

FRANKA RESEARCH 3

The reference robotic platform for AI & Robotics research.

Franka Research 3 is the reference world-class, force sensitive robot system that empowers researchers with easy-to-use robot features as well as with low-level access to robot's control and learning capabilities.

Get a free technical presentation with our experts!



✓ Robot System

Franka Research 3's robot system includes the Arm and its Control. The force sensitive and agile Arm features 7 DOF with torque sensors in each joint, industrial-grade pose repeatability of +/- 0.1 mm and negligible path deviation even at high velocities. It comes with a payload of 3 kg, a reach of 855 mm and a workspace coverage of 94.5 %.

✓ FCI (Franka Control Interface)

FCI is the ideal interface to explore low-level programming and control schemes, providing the current status of the robot and enabling its direct torque control, at 1 kHz. On top of the C++ interface libfranka, integration with the most popular ecosystems ROS, ROS2 and MATLAB & Simulink is available!

✓ DESK

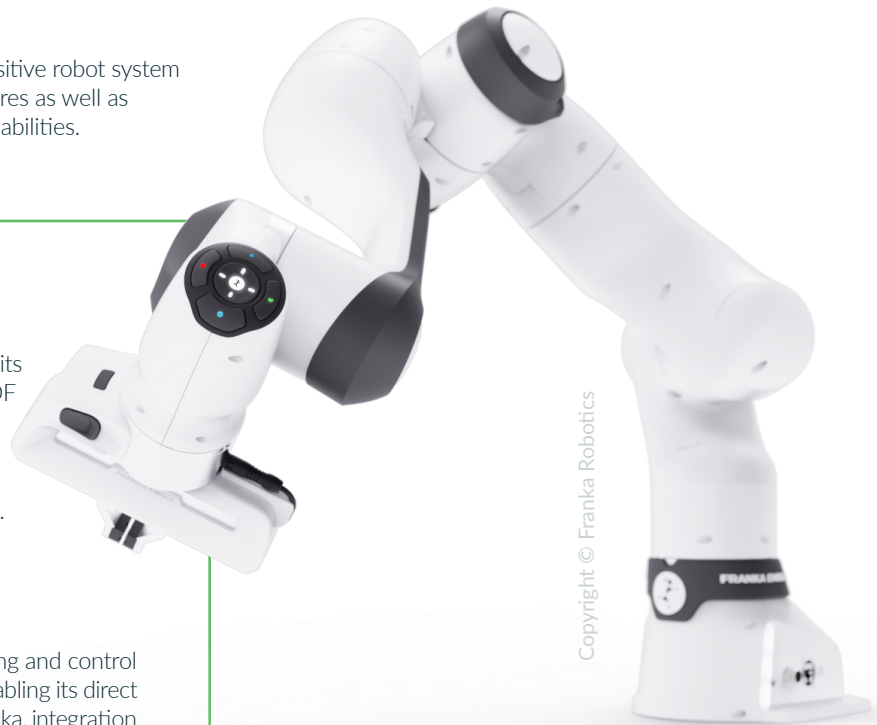
Desk is the browser-based user interface that offers quick robot control options, and where Apps can be dragged and dropped into a sequence to create entire tasks in no time. Ideal for rapid prototyping of robot behaviors, setup of experiments, simple human-robot interaction studies and demos.

✓ Watchman

Easy to use and fast to implement safety. Thanks to browser-based user interface Watchman, typically complex safety setups are greatly simplified to ensure that your lab and lab workers are protected.

✓ Resources and Community

An open and global research ecosystem enabled by a powerful robotics platform for quicker time to results and publishing. Franka Research 3 is the reference platform to exchange and collaborate. Promote your latest breakthroughs within the community.



End effectors and additional software

+ Franka Hand

A 2-finger gripper with exchangeable fingertips, fully integrated with the software of Franka Research 3, therefore plug-and-use.

+ App Package for FR3

A selection of Apps, modular building blocks that can be combined into App Workflows to prototype robot behaviors rapidly.

+ RIDE

A development interface for writing custom Apps and connecting third-party HW and external resources. The ideal tool for customizing and extending the system's capabilities.

www.franka.de/research
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A GROWING ECOSYSTEM

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Helping researchers to deliver cutting edge results quickly and reduce “time-to-paper”.

Franka Robotics offers a variety of integrations based on our Franka Control Interface (FCI), providing a solid bridge between our cutting edge hardware and the most-used ecosystems in research and academia. Such synergies enables you to make full use of the powerful data acquisition and real-time control capabilities of Franka Research 3.

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! NVIDIA Isaac Sim™

NVIDIA Isaac Sim makes your development and testing better and faster, by creating photorealistic, physically accurate virtual environments. The scalable robotics simulation and synthetic data-generation tool is designed to seamlessly integrate with the latest robotic systems, including the FR3. With such integration, you can replicate real-world scenarios and conduct comprehensive testing as well as analysis.



! Franka Matlab

A quick, intuitive, and robust way for researchers to evaluate their algorithms on Franka Research 3. The library Franka Matlab Toolbox provides all of the necessary control options and signals from the robot. A rich set of MATLAB® scripts and Simulink® blocks is available too, as well as a list of advanced demos, covering a wide array of possibilities for controlling the Franka robot.



! Franka ROS 2

ROS 2, the successor to the widely acclaimed ROS, has become a beacon of innovation, opening new doors for researchers and industry professionals alike. We have released our first Franka ROS 2 package version to provide the most widely used functionalities, enriching FR3 with the opportunities ROS 2 unlocks. And we will extend it further, to bring all of Franka robots' features fully into the ROS 2 world.

