



EPSON EZ Modules

Modular axes for a wide variety of applications!

Available with
our PC Based
RC620+
Controller

The Power of Choice



EPSON EZ Modules: Industry Leading Ease of Use

EPSON EZ Modules General Features

- Rigid arm construction
- High torque AC servo motors
- Absolute encoders
- Precision ground ball screws
- Dustproof seals for dirty environments
- High precision linear guides
- Maintenance free linear guide and ball screw
- High speed and high payload capable
- Easy to assemble
- High performance PC based controls
- Superior servo control for smooth quick motion
- Easy to use Microsoft Windows™ based software
- Integrated Vision, Conveyor Tracking, .NET Controls, Audit Log/Security and more options
- All cables, cable guides and brackets included

3 Axis
EPSON EZ
Modules



High Performance and Reliable – Definitely an EPSON!

EPSON EZ Modules are a series of linear modules that are easy to assemble and even easier to use. They are ideal for simple pick and place applications and can also be used for many different jobs like sealant or glue laying applications, parts handling and even precision assembly tasks. With hundreds of EZ Modules available in 1, 2, 3 and 4 axis configurations, chances are that EPSON has the right model and configuration you need for your next application.

Powerful Controls and Development Environment

EPSON EZ Modules are available with our RC620+ PC Based controller. It is the controller of choice for those applications that require a high performance open architecture solution and advanced motion and I/O control. The EPSON RC+ 6.0 development environment features powerful tools and provides the ultimate experience in industry leading ease of use. With the ability to control up to 20 axes of motion from one single controller, the RC620+ controller provides our customers with a high performance solution at a value price and more Power of Choice than ever before.



Additional Axis with Coordinated Motion

EPSON EZ Modules, SCARA and 6-Axis robots all run on the EPSON RC620+ controllers and can be easily integrated together. With the ability to control up to 8 axes of coordinated motion, the RC620+ can easily control a SCARA or 6-Axis robot mounted on top of a single EZ Module to expand the work envelope.



1, 2, 3, and 4 Axis Configurations Available



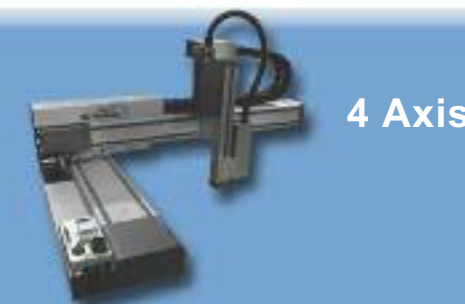
1 Axis



2 Axis



3 Axis



4 Axis

1 Axis Models

With speeds of 1500 mm/sec, payloads up to 80 Kg, and repeatabilities of +/-10 microns, our single axis EPSON EZ Modules are hard to beat. For maximum flexibility, single axis EPSON EZ Modules can be mounted in table top, side mount, or even ceiling mount configurations. One common practice is to use the RH (heavy) EZ Modules as a linear module for our EPSON SCARA and 6 Axis robots. Whatever the use, the single axis EPSON EZ Modules are sure to fit your application needs.



RH
Heavy

Single Axis Lengths



Medium
RM (350, 550, 750 mm)



Heavy
RH (400, 600, 800, 1000, 2000 mm)

	RH (Heavy)	RM (Medium)
Payload (Max/Rated)	80/40 Kg	40/20 Kg
Motor Size	400 Watt	
Max Speed	1500 mm/sec*1	1500 mm/sec
Repeatability	+/- 0.01 mm (0.0004 in)	

*1 1000 mm RH Module max speed is 1200 mm/sec
2000 mm RH Module max speed is 560 mm/sec

2 Axis Models

2 Axis EPSON EZ Modules are available in 2 core configurations. RG type (which is the conventional XY cartesian type module), and YZ type (which has the Z Axis attached to the carriage of the Y Axis).

RG (Heavy) and YZ (Medium) Modules are high in both speed and payload performance and are made for fast pick and place applications. They incorporate high torque AC servo motors for reduced maintenance and our high performance servo system available only with the RC620+ PC based controller. This combination of rigid mechanical arms along with our high performance servo system yields the best solution available for linear modules today.

RG (A/B/C/D)*3 type:

- ▶ RG-HM (Heavy/Medium models where the first axis is an RH module and the second axis is an RM module)
Available Axis Lengths: Axis 1: RH (400, 600, 800, 1000 mm)
Axis 2: RM (350, 550, 750 mm)

YZ (A/B)*3 type:

- ▶ YZ-MSz (Medium/Small models where the first axis is an RM module and the second axis is an RSz module)
Available Axis Lengths: Axis 1: RM (350, 550, 750 mm)
Axis 2: RSz (200, 300, 400 mm)



RG-HM
(Heavy/Medium)



YZ-MSz
(Medium/Small)

	RG-HM (Heavy/Medium)	YZ-MSz (Medium/Small)
Payload (Max/Rated)	25/15 Kg	15/10 Kg
Axis 1 Max Speed	1500 mm/sec*1	1500 mm/sec
Axis 2 Max Speed	1500 mm/sec	750 mm/sec
Repeatability	+/- 0.01 mm (0.0004 in)*2	
Axis 1 Motor Size	400 Watt	
Axis 2 Motor Size	400 Watt	150 Watt
Downward Force	N/A	200N

*1 1000 mm RH Module max speed is 1200 mm/sec

*2 Single axis repeatability

*3 See Pages 6 & 7 Mirror and Flip Configurations



3 Axis Models

3 Axis EPSON EZ Modules (RP Type) are both fast and precise. They are the ideal choice for applications ranging from simple pick and place to dispensing, and are used in a wide variety of industries including medical, automotive, and semiconductor to name a few. With payloads up to 15 Kg and speeds of up to 1500 mm/sec along with +/-10 micron single axis repeatabilities, EPSON EZ Modules have the performance specs to meet your application needs.

RP-HMSz
(Heavy/Medium)

RP Type 3 Axis EPSON EZ Modules

RP type 3 Axis EPSON EZ Modules come in heavy/medium configurations, which can be configured in 1 of 4 configuration types.

The Basic sizes available are as follows:

(RP-HMSz)

Axis 1: RH (400, 600, 800, 1000 mm)

Axis 2: RM (350, 550, 750 mm)

Axis 3: RSz (200, 300, 400 mm)

	RP-HMSz (Heavy/Medium)
Payload (Max/Rated)	15/10 Kg
Axis 1 Max Speed	1500 mm/sec*1
Axis 2 Max Speed	1500 mm/sec
Axis 3 Max Speed	750 mm/sec
Repeatability	+/- 0.01 mm (0.0004 in)*2
Axis 1 Motor Size	400 Watt
Axis 2 Motor Size	400 Watt
Axis 3 Motor Size	150 Watt
Downward Force	200N

*1 1000 mm RH Module max speed is 1200 mm/sec
*2 Single axis repeatability

4 Axis Models

4 Axis EPSON EZ Modules (RU Type) are available in a Heavy/Medium configuration. With a max speed of 1500 mm/sec, the 4 Axis EPSON EZ Modules are some of the fastest modules available in the market. The 4th axis rotational speed is 1428 deg/sec which provides more than enough orientation speed for even the most demanding of module based applications. These Heavy/Medium 4 axis modules also have a maximum payload of 10Kg which means they are an excellent choice for medium payload jobs.

The available axis lengths are as follows:

- Axis 1:** RH (400, 600, 800, 1000 mm)
- Axis 2:** RM (350, 550, 750 mm)
- Axis 3:** RSz (200, 300 mm)
- Axis 4:** RU +/- 360 degrees

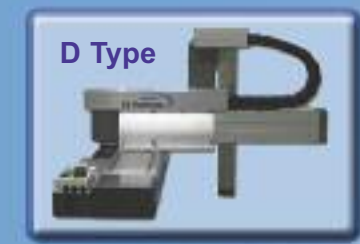
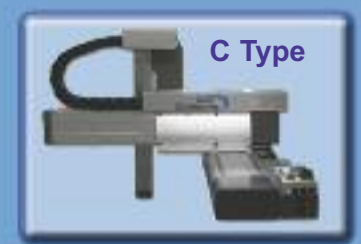
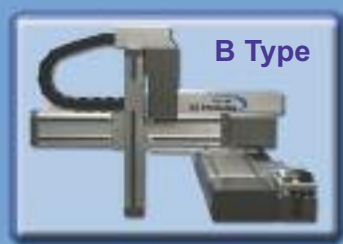
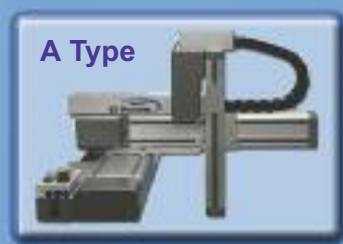
	RU-HMSz (Heavy/Medium)
Payload (Max/Rated)	10/5 Kg
Axis 1 Max Speed	1500 mm/sec*1
Axis 2 Max Speed	1500 mm/sec
Axis 3 Max Speed	750 mm/sec
Axis 4 Max Speed	1428 deg/s
Repeatability	+/- 0.01 mm (0.0004 in)*2
Axis 1 Motor Size	400 Watt
Axis 2 Motor Size	400 Watt
Axis 3 Motor Size	150 Watt
Axis 4 Motor Size	150 Watt
Downward Force	200N

*1 1000 mm RH Module max speed is 1200 mm/sec
*2 Single axis repeatability



RU-HMSz
(Heavy/Medium)

3 & 4 Axis Mirror and Flip Configurations



3 & 4 axis EPSON EZ Modules can be purchased with 1 of 4 configuration types as shown in the figure. The Y axis (2nd axis) can be "flipped" on the left or right side of the X axis (1st axis) and the Z axis (3rd axis) can be "mirrored" on the Y axis (2nd axis). This flexibility allows the right EPSON EZ Module to be selected for your specific workcell layout requirements.

EPSON EZ Modules Specifications

EZ Modules		One Axis		Two Axis		Three Axis	Four Axis
Model Types		RH (Heavy)	RM (Medium)	RG-HM (Heavy/Med)	YZ-MSz (Med/Small)	RP-HMSz (Heavy/Med)	RU-HMSz (Heavy/Med)
Configuration		1, 2, 3, and 4 Axis Linear Modules					
Range	Axis 1	400, 600, 800, 1000, 2000 mm ^H	350, 550, 750 mm ^M	400, 600, 800, 1000 mm ^H	350, 550, 750 mm ^M	400, 600, 800, 1000 mm ^H	400, 600, 800, 1000 mm ^H
	Axis 2			350, 550, 750 mm ^M	200, 300, 400 mm ^{Sz}	350, 550, 750 mm ^M	350, 550, 750 mm ^M
	Axis 3					200, 300, 400 mm ^{Sz}	200, 300 mm ^{Sz}
	Axis 4						
Max Speed	Axis 1	1500 mm/sec ¹	1500 mm/sec	1500 mm/sec ¹	1500 mm/sec	1500 mm/sec ¹	1500 mm/sec ¹
	Axis 2			1500 mm/sec	750 mm/sec	1500mm/sec	
	Axis 3					750 mm/sec	
	Axis 4						
Repeatability		+/-0.01 mm (0.0004 in)		+/-0.01 mm (0.0004 in) ^{*2}			
Payload (Max/Rated)		80/40 Kg	40/20 Kg	25/15 Kg	15/10 Kg		10/5 Kg
Motor Ratings	Axis 1	400 watt		400 watt			
	Axis 2			400 watt	150 watt	400 watt	400 watt
	Axis 3					150 watt	
	Axis 4						
Cycle Time						0.594 secs ^{*3}	0.594 secs ^{*4}
Downward Force Z Axis				N/A	200N		200N
Weight	Axis 1	21-34 Kg	12-17 Kg	21-34 Kg	12-17 Kg	21-34 Kg	21-34 Kg
	Axis 2			12-17 Kg	7-8.3 Kg	12-17 Kg	12-17 Kg
	Axis 3					7-8.3 Kg	7-7.6 Kg
	Axis 4						
Environmental Conditions	Temperature	5-40 deg C					
	Humidity	10-80% (no condensation)					
Available Controller		PC Based Controller RC620+					

*1 1000 mm RH Module max speed is 1200 mm/sec
2000 mm RH Module max speed is 560 mm/sec

*2 Single Axis Repeatability

*3 Cycle time is for 3 Axis RH800, RM550 (or RM350), RSz (200, 300, or 400 mm) sized model with a 5 Kg payload

*4 Cycle time is for 4 Axis RH800, RM550 (or RM350), RSz (200, 300 mm) size model with 0Kg payload

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