## **Achieving Efficient** Automation & Energy Solutions

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Energy Optimization

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# Who We Are

ARIA Technologies, a Giza Systems subsidiary, is leading in automation solutions for manufacturing industries. ARIA is a responsible and committed full service solutions provider and systems integrator delivering turnkey automation and energy optimization solutions to manufacturing companies across the MENA region. Partnering with world pioneers in robotics and automation, ARIA Technologies is a certified robot system integrator leading the digitalization of industrial technology.

# What We Do

We work with our customers to create genuine and responsible value through offering state-of-the-art tecnologies for sustainable, efficient and resilient industries to support growth, development and the environment. Our services include automation systems, industrial IoT and energy optimization.

Our products and system integration solutions enable our customers to **reduce costs** and **increase Productivity**, **Flexibility** and **Precision of day-to-day operations**. Our core competencies include design and implementation of solutions with programmable controllers, information systems, drives, motion control and different robotic systems integration.



Our industrial IoT platform provides our customers with a number of capabilities including predictive maintnance, performance monitoring and energy efficiency solutions. IIoT delivers countless benefits ranging from real-time monitoring of performance and quality control to equipment maintenance and safety.

In addition to our industrial IoT platform, we also offer energy optimization solutions. We adopt the latest in cutting-edge technologies to reduce energy consumption, costs, and carbon footprint. Our team of experts offers customized re-tuning energy optimization and renewable energy integration solutions to transform infrastructures and support resilient sustainable industries.

# Quality

ARIA Technologies strives to integrate quality in all its processes to ensure adherence to the best standards and practices. ARIA has received the ISO 9001:2015, ISO 14001:2015 and ISO 45001:2018.

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### ARIA Robot Original Equipment Manufacturer

### Industrial Robot System Integrator

Energy Efficiency Industrial IoT

Predictive Maintenance Industrial IoT

Performance Monitoring Industrial IoT

INDUSTRY



# Linear Robots Partner to BECKHOFF Germany

Our in-house developed line of linear robots allows us to offer our customers full systems integration, full design and full manufacturing capabilities.

We custom make your linear robot based on the specific application needed for your manufacturing operation.



The three-axis linear robot has Cartesian axes which are operated via the robot controller. Our different robotic solutions cater to the digitalization of the manufacturing process, providing our customers with the ability to increase productivity, Lower manufacturing costs, enhance flexibility and repurposing,

Improve precision and accuracy, ensure highest quality standards and consistency, and increase work safety. A 4th & 5th axles can be integrated to ARIA linear robot by adding the optional accessories.

#### **Main Applications:**

- Packaging & Palletizing
- Simple pick & place
- Sorting & stacking applications
- Multiple parts orientation in space
- Handling automation
- Loading & unloading applications





### **Technical Specifications**

	Model	ARIA 200C	ARIA 300C
Number of Axes		3 (4&5 Optional)	
Repeatability	mm	±0.05	
Main Horizontal Arm (z)			
Stroke	mm	2,200	3,400
Speed	m/s	2.5	2.5
Ejector Stroke (x)			
Stroke	mm	900	1,200
Speed	m/s	2	2
Vertical Arm (y)			
Stroke	mm	1,200	1,800
Speed	m/s	2	2
Maximum Load (Part + EOAT)	Kg	40	60
Automation Control System		BECKHOFF Ge	ermany
		MITSUBISHI Japan	
Pneumatic System		FESTO Germany	
Rated Voltage	Volt	380	
Rated Power	kw	13	15
Frequency	Hz	50	
All Driven		Servomotor	
Floor-standing Control Cabinet		$\checkmark$	$\checkmark$
Weight	Kg	350	500
Environment	°C	5 °C ~ 45 °C	
OPTIONS			
Steel Mounting Base		$\checkmark$	$\checkmark$
Vacuum and/or Pressure Circuit		$\checkmark$	$\checkmark$
Pneumatic Vertical Tilting (0- 90°)		$\checkmark$	$\checkmark$
Automatic Lubrication System		$\checkmark$	$\checkmark$
Wireless Industrial Tablet		$\checkmark$	$\checkmark$
EOAT Design & Manufacturing		$\checkmark$	$\checkmark$





# ARIA P60 Robot Arm

### Our ARIA P60 Pick & Place Robot Arm

- Cost Efficient

- Precision Repeatability
- Controller simplicity
- Enhance Flexibility & re-purposing



# **Packaging Solutions**

Powered by **FESTO & BECKHOFF** (our German partners), ARIA's newly compact design will solve all your packaging needs.

# End-of-Arm-Tooling (EOAT)

### **Design and Build Service**

From the simplest to the most complex EOAT, ARIA Technologies specializes in designing and building customized End-of-Arm-Tooling at competitive pricing.



### **Perfection in Pneumatic Motion** Partner to **FEST**





We integrate Festo's portfolio for compressed air preparation, pneumatic actuators, directional control valves and valve terminals as well as mechanical and vacuum gripping solutions in all our state-of-theart systems.

#### Why are we collaborating with Festo?

- For an outstanding and consistent quality.
- For uninterrupted production and reduced downtimes.
- For higher energy efficiency and sustainable operation.
- For high level of expertise in the industry and technical competence.





# Industrial Robots-MELFA



From simple pickand place applications, to complex assembly tasks, Mitsubishi Electric industrial robots are equipped with class leading speed and precision.

Mitsubishi Electric industrial robots are coupled with intelligent options like 3D vision, force sensing, seamless PLC integration, and the ability to operate in "collaborative applications."

Designed to work in a diverse range of high-speed applications, the RH (horizontal type) SCARA robots are ideal as a high speed robotic solution for even the most demanding of applications.

Mitsubishi Electric has the robots required for today's demanding manufacturing applications.





# Industrial Robots Partner to **Stäubli**

Stäubli Robotics is a leading international player in industrial automation, providing engineering and technical support recognized for their efficiency and reliability.

From SCARA, 6 axis robots and cobots to mobile robot systems and AGV, our Stäubli powerful, high-precision solutions allow us to work with clients in many industries to help them tackle the challenges of Industry 4.0.

Stäubli serve customers worldwide who aim to increase their industrial productivity without compromising quality, reliability or safety.





### **Smart Vision**

Partner to

COGNEX

ARIA Technologies is a system integrator partner to Cognex advanced machine vision & industrial barcode reader systems, delivering instant improvements to any manufacturing process by enabling products to be made at higher speed, without defects and at lower cost.















# **ARIA Industrial IoT Platform**

ARIA IoT-based platform is a cloud-based service that visualizes and optimizes performance, maintenance and energy usage.





### Predictive Maintenance

Predictive maintenance (PdM) techniques are designed to help determine the condition of equipment in order to predict when maintenance should be performed or possible breakdowns. Predictive maintenance promises cost savings over routine or time-based preventive maintenance, as the tasks are performed only when warranted.

#### Predictive maintenance measures include:

Vibration / Pressure / Temperature / Flow Rate / Weight / Torque / Speed / Stroke / Humidity / Level Sensors.



### Performance Monitoring

Machine/robot real-time performance monitoring generates data that can be used to evaluate machine operational conditions and efficiency, needed for required perfective maintenance (PdM) and others smart factory applications.



# **ARIA Energy Solutions**

### Energy Audits ISO 50002-compliant

Our ISO 50002–compliant energy auditing process creates savings-opportunity plans based on our clients' specifications. These assessments focus on the largest consuming energy components, processes or equipment to identify opportunities for the reduction of energy waste, improvement of energy efficiency, and optimization of energy supply.



#### Energy Management Strategies ISO 50001-compliant

Good energy-management strategies and plans are essential to achieving energy conservation and efficiency targets. Facility owners can take prescriptive actions, and identify and evaluate targets and KPIs to ensure they are realistic and effective. All strategies developed for our clients meet the international ISO 50001 requirements to develop a plan, identify and implement improvements, measure results, and then enable continuous improvement.



# **Energy Monitoring**

ARIA IoT-based platform is a cloud-based service that visualizes and optimizes your energy usage. After conducting the energy management system at your facility, the platform monitors and analyzes millions of data points each day and creates valuable insights. It enables you to analyze the performance and energy efficiency of your equipment at any time, and identify and prioritize corrective measures instantly.

The platform easily allows you to generate detailed follow-up reports that provide a breakdown of all equipment, buildings and energy systems connected to the platform. The reports visualize energy, performance, economy and CO2 savings. These reports can be used by those working in operations, finance and environmental projects to give them immediate access to real-time information allowing them to make the right decisions.



# **Energy Opportunity**

As a valuable client to ARIA Technologies, our energy experts can conduct a primary energy audit to help optimize your facility and enable you enjoy the followings benefits:

- · Reduce energy consumption of all utilities
- Decrease operational costs
- Improve process efficiencies
- · Prolong the life of existing equipment
- Reduce carbon footprint
  - Become compliant with standards to achieve ISO 50001 certificate and gain international credibility

### **Environmental improvements**



85% Regulatory and industry compliance

### **Business improvements**



46% Decreased business risk





77% Reduced business cost

# Factory Automation Retrofit and Modernization



### Egypt

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### UAE

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