

Usage Constraints

Read with AI

⚠️ This part lists the capability boundaries and unverified items of the Beta 1 prototype. Confirm each one before use.

1. Capability Boundaries and Items Not Yet Provided

Item	Beta 1 status
Fingertip tactile sensor	Not provided on Beta 1 (provided on Beta 2 hardware and later) Beta 2 delivery: fingertip tactile sensors (point array: 40 sensing points on the thumb, 34 on the other fingers, each point reporting 3-axis force plus temperature). Requires firmware v2.1.0 and SDK v2026.7.21 or later, upgraded together See SDK Reference for the API
Simulation model with soft body	Not provided in this version, provided later

2. Electrical and Power (Strong Constraints)

- **External harness:** The wrist directly leads out two cables—**XT30 + RJ45 network port**.
- **Operating voltage:** Supports only **12 V DC**. Connect exactly 12 V. Other voltage ranges aren't compatible in this version.
- **Rated power:** A supply rated at 200 W or more is recommended. The official adapter meets this.
- **Change notice:** The external interface form and supply voltage range will change in later versions—leave room in your integration design.

3. Soft Body and Skin

- Fingertip soft-body hardness is still being tuned. The skin design isn't finalized.
- Soft-body contact properties, surface friction, appearance, and feel will keep evolving.
- The current prototype's feel, appearance, and soft-body life don't represent the final product.

4. Thermal

- The thermal design is still iterating.
- Temperature rise, surface temperature, and throttling behavior under long continuous operation aren't finally verified.
- Don't run long full-load or high-load continuous tests on the Beta 1 prototype.

5. Reliability and Durability

- Whole-unit reliability testing is ongoing.
- Beta 1 makes no guarantee on durability, life, drop, vibration, or shock.
- Contact your point of contact immediately if a prototype is damaged.

6. Motor Load Capacity

- Whole-hand motor peak force, rated force, and load curves may change later.
- The prototype's measured load values aren't committed external values and shouldn't be a basis for your later design or procurement.

7. Joint Zero Calibration

- Joint zero-calibration accuracy is still being optimized. The prototype may show larger-than-expected zero errors.
- The prototype's zero accuracy doesn't represent the final product.

8. Joint Back-Drive and Torque Transparency

- Back-drive torque consistency across joints is still being tuned.
- Estimating external joint torque from joint current: the forward path exists in Beta 1, but the hardware consistency and calibration accuracy it relies on haven't converged, and closed-loop performance isn't verified.
- In Beta 1, don't use joint current readings to judge external contact force or torque. These values don't represent the final product.