

Quick Guide for Installation

FRANKA GELLO DUO

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1.1	18.12.2025	Updated information in Chapter 5 "Assembly instructions" and fixed errors
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Product Reference:

Franka article number	Revision	Model number	Description
313686	00-05	10074107	Franka GELLO Duo
313684	00-05	10074108	Franka GELLO Arm (part of Franka GELLO Duo)



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1 PURPOSE AND SCOPE

The quick guide for installation provides step-by-step instructions for assembling and connecting Franka GELLO Duo system. It is intended to help users quickly set up the hardware and prepare it for initial operation with Franka Research 3 Duo (FR3 Duo robot).

The guide covers:

- Components included in the package
- Correct assembly procedures
- Reference to further resources for teleoperation and programming

Intended Audience

This guide is designed for:

- **Researchers** working with robotic systems
- **Technicians** responsible for hardware setup
- **Developers** integrating Franka GELLO Duo into custom applications

Basic familiarity with robotic hardware and safe handling of electronic components is recommended.

2 LEGAL DISCLAIMER

Franka GELLO-Arms are experimental development tools that are provided solely for testing and evaluation purposes. They are not part of the certified product portfolio of Franka Robotics GmbH and are supplied 'as-is' without any express or implied warranties, including but not limited to warranties of merchantability, fitness for a particular purpose, or conformity. The Supplier does not provide any support, maintenance, or updates for these tools. Any liability for material or legal defects is excluded, except in cases of willful misconduct or gross negligence. This clause shall not affect mandatory liability under applicable product liability laws or for injury to life, body, or health.

3 ABOUT FRANKA GELLO DUO

Franka GELLO Duo is a teleoperation device for the Franka FR3 Duo robot. It is kinematically equivalent to the FR3 Duo robot system, but scaled down in dimensions, allowing users to control the FR3 Duo directly at joint level. The hardware is an upgraded version of the hardware used in the original GELLO paper by Philipp Wu et al. ¹

It is especially useful for researchers who want to explore:

- Intuitive joint-level teleoperation
- Large-scale data recording for imitation Learning, e.g., training of Vision-Language-Action models

Comparing GELLO with VR controllers and 3D SpaceMouses for teleoperation tasks, the authors of the paper have found that *“utilizing GELLO results in consistently faster completion times. This not only signifies that GELLO is easier to use with a higher success rate but also indicates its efficiency; faster completion times would enable users to achieve more successful operations in each time frame”*.

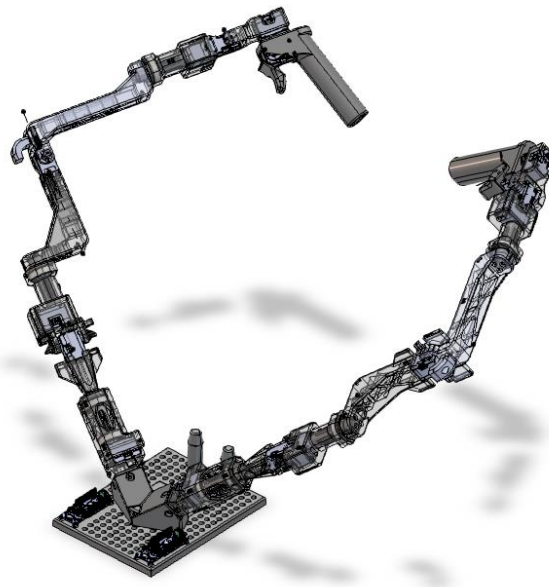


Figure 1: Franka GELLO Duo

The hardware and software of Franka GELLO Duo are open source, so anyone in the community can access and use them freely. Franka Robotics has contributed a ROS 2 implementation of the GELLO software and 3D-printable parts compatible with the Franka FR3 Duo to the original author’s repositories:

- https://github.com/wuphilipp/gello_software
- https://github.com/wuphilipp/gello_mechanical

NOTICE

Franka GELLO Duo is designed to match the kinematics of Franka FR3 Robot Arm v2.0 and later versions. Previous robot versions slightly differ.

4 SCOPE OF DELIVERY / INCLUDED IN THE BOX

Item No.	Components	Quantity
1	Franka GELLO Arm	2 pcs.
2	Table Base Mount Duo	1 pc.
3	Screws M4x12	6 pcs.
4	OpenRB-150 Controller	2 pcs.
5	Screws C2x8 black	8 pcs.
6	Cable USB-A to USB-C 2m	2 pcs.
7	Reference to Assembly Guide	1 document



See Figure 2 below for a visual reference

SCOPE OF DELIVERY / INCLUDED IN THE BOX



Figure 2: Visualization of included items

5 ASSEMBLY INSTRUCTIONS

Step 1 – Install the Controllers

1. Position one **OpenRB-150 Controller** (4) on each side of the base (top corners).
2. Check that the USB-C port faces outward for easy access.
3. Fix each controller using **four screws C2×8 black** (5).

Step 2 – Mount Franka GELLO Arms

1. Place the **Table Base Mount Duo** (2) on a stable surface.
2. Attach each **Franka GELLO Arm** (1) to either side bracket of the base.
3. Use **three M4×12 screws** (3) per Arm to secure them firmly.
4. Make sure both Arms are symmetrically aligned and stable.

Step 3 – Connect the System

1. Plug **Franka GELLO Arm** (1) cable connector into any of the four white connectors on the controller (4).
2. Repeat the same for the other **Franka GELLO Arm** (1).
3. Ensure all connections are secure before continuing.
4. Connect each **OpenRB-150 controller** (4) to your **PC** using the **USB-A to USB-C cable** (6).



See Figure 3 below for a visual reference

ASSEMBLY INSTRUCTIONS

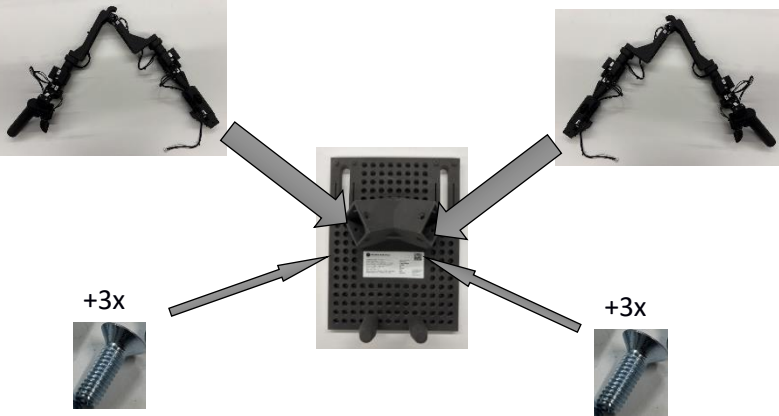
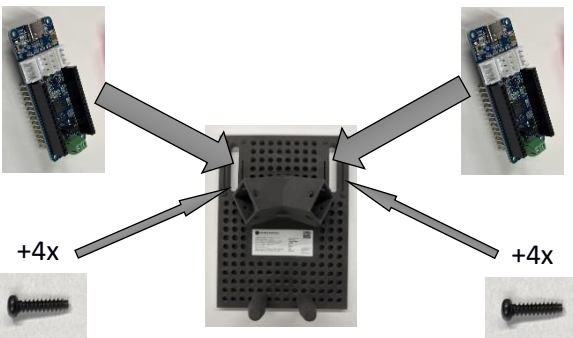
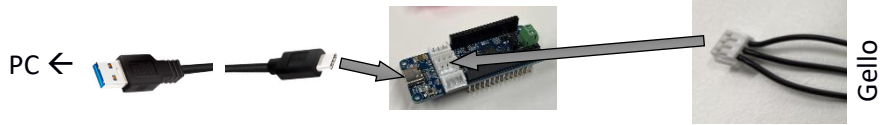
Step	Instruction
1	 <p>+3x</p> <p>+3x</p>
2	 <p>+4x</p> <p>+4x</p>
3	 <p>PC ←</p> <p>any of the 4 white connectors</p> <p>Gello</p>

Figure 3: Assembly

ASSEMBLY INSTRUCTIONS

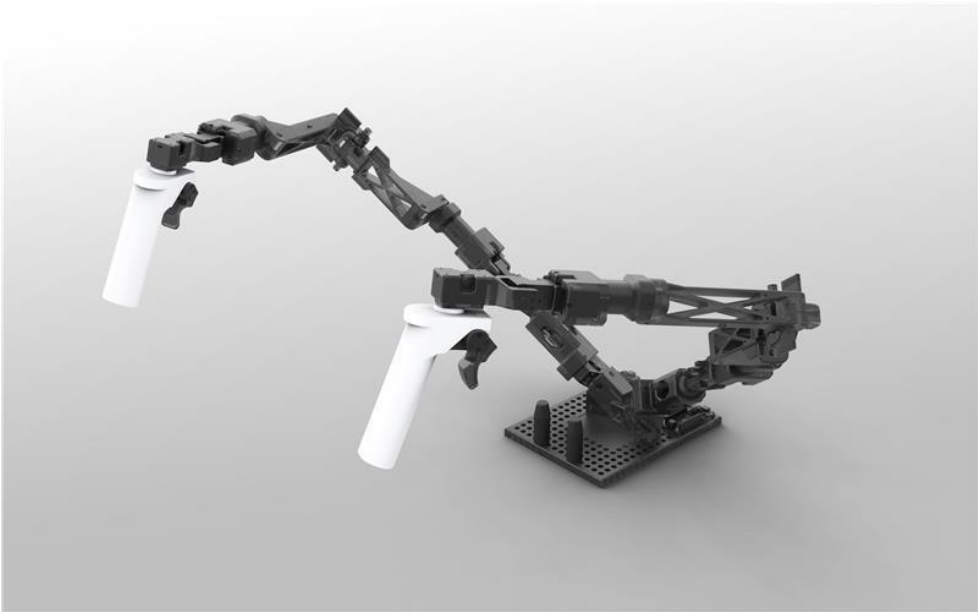


Figure 4: Installed Franka GELLO Duo

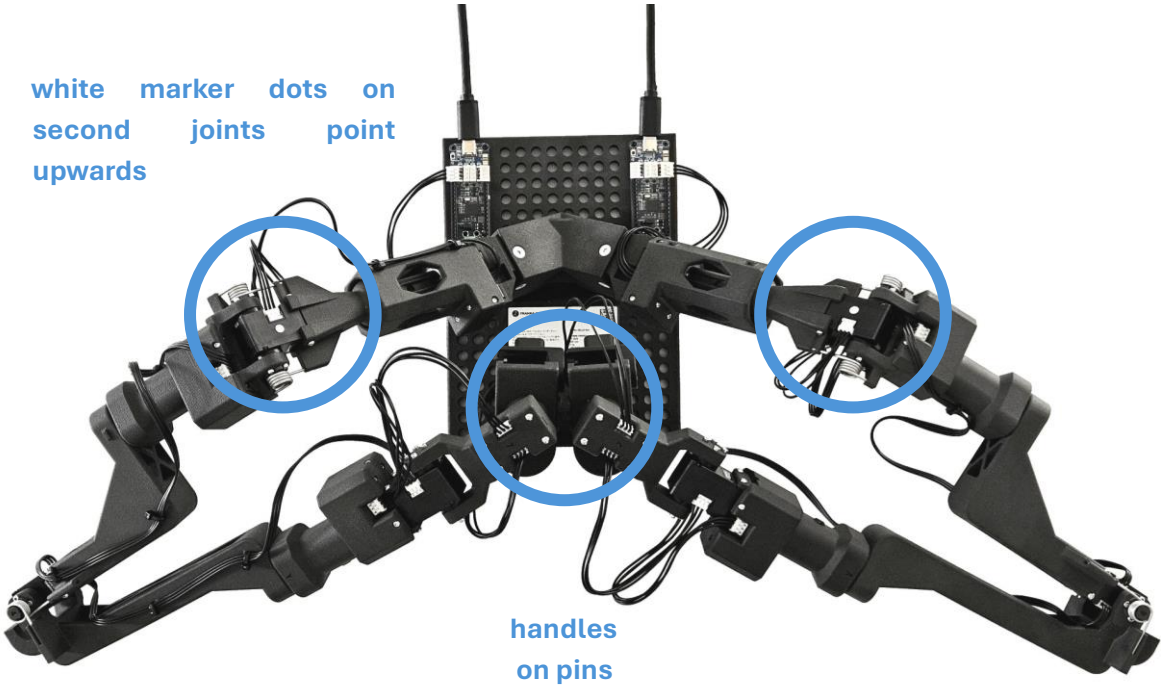


Figure 5: Resting pose

6 SOFTWARE

The ROS 2 integration to control a Franka FR3 robot system using the Franka GELLO is available in the “ros2” subfolder of the “gello_software” repository: https://github.com/wuphilipp/gello_software/tree/main/ros2.

Refer to the README of the “ros2” folder for instructions on launching ROS 2 nodes.

NOTICE

The ROS 2 package “franka_gello_state_publisher” requires a configuration file for each individual GELLO system which defines its hardware properties and settings.

For Franka GELLO a suitable configuration file is provided:

```
ros2/src/franka_gello_state_publisher/config/franka_gello_duo.yaml
```

To use it:

- Update the **com_port** entries so they match the ID of your controller.
- Refer to the **README** for detailed instructions on how to identify this ID.

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