GMT GLOBAL INC.

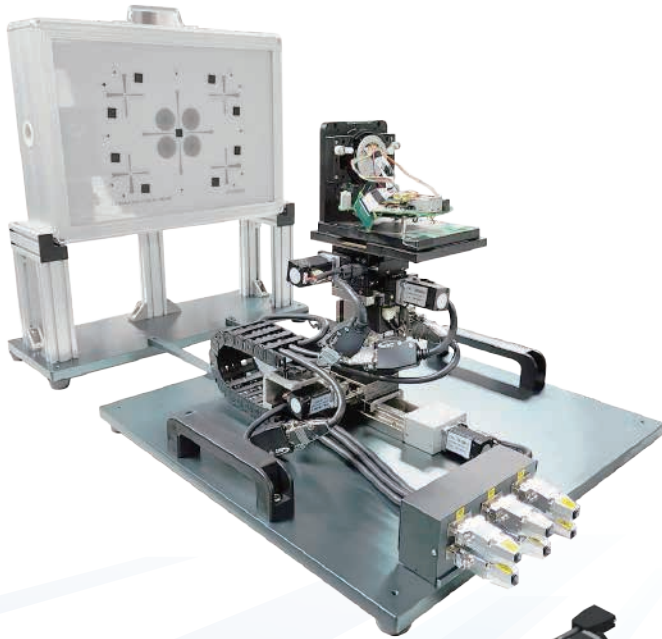# Lens Alignment Automation System

CXN60100 Standard motorized stage	AX60-F2PN Precision motorized stage	AYG6-100VMC Precision motorized stage	ARH60-A2PN Motorized precision rotary stage	AZV6008-F8NN Standard motorized stage

Customized interface
Simplified calibration process
Automation of detection procedure

Made in Taiwan

Features:

- 🟢 High-efficiency image tracking algorithm supports translation and rotation with multiple degrees of freedom.
- 🔵 Automatic image tracking calibration function:
  μMMC Controller (microcontroller-Based Multi-axis Motion Controller), six-axis integration, ModbusTCP communication and trajectory planning function are applied to achieve precise control.
- 🔴 Customized interface: According to customers' needs, the interface can customize the detection process and adjust the workflow.

Product Description：

- 🟡 Operators only need to load and unload materials; they can leave after executing the detection procedure.
- 🟢 This lens alignment system incorporates technologies such as visual tracking, image processing, camera communication, and motion control. It enables seamless integration of interface software, cameras, and linear stage modules into the application end.
- 🔴 This system can be applied in various scenarios such as lens alignment inspection, initial positioning of fiber coupling, PickAndPlace operations, BinPicking, assembly tasks, AOI and other related processes. It can be flexibly combined with existing GMT modules to address the challenges in multiple applications.

Stacking of six-axis motorized modules (left wiring method or right wiring method)

Mechanical Spec.	Direction of Movement	X、Y、Z、θ、α、β
	Travel Stroke	Xaxis：100mm, Yaxis：15mm, Zaxis：8mm, θaxis：±7.5°, αaxis(upper axis)：±6°, βaxis(lower axis)：±5°
	Six-axis table size	285mm*220mm*177mm (without drag chain)
	Overall table size	1000mm*490mm*240mm (without lightbox and test object)
	Weight of the module	about 5.5kg
	Material / Surface treatment	Aluminum Alloy / Black Anodizing, Steel-made / Electroless Nickel Plating
Accuracy Spec.	Max. Speed	Xaxis：40mm/sec, Yaxis：12mm/sec, Zaxis：6mm/sec, θaxis：10.5°/sec, αaxis(upper axis)：5.4°/sec, βaxis(lower axis)：4.4°/sec
	Positioning Accuracy	Xaxis：0.015mm, Yaxis：0.015mm, Zaxis：0.03mm, θaxis：0.03°, αaxis(upper axis)：0.03°, βaxis(lower axis)：0.03°
	Repeatability Accuracy	Xaxis：±2μm, Yaxis：±2μm, Zaxis：±5μm, θaxis：±0.003°, αaxis(upper axis)：±0.003°, βaxis(lower axis)：±0.003°
	Load Capacity (Horizontal)	3.5kg
Electrical Spec.	**Motor** Model / Wiring Method	2-phase closed-loop motor
	Motor Brand / Model	GMT/TM-28M-G
	Driver Brand / Model	GMT-μMMC Driver(with software)
	Connector Stage side connector	15-Pin male end connetor D-SUB
	Connector Controller side connector	15-Pin female end connetor D-SUB(optional)
	Sensor Origin Sensor	Center-point sensing
	Sensor Limit Sensor	Forward/Reverse limits
	Sensor Power Voltage	24V±10%
	Sensor Control Output	Testing (sensing)：output transistor OFF (closed)

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