

KINDVA Génération ROBOIS

KINDVA

MODULAR AND ADAPTABLE ROBOTIC ARMS FOR GRASPING AND MANIPULATION TASKS

### OPEN TECHNOLOGY FOR SIMPLE TASKS OR COMPLEX AI AND MACHINE LEARNING

Regardless of your expertise, the Gen3 robotic platform enables you to test and turn your ideas into reality:

- > Vision-based manipulation
- > Dexterous assembly
- Haptics
- > Dynamic grasping
- > Deep learning
- > Mobile manipulation

# Start working with your robot quickly using new teaching modes and preferred tools and languages

Bring your projects to the next level with easy integrations and our rich Kinova® Kortex™open API software.

- > Advanced programming in C++ and Python
- > ROS, MATLAB® and Simulink® packages
- Closed-loop, low-level control at 1kHz
- Gazebo and MoveIt simulation
- Web based GUI accessible from any device on the network

OPTIONAL
INTEGRATED 2D/3D
VISION MODULE
HIGH-LEVEL

AND LOW-LEVEL CONTROL

OPEN END-EFFECTOR INTERFACE MODULE

SMART ACTUATORS
WITH INTEGRATED
TORQUE SENSORS

Kinova Gen3 robots are designed for safety, efficiency and control in real-world

- > Ultra lightweight and portable
- > Ideal for robotics research
- > Power efficient
- Best payload-to-weight ratio

PLUS, YOU CAN COUNT ON KINOVA'S EXCELLENT AND RELIABLE SERVICE AND SUPPORT.

## TECHNICAL SPECIFICATIONS

#### **GENERAL**

Degrees of freedom	6 DoF	7 DoF
Payload* (full-range continuous)**	2.0 kg	2.0 kg
(mid-range continuous)	4.0 kg	4.0 kg
Total weight	7.2 kg	8.2 kg
Maximum reach	891 mm	902 mm
Maximum Cartesian translation speed	50 cn	n/s
Actuator joint range after start-up	Infinite	
Power supply voltage	18 to 30 VDC, 24 VDC nominal	
Average power	36 W	
Ingress protection	IP33	
Operating temperature	-30 °C to 35 °C	
Sensors	Torque, position, current, voltage, temperature, accelerometer and gyroscope	

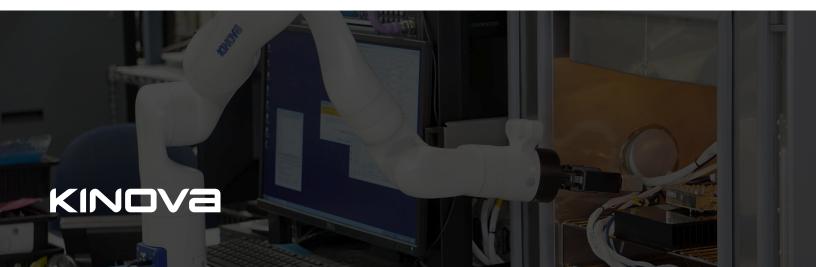
#### **INTERFACES**

Software	Kinova Kortex™
Internal communications	2 x 100 Mbps Ethernet
API compatibility	Windows 10, Linux Ubuntu 20.04, ROS Noetic
Programming languages	C++, Python, MATLAB®
End effector interfaces	Ethernet, I2C, UART, GPIO, 1A supply @24V
Control system frequency	1 kHz
Low-level control	Position, velocity, current, torque
High-level control	Cartesian position/velocity, joint position/velocity, wrench

#### **VISION (OPTIONAL)**

Color sensor	Resolution, frame rates (fps), field of view (FOV): up to 1280 x 720 @ up to 30 fps; FOV up to 65 +/- $3^{\circ}$ (diagonal)	
	Focusing range: 30 cm to infinity	
Depth sensor (Intel® RealSense™)	Resolution, frame rates (fps), field of view (FOV): up to 480 x 270 (16:9) @ up to 30 fps; FOV 72 +/- 3° (diagonal)	
	Minimum depth distance (min-Z): 18 cm	

\*without gripper \*\*in motion



# Generation

Brand of the group NGX ROBOTICS

#### **Official Distributor**

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