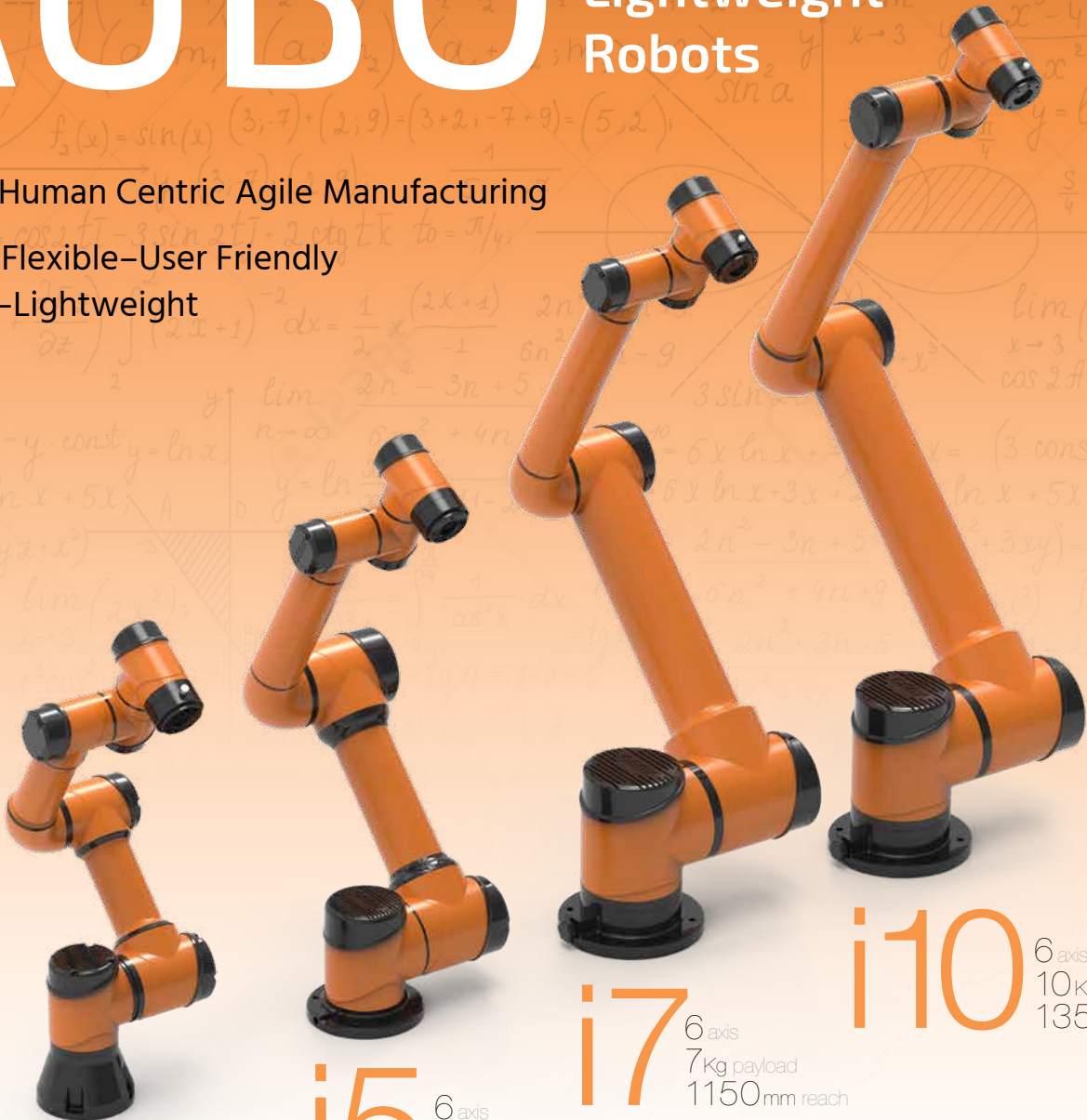# AUBO

Collaborative Lightweight Robots

Made for Human Centric Agile Manufacturing

Versatile–Flexible–User Friendly
Low Cost–Lightweight

CE

i3 6 axis
3 Kg payload
625 mm reach

i5 6 axis
5 Kg payload
924 mm reach

i7 6 axis
7 Kg payload
1150 mm reach

i10 6 axis
10 Kg payload
1350 mm reach

Quick Redeployment
No Programming Skills Needed

AMS ADVANCED MECHATRONICS SOLUTIONS, INC
AUTOMATION, SMT & LEAN MANUFACTURING

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AUBO ROBOTICS

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AUBO

Collaborative Robots (Co-Bots)

AUBO Robots work closely within the human environment without the need for safety equipment, depending on risk assessment.

COLLABORATIVE FUNCTION:

- Hand guide-to-teach (inverse kinematics motion planning), this manual operation of the robot enables quick and easy programing by demonstration without any programing skills.
- Robot works side by side with human operator without safety fence, laser or sensors (after a risk assessment is performed).
- Teach pendant user interface for programing (forward kinematics) enables online programing and simulation via a touch screen tablet.
- Lightweight, flexible and easy to re-purpose this lightweight robot.

SAFETY FUNCTIONS:

- Designed in accordance with PI d and ISO 10218-1 (ISO/TS 15066) safety requirements and with most all specifications for collaborative robots operation.
- Power and force limiting design brings robot to a protective stop if limits are exceeded or a collision is detected. Speed and force can be adjusted to fit and optimize any application easily.
- Sensors embedded in motor drives provide real-time feedback to prevent dangerous situations.
- Emergency stop buttons are positioned on teach pendant and control box with a braking distance less than 1mm.

OPEN SOURCE ARCHITECTURE:

- CAN bus network used in this robot for multiple microcontrollers to communicate with each other.
- ROS (Robot Operating System) compatibility is supported through an API.
- Hardware adopts BUS protocols with open I/O interface extensions.
- Easily integrate robot into existing production systems.

RETURN ON INVESTMENT (ROI):

- Low cost of ownership without basic programing skills needed, and ease of integration into a system, all add up to a quick return on your investment.
- Short run, high mix environments like Lab automation or machine tending are prime examples of industries needing fast redeployment.
- Floor space is a premium cost at most companies—usually more than the equipment. A small foot print, lightweight robot will be a huge benefit for any size company's cost of production.
- Repurpose, redeploy and/or reinvent applications with the same robot, fast change over for lean manufacturing.
- Remove human error in a high-mix low-volume (HMLV), this reduces manufacturing time and consequently increases capacity; without adding costly resources so robot acts as a de facto quality inspector.

INTELLIGENCE:

- Vison systems can be easily integrated into controller.
- Control Box communication ports include TCP/IP, Modbus RTU/TCP, and USB 2.0
- This research robot platform is used widely around the world in corporate labs and for academic robotics research.

Safety Functions

Collaborative Functions

Return on Investment (ROI)

Intelligence

J4 Wrist

J6 Wrist

J5 Wrist

J3 Elbow

J2 Shoulder

J1 Base

API
SDK

Open Source Architecture

Applications for Collaborative Robots

Case Polishing

Assembly

Product Testing

Education

Machine Tending

Dispensing

Load/Unload

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