

109

175
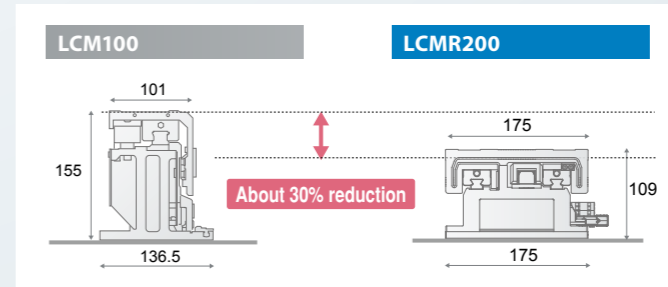
Built-in driver saves electrical wiring

Motor driver is incorporated inside module and entire LCMR200 is controlled by YHX controller through YQLink cable. It also contributes to space saving inside the control panel.

LCM100

Robot cable

LCC140   LCC140   LCC140

LINK cable

LCMR200

YQLink

Built-in driver

Reduced wiring   Space saving

YHX

Concentrated control by the YHX controller

Including the operation environment, all sliders and single-axis robots on the transfer process can be controlled.

Simple control with the standard profile

According to the commands from the host PLC, it adopts a simple control method that operates the sliders and single-axis robots as positioners <See Page 12 for detail>.

Versatile and value added transport between work process.

Reduce transport time.

Improve productivity.

Cost reduction

Save space.

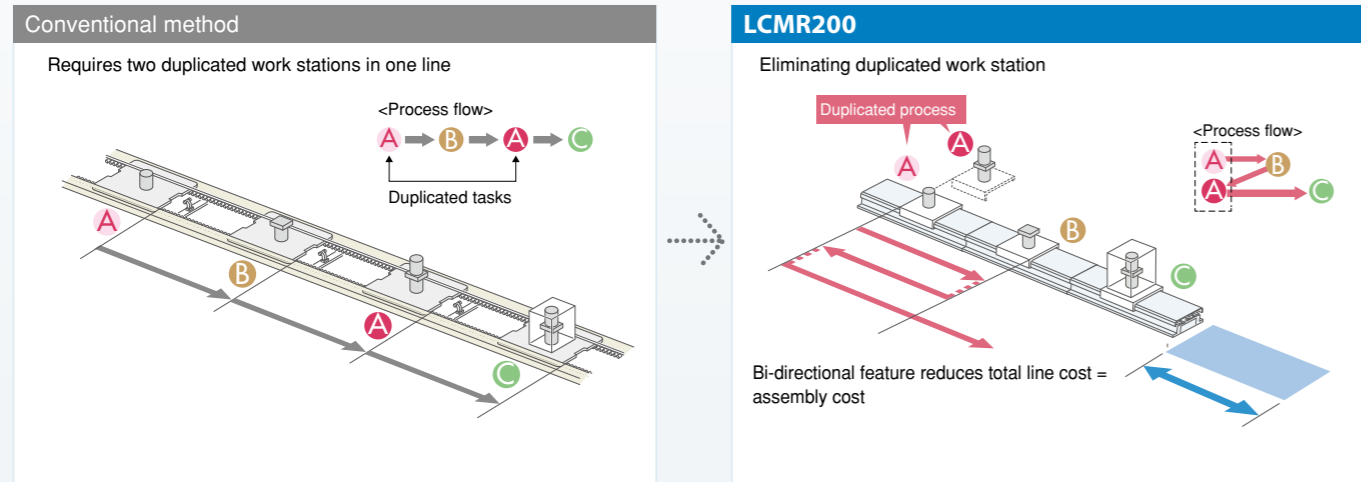**Improve cycle time and reduce line floor space.**

Increase productivity and cost performance.

Process sharing

Direct drive · Slider backward travel · $↓ ·

- Carriage is bi-directional and one work station can perform more than one task. Saving total line cost and floor space.
- High speed bi-directional move and simultaneous independent operation of multiple carriages.

Conventional method

Requires two duplicated work stations in one line

<Process flow>

A ⇒ B ⇒ A ⇒ C

Duplicated tasks

LCMR200

Eliminating duplicated work station

Duplicated process

<Process flow>

A
A ⇒ B
A ⇒ C

Bi-directional feature reduces total line cost = assembly cost

## Variable speed control between work stations.

Direct drive · Narrow pitch operation

- Servo controlled direct drive eliminates mechanical stoppers and position sensors.
- Simple position setting by entering point data in a program.
- Flexibility in setup for production lot change
- Saving flow time by narrow pitch incremental move and high speed move.

LCMR200

Narrow pitch movement

High-speed movement

Narrow pitch movement
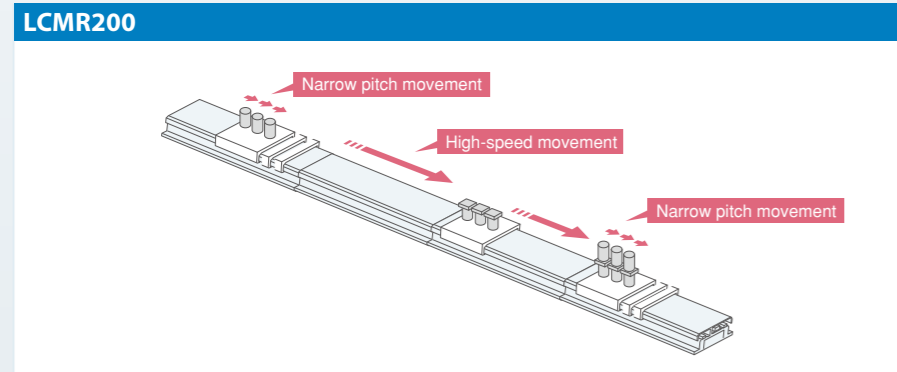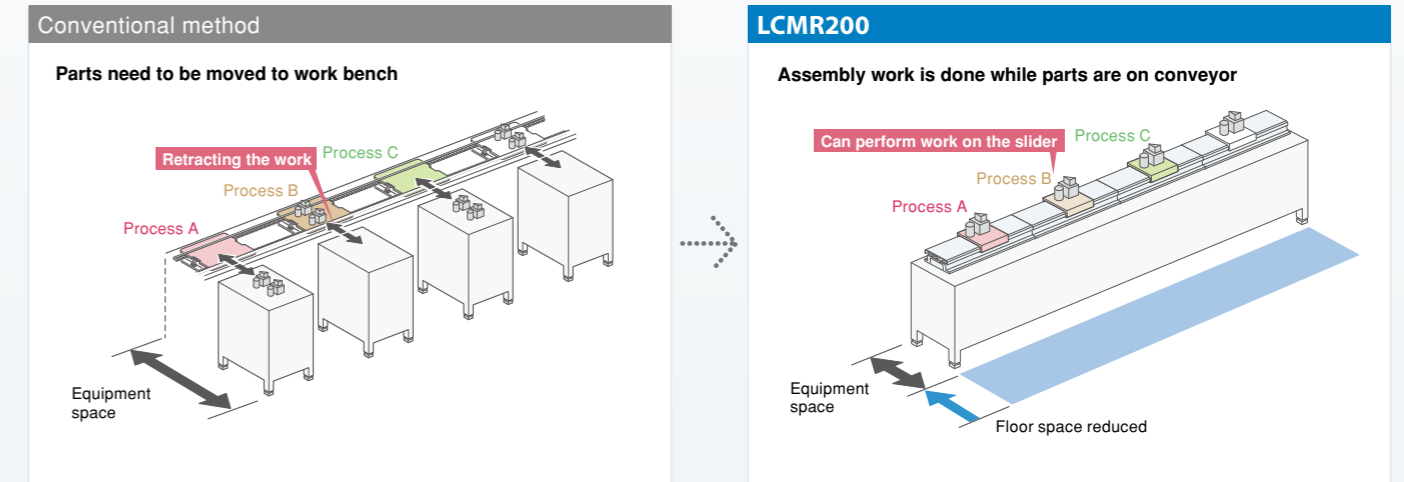
Easily serviceability = Easy troubleshooting

- Covered structure of module keeps internal mechanism free from foreign objects
- The environment-resistant magnetic sensor is resilient to contamination.
- Easy positioning with no precision setting.
- Non-contact motor and linear scale design eliminates mechanical wearing
- Low particle generation (only mechanical contact is guide rail)

- Standardized components reduce spare parts SKU.
- Parts can be replaced easily.
- Operation can be restored just by replacing the slider or linear module, and the manufacturing line down time can be kept to a minimum.
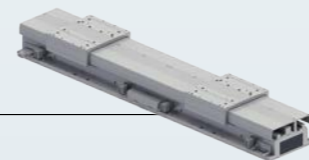
Assembly can be done while parts are on conveyor

Highly rigid guide

- The highly rigid guide enables assembly and processing on the transport line.
- No need to reposition parts to/from conveyor. Floor line space is reduced substantially.

Conventional method

Parts need to be moved to work bench

Retracting the work

Process C

Process B

Process A

Equipment space

LCMR200

Assembly work is done while parts are on conveyor

Can perform work on the slider

Process C

Process B

Process A

Equipment space

Floor space reduced

Sleek and simple configuration. Simplified line design process with flexibility and efficiency by modular concept.

All carriages and peripheral linear robots can be controlled by PLC through one YHX controller.

- Layout example with a combination of the module and circulation unit.

Horizontal circulation example

Circulation mechanism
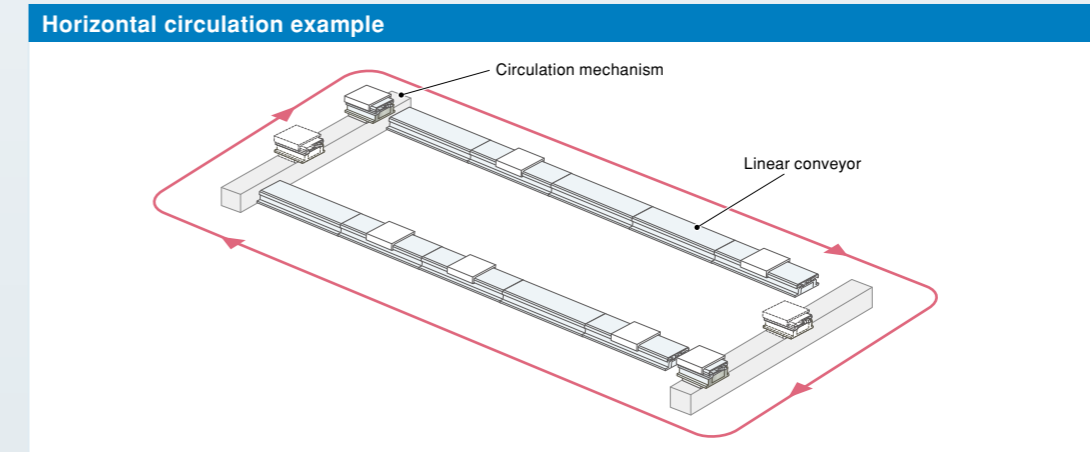
Linear conveyor

Linear conveyor module "LCMR200" can be controlled via YHX controller from the host PLC.

YHX controller

Reduces production line configuration time

Stacking modular structure

No wiring between modules needed.

Incorporation a control power supply, motor drive power supply, high speed network communication, safety circuit into a stacking modular structure.
Eliminates wiring between units, reducing conventional wiring cost and wiring man-hour to 30% to 50%.
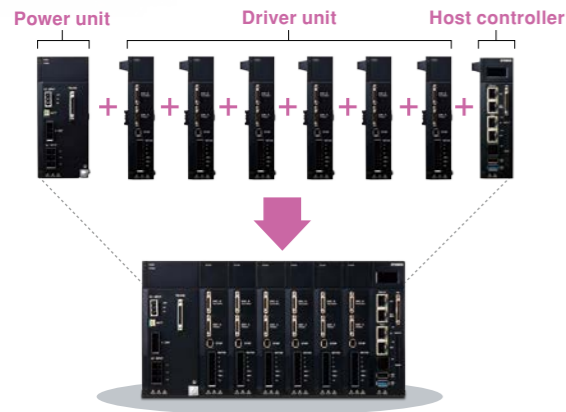The stacking structure including host, power and driver is the very first in the industry.
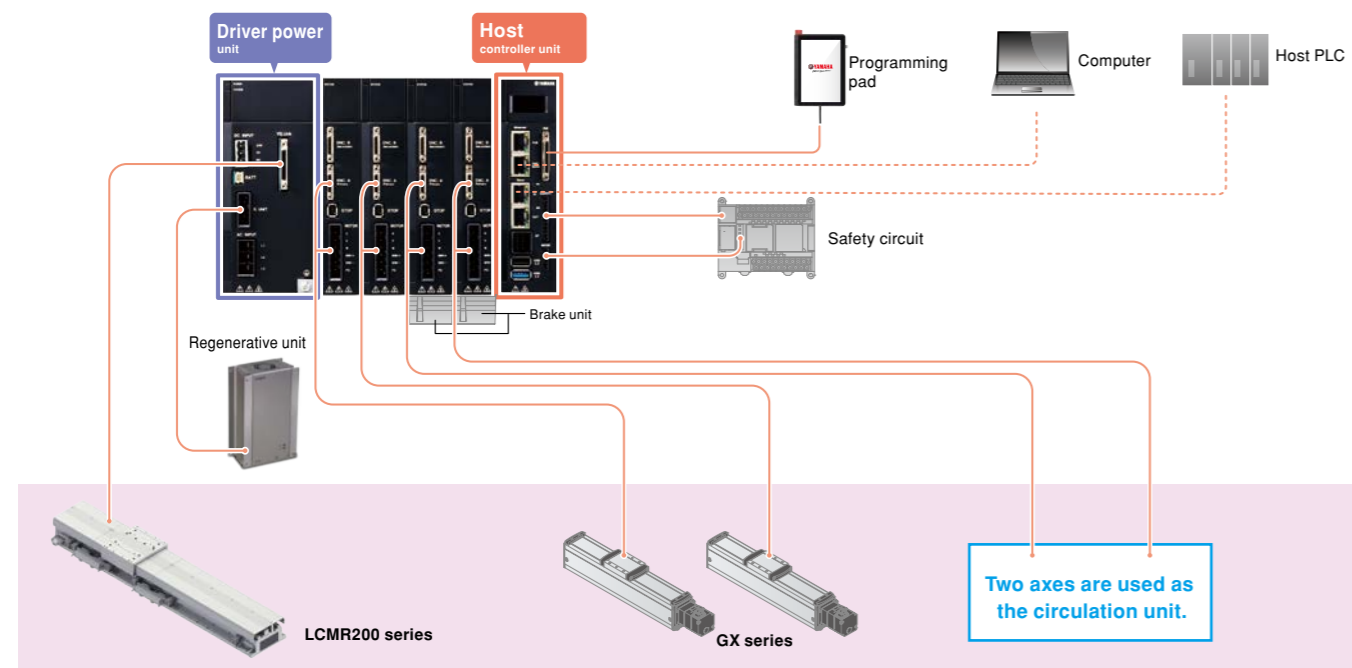
Power unit   Driver unit   Host controller

+ + + + + + + +

Typical photo image of stacking structure

Driver unit
up to **16** units
Stackable

Configuration example

Driver power
unit

Host
controller unit

Programming pad

Computer

Host PLC

Safety circuit

Regenerative unit

Brake unit

LCMR200 series

GX series

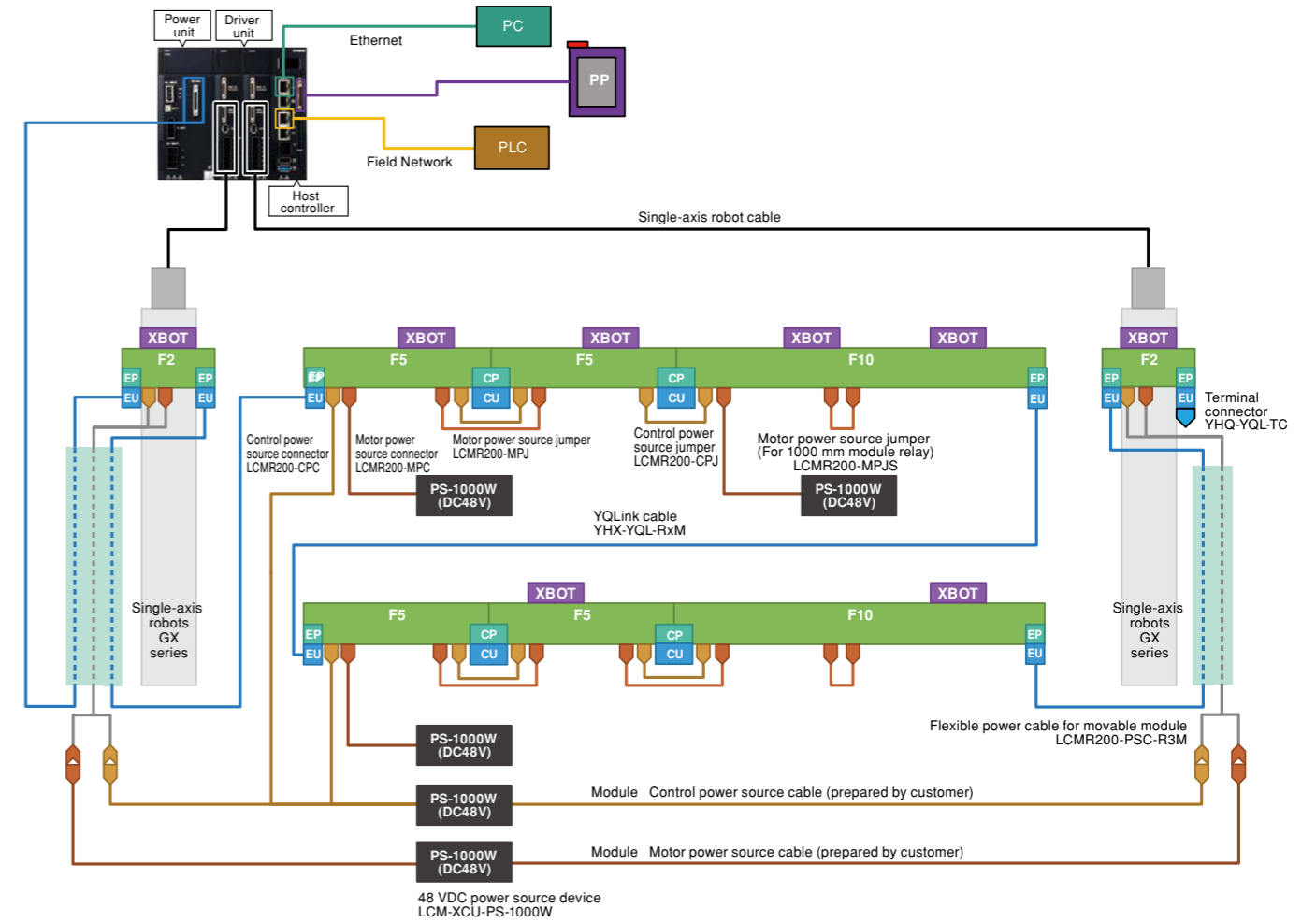**Two axes are used as the circulation unit.**

System configuration diagram

Configuration example   **One way 2000 mm, vertical circulation transport line**
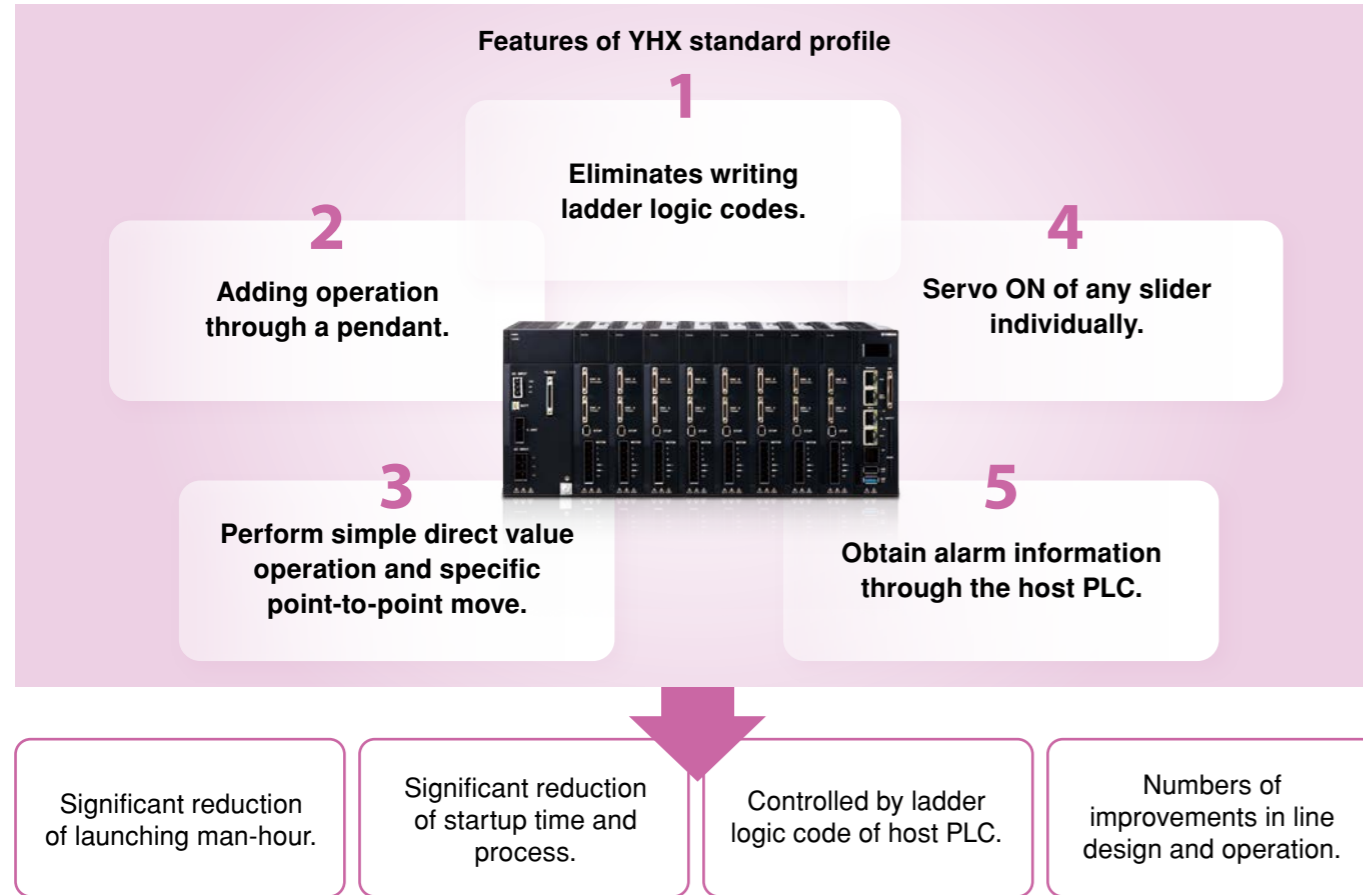* 200 mm linear model and single-axis robot are used for circulation section

Power unit   Driver unit

Ethernet

PC

PP

PLC

Field Network

Host controller

Single-axis robot cable

XBOT   XBOT   XBOT   XBOT   XBOT   XBOT

F2   F5   F5   F10   F2

EP   EP   EP   EP   EP   EP
EU   EU   EU   CP   CP   EU   EU   EU
CU   CU

Terminal connector
YHQ-YQL-TC

Control power source connector LCMR200-CPC
Motor power source connector LCMR200-MPC
Motor power source jumper LCMR200-MPJ
Control power source jumper LCMR200-CPJ
Motor power source jumper (For 1000 mm module relay) LCMR200-MPJS

PS-1000W (DC48V)   PS-1000W (DC48V)

YQLink cable YHX-YQL-RxM

Single-axis robots GX series

XBOT   XBOT   XBOT

F5   F5   F10

EP   CP   CP   EP
EU   CU   CU   EU

Single-axis robots GX series

PS-1000W (DC48V)

Flexible power cable for movable module LCMR200-PSC-R3M

PS-1000W (DC48V)   Module Control power source cable (prepared by customer)

PS-1000W (DC48V)   Module Motor power source cable (prepared by customer)

48 VDC power source device LCM-XCU-PS-1000W

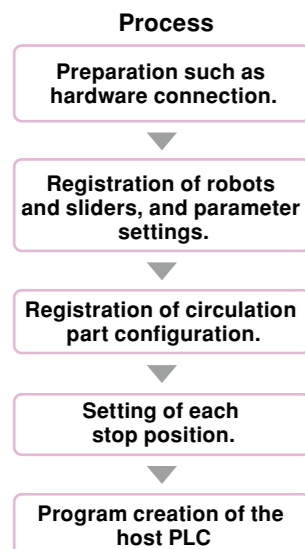| Icon	Name	Description
	Linear module	Size of modules selected here is for reference only. The cable extraction direction can be selected in units of cluster (multiple linear modules are connected to configure one line). A linear module used in the circulation part is also common.
XBOT	Robot slider	A slider that operates on the linear module.
EP	End plate	Position a linear module on both ends of a cluster.
CP	Connection plate	The adjacent modules are positioned and connected.
EU	End unit	Connect with the YQLink cable or YQLink terminal end unit on both ends of a cluster.
CU	Connection unit	Between module communication of adjacent modules is connected.
	Control power supply connector	A connector to supply control power source from 48 VDC power source to the linear module.
	Control power source jumper	A jumper cable to supply control power source to adjacent modules.
	Motor power source connector	A connector to supply motor power source from 48 VDC power source to the linear module.
	Motor power source jumper	A jumper cable to supply motor power source to adjacent modules.
	Motor power source jumper (for 1000 mm module relay)	A jumper cable to relay motor power source in 1000 mm module. When 3 to 4 robot sliders stop in 1000 mm module, remove this motor power source jumper, and connect the power source device for additional motor with the motor power source connector.
	YQ Link cable	A communication cable between each linear module cluster and the controller. As shown in the above figure, connect from left to right with one line. Connect the YQLink end connector to the terminal of the end cluster.
PS-1000W (DC48V)	48 VDC power supply	General-purpose 48 VDC power source device that can be applied to both control and motor operations. With one power source device, 10 m module control power source can be supplied. Also, one power source device can supply motor power source of two robot sliders. Prepare power source devices for each control power source and motor power source.
	Flexible power cable for movable module	Flexible cable to supply power source to the module that performs reciprocal operation mainly in the circulation part.

Project file

YHX Standard Profile

What is a standard profile

A project file for LCMR200 that moves a single-axis robot and LCMR200 as a positioner via field network from the host PLC.

Features of YHX standard profile

1 Eliminates writing ladder logic codes.

2 Adding operation through a pendant.

3 Perform simple direct value operation and specific point-to-point move.

4 Servo ON of any slider individually.

5 Obtain alarm information through the host PLC.

Significant reduction of launching man-hour.

Significant reduction of startup time and process.

Controlled by ladder logic code of host PLC.

Numbers of improvements in line design and operation.

Implementing a task is simple and easy

Process

Preparation such as hardware connection.

▼

Registration of robots and sliders, and parameter settings.

▼

Registration of circulation part configuration.

▼

Setting of each stop position.

▼

Program creation of the host PLC

Standard profile specification

Applicable controller	YHX-HCU		
Operation method	Point trace point No. specified positioning and direct value coordinate specified positioning.		
Comparative robot	LCMR200, LCM-X and GX series (LCMR200 and LCM-X cannot be controlled together).		
Interface	YHX-PP, and field network communication		
Operation type	Absolute position moving		
Maximum number of points that can be registered.	65535		
No. of control axes (Total of sliders and single-axis robots, however, up to 16 axes for single-axis robot)	EtherCAT	64	
	EtherNet/IP™	64	
	PROFINET	64	
	CC-Link	22	
Main input and output See the manual for other functions.	All axes target input	Servo ON/OFF switch/Interlock/Alarm reset	
	All axes target output	Servo State/Interlock State/Alarm State/Heart beat/Emergency stop State	
	Individual axis target input	Servo ON/OFF switch/Return to Origin/Positioning moving inside the control range (including LCM relay operation)/Slider insertion preparation from outside the control range/Slider discharge to outside the control range/Jog movement, inching movement/Movement Stop	
	Individual axis target output	Servo State/Return to origin State/Output specified point No. for various execution state display/Current position/Axis alarm State	
Main remote command See the manual for other remote commands.	Writing/reading of setting data		
	Alarm check		
	Writing and reading of integrated running distance and No of transits.		

Configuration parts

LCMR200 Main Body

Linear module

Length	Front* cable extraction	Rear* cable extraction
	Model	
200mm	LCMR200-F2	LCMR200-B2
300mm	LCMR200-F3	LCMR200-B3
500mm	LCMR200-F5	LCMR200-B5
1000mm	LCMR200-F10	LCMR200-B10

*The direction for the order of the driver numbers.
*The motor power source connector is attached to the module.

Robot slider

Model	LCMR200-XBOT

LCMR200 Connection Parts

Module connection kit

Model	Configuration parts
LCMR200-CKIT	Connection unit Connection plate Motor power source jumper Control power source jumper

Module terminal kit*1

Model	Configuration parts
LCMR200-EKIT	End unit ×2 End plate ×2 Control power supply connector

*1 When a circulation unit made by Yamaha is not used, one terminal kit is necessary for one cluster.
The same part is included for the circulation unit made by Yamaha.

YQLink cable

YQLink movable cable

This cable connects the controller (YHX) and linear conveyor module. Refer to the system configuration drawing for a connection example.

Cable length	Model
0.3m	YHX-YQL-R0.3M
3m	YHX-YQL-R3M
7m	YHX-YQL-R7M
10m	YHX-YQL-R10M-N

YQLink fixation cable

Length	Model
15 m	YHX-YQL-M15M

YQLink terminating connector

Model	YHX-YQL-TC

Maintenance items*2

Control power supply connector

Model	LCMR200-CPC

Control power source jumper

Model	LCMR200-CPJ

Motor power source connector

Model	LCMR200-MPC

Motor power source jumper

Model	LCMR200-MPJ
	LCMR200-MPJS (for 1000 mm module relay)

End plate

Model	LCMR200-EP

Connection plate

Model	LCMR200-CP

End unit

Model	LCMR200-EU

Connection unit

Model	LCMR200-CU

*2 These are single unit types of each part attached to the module connection kit, module terminal kit, and circulation unit.
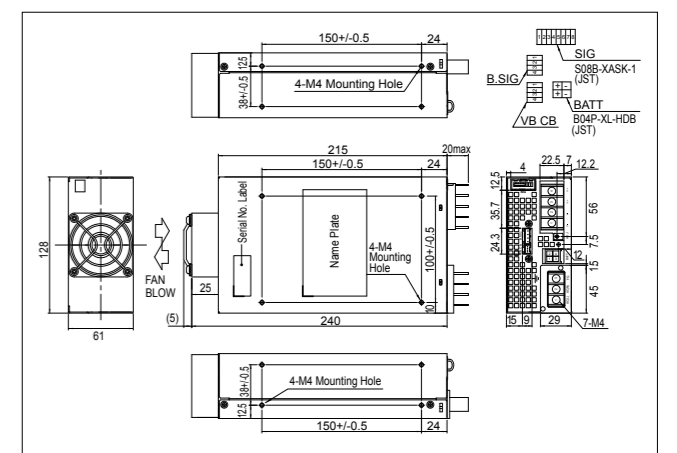
Other power source options

Module electric power supply (48 VDC-1000 W)

This general-purpose 48 VDC power supply unit can be used for both module control and motor drive.

● Rated output 21 A, peak output rating 42 A (within 5 sec.)
● Unit type general-purpose power, efficiency > 80%, power factor > 90%

Model	LCM-XCU-PS-1000W

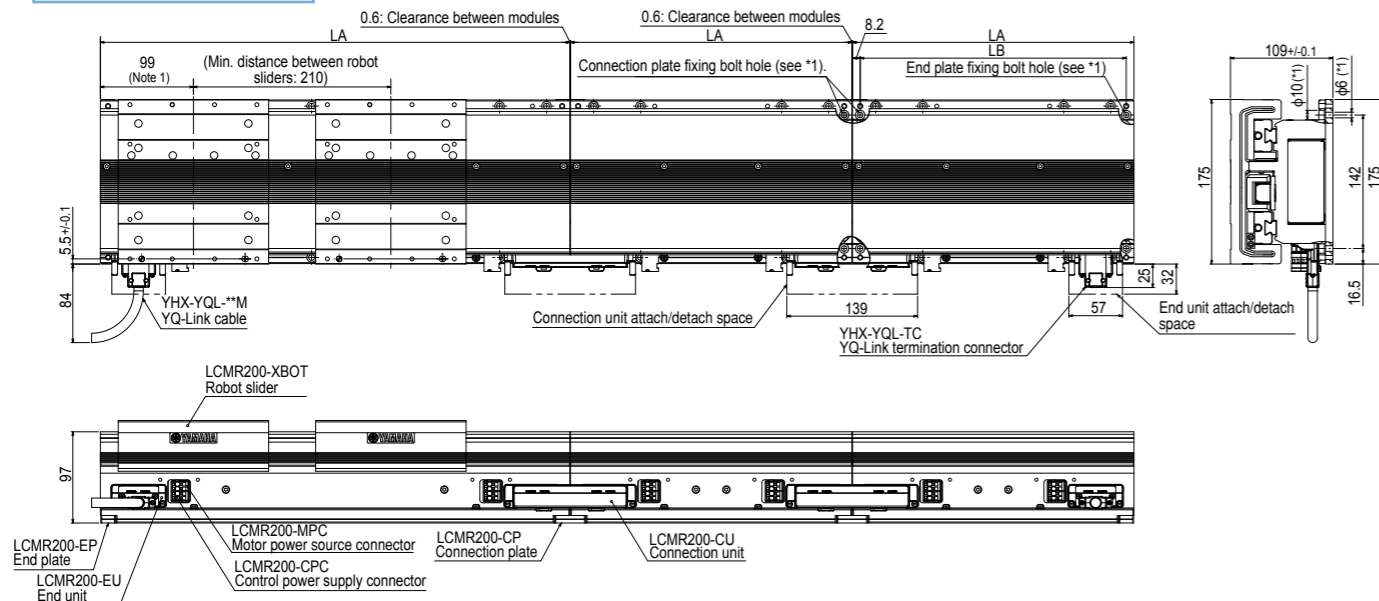### Flexible power cable for movable module

Model	LCMR200-PSC-R3M

External view

LCMR200 Module connection and installation

Front* cable extraction

0.6: Clearance between modules
0.6: Clearance between modules
8.2

99 (Note 1) (Min. distance between robot sliders: 210)
Connection plate fixing bolt hole (see *1).
End plate fixing bolt hole (see *1)
LA
LA
LB

φ10(*1)
φ6 (*1)
109+/-0.1
175
142
175
25
32

YHX-YQL-**M YQ-Link cable
Connection unit attach/detach space
139
YHX-YQL-TC YQ-Link termination connector
57
End unit attach/detach space
16.5
84
5.5+/-0.1

LCMR200-XBOT Robot slider
97

LCMR200-EP End plate
LCMR200-EU End unit
LCMR200-MPC Motor power source connector
LCMR200-CPC Control power supply connector
LCMR200-CP Connection plate
LCMR200-CU Connection unit

Module type	LA	LB
LCMR200-F2	199.4	183
LCMR200-F3	299.4	283
LCMR200-F5	499.4	483
LCMR200-F10	999.4	983

Rear* cable extraction

LCMR200-EU
LCMR200-CPC Control power supply connector
LCMR200-EP End plate
LCMR200-MPC Motor power source connector
LCMR200-CP Connection plate
LCMR200-CU Connection unit

97

LCMR200-XBOT Robot slider

YHX-YQL-**M YQ-Link cable
YHX-YQL-TC YQ-Link termination connector
Connection unit attach/detach space
139
57
End unit attach/detach space
84
175
142
175
25
32

5.5+/-0.1

99 (Note 1)
Min. distance between robot sliders: 210
Connection plate fixing bolt hole (see *1)
End plate fixing bolt hole (see *1)
LA
LB
LA
LA
8.2
φ10(*1)
15
φ6(*1)
109+/-0.1
16.5

0.6: Clearance between modules
0.6: Clearance between modules
8.2

Module type	LA	LB
LCMR200-B2	199.4	183
LCMR200-B3	299.4	283
LCMR200-B5	499.4	483
LCMR200-B10	999.4	983

Note 1. A robot slider is unable to stop in an area 99 mm from both ends of the line. The robot slider stopper juts out from the ends, which could cause collision. (The dimensions refer to the robot slider center.)
Note 2. A module type can be freely combined on the same line after aligning the front/rear of the cable extraction direction.
Note 3. The control power source and motor power source can be passed and received by the jumper connector. See the manual for detail of passing and receiving.
Note 4. For the YQLink cable connection, always supply from the end unit that moving coordinate value is smaller. When passing with signal between lines, connect the YQLink cable to the end part end unit that moving coordinate value is larger, and connect to the end unit that moving coordinate value of the other line is smaller. When not connecting the YQLink to other lines from the line end, attach the YQLink terminal connector.
Note 5. Sixty-four robot sliders can be installed in a system connected by the YQ Link cables * (depending on the number of robots that are controlled by the same controller).
Note 6. Where modules are connected with the connection plate, the clearance between the adjacent modules is 0.6 mm.
Note 7. The minimum pitch of each slider at the stopping state is 210 mm; however, when they start at the same time, they may collide due to operation conditions, and conditions such as command timing from the upper PLC, programming with YHX, etc. In the case, it is necessary to adjust by securing more distance (pitch) between the sliders, changing the start timing (sequential start), etc.
Note 8. There is no mechanical stopper due to the nature of the product. Please install a mechanical stopper by the customer as needed.
Note 9. For connection between modules, use a connection plate and connection unit, and for the line end, use an end plate and end unit.
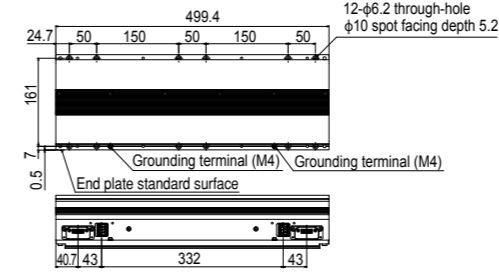* It may differ depending on the system configuration.
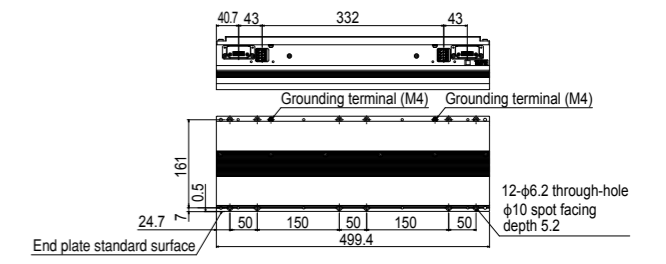
Linear module (Front* cable extraction)

LCMR200-F2
8-φ6.2 through-hole φ10 spot facing depth 5.2
199.4
24.7 | 50 | 50 | 50
161
7
0.5
Grounding terminal (M4)
End plate standard surface
40.7 43 | 32 43

LCMR200-F3
8-φ6.2 through-hole φ10 spot facing depth 5.2
299.4
24.7 | 50 | 150 | 50
161
0.5
7
Grounding terminal (M4)
End plate standard surface
40.7 43 | 132 | 43

LCMR200-F5
499.4
24.7 | 50 | 150 | 50 | 150 | 50
12-φ6.2 through-hole φ10 spot facing depth 5.2
161
7
0.5
Grounding terminal (M4) Grounding terminal (M4)
End plate standard surface
40.7 43 | 332 | 43

LCMR200-F10
999.4
24.7 | 50 | 150 | 50 | 200 | 50 | 200 | 50 | 150 | 50
20-φ6.2 through-hole φ10 spot facing depth 5.2
161
7
0.5
Grounding terminal (M4) Grounding terminal (M4) Grounding terminal (M4)
End plate standard surface
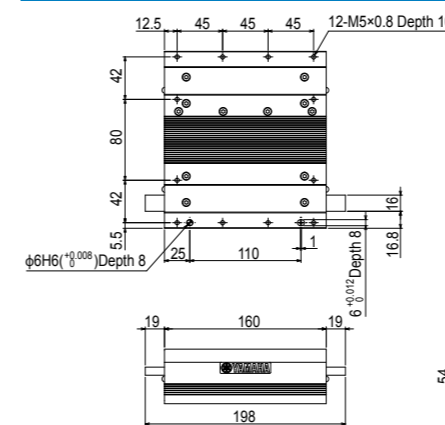40.7 43 | 400 | 32 | 400 | 43

Linear module (Rear* cable extraction)

LCMR200-B2
40.7 43 32 43
Grounding terminal (M4)
161
24.7 7
0.5
8-φ6.2 through-hole φ10 spot facing depth 5.2
50 | 50 | 50
199.4
End plate standard surface

LCMR200-B3
40.7 43 | 132 | 43
Grounding terminal (M4) Grounding terminal (M4)
161
24.7 7
0.5
8-φ6.2 through-hole φ10 spot facing depth 5.2
50 | 150 | 50
299.4
End plate standard surface

LCMR200-B5
40.7 43 | 332 | 43
Grounding terminal (M4) Grounding terminal (M4)
161
0.5
24.7 7
12-φ6.2 through-hole φ10 spot facing depth 5.2
50 | 150 | 50 | 150 | 50
499.4
End plate standard surface

LCMR200-B10
40.7 43 | 400 | 32 | 400 | 43
Grounding terminal (M4) Grounding terminal (M4) Grounding terminal (M4)
161
0.5
24.7 7
50 | 150 | 50 | 200 | 50 | 200 | 50 | 150 | 50
999.4
20-φ6.2 through-hole φ10 spot facing depth 5.2
End plate standard surface

Robot slider
12.5 | 45 | 45 | 45
12-M5×0.8 Depth 10
42
80
42
5.5
φ6H6(+0.008/0)Depth 8
25
110
1
6(+0.012/0)Depth 8
16
16.8
19 | 160 | 19
6 (*1)
175
54
198

End plate
15.4
7.7
2-φ6 through-hole
142
175
16.5
8

Connection plate
32.4
7.7 | 17
4-φ6 through-hole
142
175
16.5
8

End unit
58
35 | 16.4
7.8
φ6
23.9

Connection unit
139.8
35 | 16.4
26.5
2
4.4
5.5
24.6
φ6

* The direction for the order of the driver numbers.

Basic specifications of LCMR200

Drive method		Linear motor with moving magnet type core
Position Search		Magnetic absolute position sensor
Maximum payload		15 kg
Maximum speed		2,500 mm/sec [*1]
Repeatability		+/-5 μm
Mechanical tolerance between robot sliders		+/-30 μm (Dowel hole standard)
Total stroke limit		25.5 m [*2]
Maximum number of robot sliders		64 units [*2]
Minimum spacing between robot sliders		210 mm [*3]
Main frame dimensions	Max. external size of frame cross-section	W175 × H109 mm (Including robot slider)
	Linear module length	200 mm / 300 mm / 500 mm / 1000 mm
	Robot slider length	198 mm
Weight	Linear module	Approx 20 kg [Per 1 m of linear module]
	Robot slider	2.4 kg
Power supply	Control power supply	48 VDC +5 %, -10 %, Max. 30 A [*4]
	Motor power supply	48 VDC +/-10 %, Max. 30 A [*5]
Operating environment	Operating temperature	0 °C to 40 °C [*6]
	Storage temperature	-10 °C to 65 °C
	Operating humidity	35 % to 85 %RH [No condensation]
Controller		YHX controller [*7]

*1. When the conveying weight exceeds 10 kg, it will drop to 2,000 mm/sec according to the weight.
*2. It may differ depending on the system configuration.
*3. When the jig palette to equip to the robot slider is longer, it shall be the jig palette length + 10 mm.
*4. Up to 10 m linear module can be supplied with the optional 1000 W power source.
*5. Up to 2 robot sliders can be supplied with the optional 1000 W power source.
*6. Operate LCMR200 in the temperature environment (+/-5 °C) that installation and adjustment were performed.
*7. The YHX controller requires a separate electrical power supply.

Allowable Load

Note. • When center of slider is center of gravity.
• Allowable load in the moving direction of slider is always 28 N regardless of the loading position.
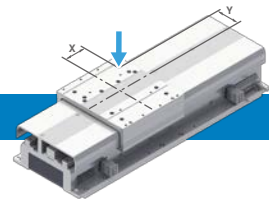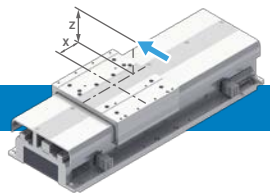
Load: Horizontal Direction

Payload: Common up to 15 kg.

Loading Position X [mm]	Loading Position Z [mm]					
	0	20	40	60	80	100
0	611	514	443	390	348	314
20	517	445	391	349	315	287
40	447	393	350	316	288	264
60	394	352	317	289	265	245
80	353	318	289	266	245	228
100	319	290	266	246	229	214

Unit: [N]

Load: Vertical Direction

Payload: 5 kg

Loading Position X [mm]	Loading Position Y [mm]					
	0	20	40	60	80	100
0	924	687	546	453	387	339
20	760	593	485	411	356	314
40	647	521	436	375	328	293
60	562	465	396	345	305	274
80	498	420	362	319	285	258
100	446	382	335	297	268	243

Payload: 10 kg

Loading Position X [mm]	Loading Position Y [mm]					
	0	20	40	60	80	100
0	874	650	517	429	367	320
20	721	561	459	389	337	297
40	613	493	413	355	311	277
60	533	440	375	327	289	260
80	471	397	343	303	270	244
100	423	362	317	282	254	231

Payload: 15 kg

Loading Position X [mm]	Loading Position Y [mm]					
	0	20	40	60	80	100
0	826	614	488	406	347	303
20	680	529	433	367	318	281
40	578	466	390	335	294	261
60	503	416	354	309	273	245
80	445	375	324	285	255	231
100	399	342	299	266	239	217

Unit: [N]

● Specifications and appearance are subject to change without prior notice.
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