

INDUSTRIAL PRODUCT DATASHEET

SO-ARM101 Pro Assembled Kit – LeRobot Compatible 6DOF Robotic Arm

SO-ARM101 Pro Assembled Kit – LeRobot Compatible 6DOF Robotic Arm with open-source design, STS3215 servos, and SenseCraft Robotics workflow for imitation learning and teleoperation.

SKU

100046482

UPDATED

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PRICE

\$299.00(Excl. VAT)



Overview



The SO-ARM101 Pro Assembled Kit – LeRobot Compatible 6DOF Robotic Arm features six STS3215 magnetic-encoder bus servos delivering 30 kg·cm torque per joint with 12-bit absolute position feedback. It supports Hugging Face LeRobot natively, includes fully open-source hardware/firmware/software, and offers SenseCraft Robotics guided setup and cloud-powered AI training for leader-follower teleoperation, imitation learning, and reinforcement learning.

Key Features

- **6 Degree-of- Freedom(DOF) Arm** — Six STS3215 magnetic-encoder bus servos deliver 30 kg-cm torque per joint with 12-bit absolute position feedback for smooth, quiet, and repeatable motion
- **Hugging Face LeRobot Native Support** — Works out of the box with the LeRobot framework for imitation learning; collect teleoperation data and train ACT/Diffusion models with community-shared pipelines.
- **Affordable & Flexible Kit Options** — Low-cost 3D-printable robotic arm with flexible kit options. Select full-assembly, servo-only pack or unassembled parts to match your budget and project needs.
- **Fully Open-Source** — All hardware designs, BOM, firmware, and software are publicly available; modify, extend, and share freely

One-Stop Guided Setup & Cloud-Powered Robot AI Training

SenseCraft Robotics is an in-house developed, exclusive platform from Seeed Studio. It delivers an all-in-one robot-AI workflow featuring guided setup, cloud training and lightweight local validation. It lets you finish essential pre-training steps — device pairing, serial binding, camera binding, calibration check and teleoperation check — all in one place, greatly streamlining your setup for education labs, R&D PoCs and early-stage robot validation projects.

Platform download :

[https://sensecraft.seeed.cc/en/robotics?](https://sensecraft.seeed.cc/en/robotics?utm_source=bazaar&utm_medium=ecommerce&utm_campaign=robotics_hardware&utm_content=product_detail)

[utm_source=bazaar&utm_medium=ecommerce&utm_campaign=robotics_hardware&utm_content=product_detail](https://sensecraft.seeed.cc/en/robotics?utm_source=bazaar&utm_medium=ecommerce&utm_campaign=robotics_hardware&utm_content=product_detail)

Product Gallery

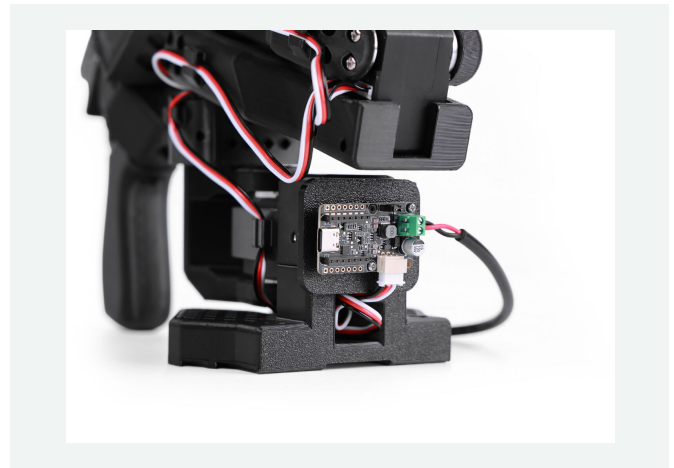
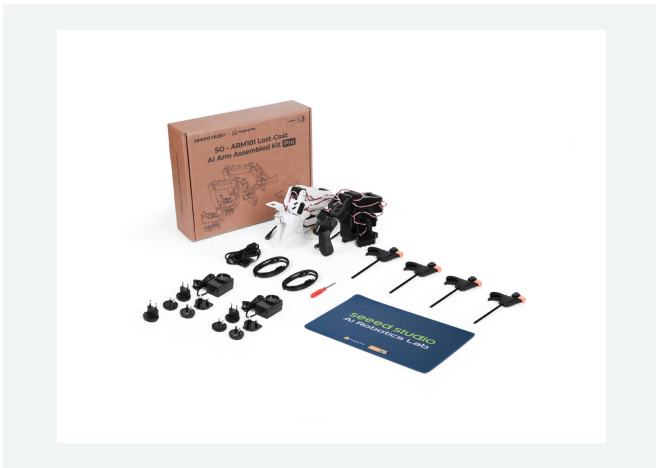
Package Option	Pre-assembled	Servo Motors	Servo Control Board	3D-Printed Body Parts	Wrist Camera Bracket	USB Camera	Teleoperation	Imitation Learning
 Servo Motor Kit	-	✓	✓	-	-	-	✓	-
 Unassembled Bundle	-	✓	✓	✓	✓	-	✓	-
 Assembled Arm	✓	✓	✓	✓	✓	✓	✓	✓

Note: Servo Motor Kit + 3D Printed Parts = Unassembled Bundle



FREE FLEXIBLE GRIPPER 3D-PRINTED PARTS





Specification

Arm Type	SO-ARM101	
	Leader Arm	Follower Arm
Motor Configuration	1 × 7.4 V motor, 1:345 gear ratio — Joint 2	12x (12V) 1:345 gear ratio motors for all joints
	2 × 7.4 V motors, 1:191 gear ratio — Joints 1 & 3	
	3 × 7.4 V motors, 1:147 gear ratio — Joints 4 & 5 & Gripper	
Power Supply	DC 5V3A	DC 12V2A
DoF	5+1	
Payload	500g	
Angle sensor	12-bit magnetic encoder	
Operating Temperature Range	0°C~40°C	
Communication Method	UART	
Control Method	PC	

	SO-ARM101 Pro Servo Motor Kit	SO-ARM101 Pro Unassembled Bundle	SO-ARM101 Pro Kit
Price	\$189.00	\$295.00	\$299.00
Assembly	Structural parts to be 3D-printed by user	Assembly from crutch	Pre-assembled
USB Camera	Excluded	Excluded	Included
Best For	Users with existing 3D-printed frames or custom enclosures	Hobbyists who enjoy the build process and want a complete kit. Select accessories as you like.	Researchers, educators, and teams who want to skip the build and focus on AI
Time to First Experiment	8+ hours	2-3 hours	Under 30 minutes

Hardware Overview



Applications

- **Leader-Follower Teleoperation:** Collect robot demonstration data easily via leader-follower teleoperation, ready for imitation-learning model training.
- **Imitation Learning & Reinforcement Learning:** Teach your robot household-style skills like folding clothes with human demos. Gather data via leader-follower teleoperation, train imitation-learning policies on LeRobot, and watch your robot reproduce tricky real-world manipulation tasks. SO-101 works seamlessly with LeRobot for data collection, simulation, training, and deployment. Train and deploy custom grasp-and-place policies quickly on NVIDIA Jetson edge devices. Explore the tutorial: LeRobot on NVIDIA Jetson AI Lab (<https://www.jetson-ai-lab.com/archive/lerobot.html>)
- **Community Inspiration:** Follow Nikodem Bartnik's hands-on SO-101 workflow: hardware assembly, servo control, custom policy training and real-time block-picking inference. Walk through key steps, fix typical issues and explore the open-source arm's potential. Our monthly project call is now open! Share your project demos for a chance to win prizes and discount coupons.
- **Start building your first Physical AI Project in 30 mins with SenseCraft**

Part List

Assembled Black Leader Arm	x1
Assembled White Follower Arm	x1
Flexible Gripper Parts	x1
32*32mm USB Camera	x1
Servo Driver Board for LeRobot	x2
5V Power Supply Cable (Multiple head)	x1
12V Power Supply Cable (Multiple head)	x1
USB-C Cable	x2
DC Power Pigtail Cable	x2
Screwdriver	x1
Clamp	x4
Mouse mat	x1

Compliance & Logistics



HSCODE	9023009000
USHSCODE	9023000000
UPC	
EUHSCODE	9023001000
COO	CHINA

FCC Requirement

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

15.21

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses, and can radiate radio frequency energy.

If not installed and used in accordance with the instructions, it may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Resource Links

- <https://www.seeedstudio.com/SO-101-Assembled-Kit-Pro-p-6691.html>
- [STS3215 Servo Motor Datasheet](#)
- [Finedtune 3D printed parts files](#)
- [Original SO-ARM100 3D printed parts](#)
- [Purchase after March 03 2025, please see: Servo Adaptor Board for Seeed Studio XIAO Datasheet](#)
- [Purchase before March 03 2025, please see: Serial Bus Servo Drive Board DataSheet](#)
- [If you are using reComputer J301, visit data sheet](#)
- [If you are using reComputer J401, visit data sheet](#)

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