seeed studio

reBot Arm B601-DM

Open-Source | Reliable | Accessible for Research & Real World Deployment

reBot Arm B601-DM is a fully open-source robotic arm built with a developer-first approach. Featuring a standardized mechanical design, transparent bill of materials (BOM), and an integrated software stack, the reBot enables a more predictable workflow—from assembly and data collection to model development. With support for end-to-end learning via Hugging Face LeRobot, seamless workflows in NVIDIA Isaac Sim, and compatibility with ROS1/2, reBot allows developers to move beyond infrastructure challenges and focus on developing and iterating on embodied intelligence in the physical world. It is not just hardware, but a ready-to-use platform designed to accelerate Physical AI innovation.

Highlight Features

100% Open-Source & Reproducible

Complete access to hardware design, BOM, software, and algorithms

High-Performance Actuation

Powered by DAMIAO high-torque, low-noise motors for stable, precise, and reliable motion control

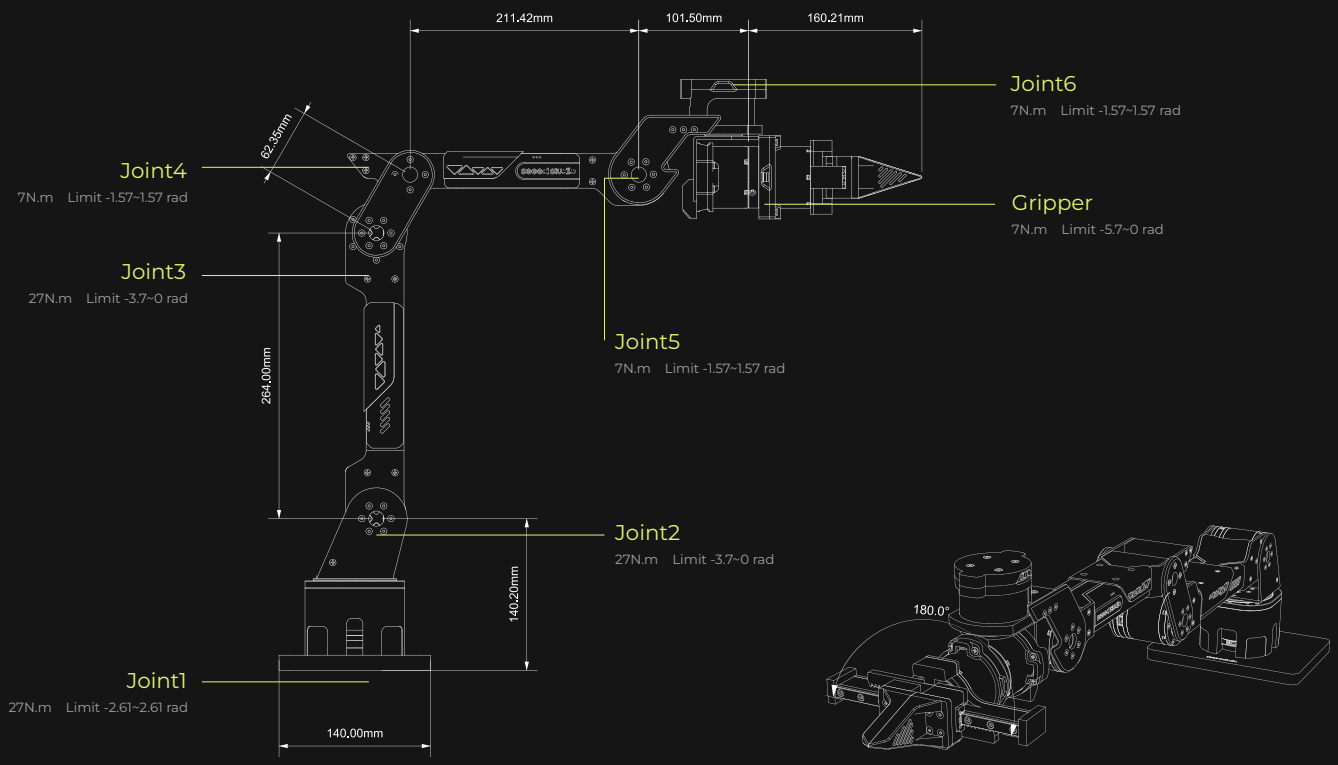
Rich Ecosystem & Continuous Updates

Fully compatible with ROS1/2, Isaac Sim, LeRobot, Pinocchio, etc

Developer-Friendly, Easy to Get Started

Step-by-step, streamlined assembly guides and video tutorials

Product Dimensions



Specifications

REBOT ARM B601-DM WITH GRIPPER	
Packaged Order	SKU E26041401
Degrees of Freedom	6+1
Reach	767mm 607mm (without gripper)
Payload	1.5kg (without gripper, 70% reach recommended)
Joint Range of Motion	J1: ±150° | J2: -220° - 0° | J3: -220° - 0° J4: ±90° | J5: ±90° | J6: ±90° | Gripper: -325° - 0°
Repeatability	0.2 mm
Weight	about 4.7kg
Servos	DM-J4340P-2EC x3 DM-J4310-2EC x4
Operating Temperature	-20°~50°
Power	DC 24V 15A
Software Stack Supported	ROS1 / Moveit1 ✓
	ROS2 / Moveit2 ✓
	Python / Lerobot ✓
	Isaac Sim / Pinocchio ✓
	Open Source ✓

PARAMETER	DM4310 MOTOR	DM4340P MOTOR
Rated Voltage	24V	24V
Rated Current	2.5A	2.5A
Peak Current	7.5A	8A
Rated Torque	3NM	9NM
Peak Torque	7NM	27NM
Rated Speed	120rpm	36rpm
No-Load Max Speed	200rpm	52rpm
Gear Ratio	10:1	40:1
Number of Pole Pairs	14	
Phase Inductance	340μH	
Phase Resistance	650mΩ	880mΩ
Outer Diameter	56mm	57mm
Height	46mm	56.5mm
Motor Weight	Approx. 300g	Approx. 375g
Encoder Resolution	14 bits	
Number of Encoders	2	
Encoder Type	Magnetic Encoder (Single-turn)	
Control Interface	CAN@1Mbps	
Tuning Interface	UART@921600bps	
Control Modes	MIT Mode; Speed Mode; Position Mode	
Protection	• Driver Over-temperature Protection: Triggers at 120°C, motor exits "Enable Mode" • Motor Over-temperature Protection: Recommended ⩽100°C (customizable), motor exits "Enable Mode" when exceeded • Motor Over-voltage Protection: Recommended ⩽32V (customizable), motor exits "Enable Mode" when exceeded • Communication Loss Protection: Motor exits "Enable Mode" if no CAN command is received within the set period • Motor Over-current Protection: Recommended ⩽9.8A (customizable), motor exits "Enable Mode" when exceeded • Motor Under-voltage Protection: Motor exits "Enable Mode" if supply voltage < set value (recommended ⩾15V)	

Commercial use for reBot Arm B601-DM —— Contact us at edgeai@seeed.cc

More AI Robotics Components at Seeed Studio: seeedstudio.com/ai-robotics

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