



K³HAND

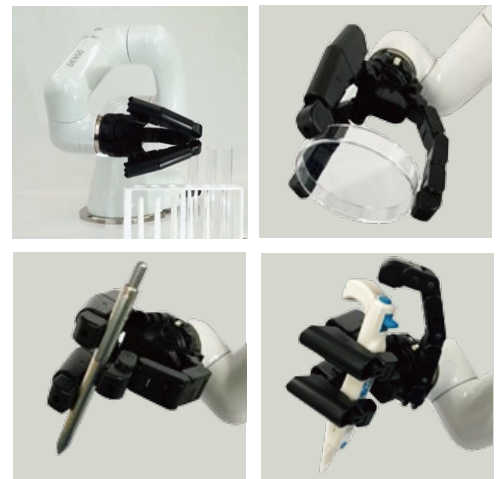
Compact, lightweight, and easy-to-use end effectors for collaborative robots

It uses our original compact servo with non-contact output shaft encoder and clutch mechanism mounted on each active joint. It demonstrates dexterity with multiple fingers / wide motion range of movement, fitting grip mechanism, and finger adduction/abduction while still being small and light-weight. Additionally, the clutch mechanism provides safety, preventing injury in the event of impact with a human.

The K3 hand can handle a wide variety of tasks, and fingertips can be changed out according to need. The hand can perform tasks that require dexterity, such as grasping items of varying shapes, positions, and softness.

Features of K³Hand

- **Dexterity = human-like = multiple fingers/multiple joints**
→ wide motion range → can hold irregularly-shaped objects in a variety of positions.
- **Compact / Light-weight (290g, excluding mounting flange)**
→ Compatible with small cooperative robot arm (loading weight ~ 500 g), payload up to 100g.
Attachable to DENSO WAVE's collaborative robot, COBOTTA
- **Safety**
→ equipped with clutches, edgeless design → Shock absorption in case of collision with a person.

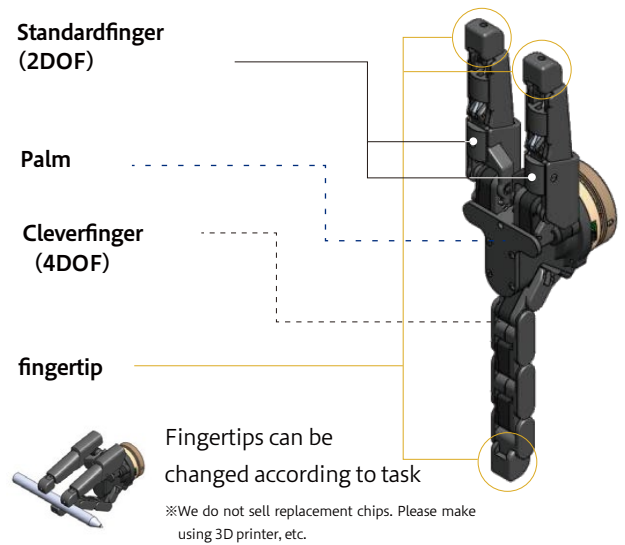


Specifications / Range of Motion

Max length (fully extended)	290mm
Weight	290g (excluding mounting flange)
Fingers	3
Degrees of freedom	Total : 8DOF Thumb ('clever' finger) : 4DOF Standard fingers : 2DOF ※Standard fingers→Fitting grip mechanism
Max weight capacity	100g
Safety measures	Clutch equipped on each joint Thermal shutdown function
Control method	Command control
Communication	Connection1: COBOTTA communication Connection 2: UART
Voltage	DC24V
Feedback signal	Servo output angle Motor current

Range of motion		Thumb ('clever' finger)	Standard fingers
1st joint	adduction/abduction	-90 ~ 90°	0 ~ 120°
2st joint	Flexion	-50 ~ 130°	0 ~ 120°
3st joint	Flexion	-90 ~ 90°	0 ~ 90°
4st joint	Flexion (Fingertip)	-90 ~ 90°	0 ~ 90°

Composition



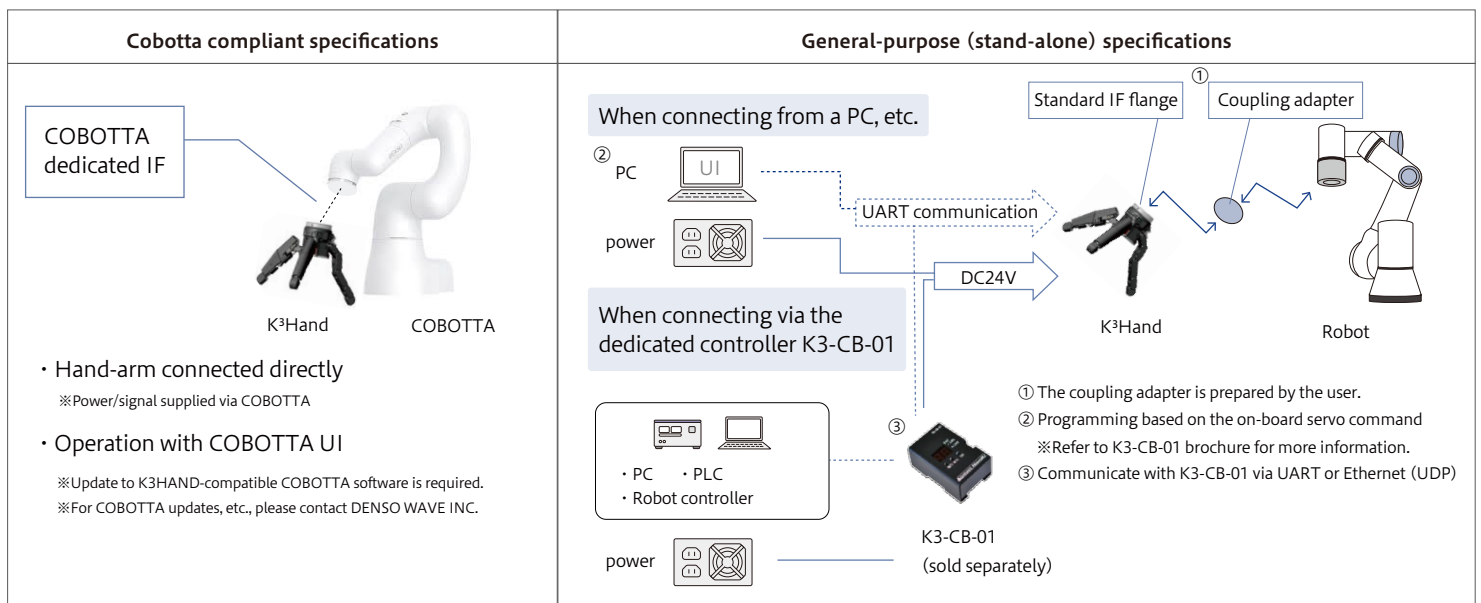
Connection

Type① COBOTTA compatibility specs
Integrated COBOTTA-dedicated co

Type② General-purpose (stand-alone) specifications
Connector for UART communication: USBmicroB
Connector for DC24V: JST-manufactured S02B-ZESK-2D
※Power cable with connector included

Finger exterior material : ABS
Fingertip rubber : chloroprene foam

System



Orbray Co., Ltd.

3-8-22 Shinden, Adachi-ku, Tokyo 123-8511 Japan

Tel : +81-3-35390-7620 / Fax : +81-3-5390-7657 / Mail : motor-sales@orbray.com / URL : <https://orbray.com/en/>

Details of this product

