

*Danish robot integrator  
specialising in automation  
and customised machinery*



## Franka Emika Cobot

User-centred design and development  
of high-performance technology.



**FRANKA EMIKA**  
DEVELOPED BY

# Robotics, redefined



Franka Emika's robot is agile and sensitive - like a human arm. Programming is workflow-based and intuitive, interaction is seamless.



AGILE THANKS TO ITS 7 AXES



ULTRA SENSITIVE DUE TO SENSORS IN ALL AXES



FAST REACTION WITH 1kHz CONTROL



INTUITIVE PROGRAMMING OR EXPERT MODE



HIGHLY INTERCONNECTED



PRODUCTION OPTIMISATION



DETECT OBJECTS WITH INTERNAL SENSORS



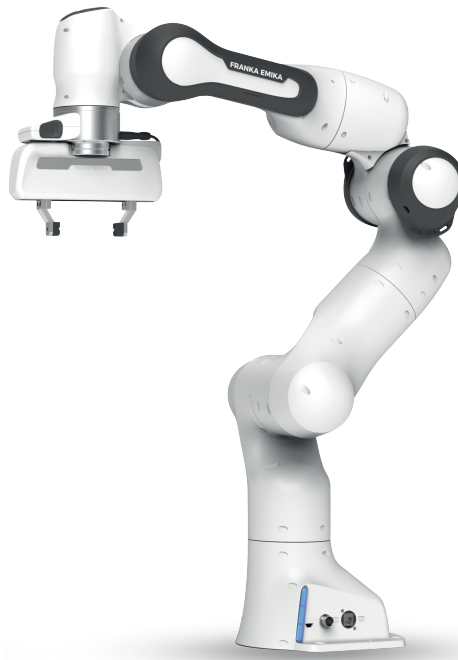
CONSTANT MODULATION OF FORCES



BROAD AVAILABILITY



IMMEDIATE TO INSTALL AND FAST ROI



## Robot System

Franka Emika Robot System includes the Arm and its Control. The sensitive and agile Arm features 7 DOF with torque sensors at each joint, allowing adjustable stiffness/compliance and advanced torque control. It comes up with a payload of 3kg, a reach of 855mm and a workspace coverage of 94,5%.



## End Effector

Hand is Franka Emika's 2-finger gripper with exchangeable fingertips, fully integrated with the software of Franka Emika Robot System, therefore plug-and-use.

The fingertips can easily be changed and adapted to the objects to be grasped, e.g. by using 3D-printed fingertips.

## Robot Apps

Apps are pre-programmed, encapsulated robotic skills that can be combined together in Desk, to automate entire tasks in no time. Desk is the high-level workflow-based programming interface, optimal for rapid prototyping and easy-to-use applications.

## 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 and MATLAB & Simulink is available!

## RIDE Development Environment

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

## Resources and Community

Explore a digital space where you can access documentation, tutorials, tools and code. Join a community of experts and like-minded people to seek advice, exchange knowledge and show off your breakthroughs!

# The right interface for each case

## Three access levels to the robot address different needs and skills

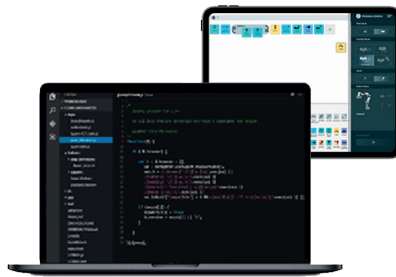
### DESK

The ease of use and minimal programming time makes Desk the most suitable interface for rapid prototyping, simple human robot interaction studies and demos.



### RIDE

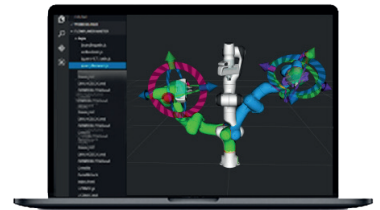
It enables researchers to fully integrate the Franka Emika system into experimental setups, and exploit its integrated high performance controllers. It is also a great tool for teaching introductory robotics.



### FCI

FCI bypasses the robot's Control to let researchers run their own control algorithms in external real-time capable PCs at 1 kHz. It is the ideal interface to explore low-level planning and control schemes.

ROS MATLAB SIMULINK

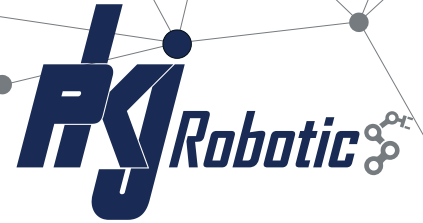


## Which interface suits best for what task?

Check what types of tasks are involved in your research work, and which of the three interfaces you are going to use mostly.

	DESK	RIDE	FCI
Workflow-based programming using Apps	●		
Quick prototyping of experiments and demos	●		
Execution of robot tasks	●		●
Development of customised Apps		●	
Connection of third-party hardware		●	●
Connection of external resources		●	●
1 kHz torque, position and velocity control			●
1 kHz measurement of sensor signals and robot status			●
Access to kinematic and dynamic robot model			●
Integration with ROS and MATLAB & Simulink			●

## About Us



*PKJ Robotics is a robot integrator that specialises in the development of automation solutions and customised machinery.*

*PKJ Robotics is a division of P.K. Jeppesen & Søn A/S Maskinfabrik, which was established in 1888. In close collaboration with our customers, we carry out the project, from the first idea to the finished product.*

*We have 4.400m<sup>2</sup>, a modern machine park with highly specialised machines as well as 50-60 skilled employees, each of whom is a specialist in his field. We can handle all tasks, and we always accept a challenge. Try us!*

## Services

**BRING SOLUTIONS  
TO LIFE**

### **P.K. JEPPESEN & SØN A/S** MACHINE FACTORY

- 5-axis milling & turning
- Wire/Die sinking EDM, Round/flat grinding
- Cutting/Bending, rolling, welding, assembling
- Developing and designing custom machines
- 3D CAD constructions

### **PKJ ROBOTICS** SOLUTIONS PROVIDER

- Idea generation in collaboration with customers
- Cobot with endless possibilities
- Complete solution proposals
- Quick simple test setup

## PARTNERS



**FRANKA EMIKA**



**GIMELLI**  
engineering

**FRONTMATEC**



For more information visit

[www.pkj-robotics.dk](http://www.pkj-robotics.dk)

✉ [info@pkj-robotics.dk](mailto:info@pkj-robotics.dk) ☎ +45 5572 0250



Næstved

