

KINOVA® GEN3 TOGETHER IN ROBOTICS

EMBRACING THE POWER OF MODULAR AND ADAPTABLE ROBOTIC ARMS TO TURN YOUR IDEAS INTO REALITY

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 1 & 2, 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

Count on Kinova for first-rate service and support, plus access to the resources of the Kinova Academy.

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

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 cm/s	
Actuator position range	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, ROS Noetic, ROS 2 Humble
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, motor 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° (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

Contact us to request a demo



KINOVA

kinovarobotics.com | info@kinovarobotics.com | +1 514 277-3777

TM KINOVA KORTEX is a trademark of Kinova inc.

© Kinova inc 2024. All rights reserved.

©MATLAB and Simulink are registered trademarks of The MathWorks, Inc.

©Intel and Intel RealSense are trademarks of Intel Corporation or its subsidiaries