



## uArm Swift & uArm Swift Pro Specifications

| Specifications           |                                              |       |          |           |                                               |       |          |           |
|--------------------------|----------------------------------------------|-------|----------|-----------|-----------------------------------------------|-------|----------|-----------|
|                          | uArm Swift                                   |       |          |           | uArm Swift Pro                                |       |          |           |
| Weight                   | 1.2kg                                        |       |          |           | 2.2kg                                         |       |          |           |
| Degrees of Freedom       | 4                                            |       |          |           | 4                                             |       |          |           |
| Repeatability            | 5mm                                          |       |          |           | 0.2mm                                         |       |          |           |
| Max. Payload             | 500g                                         |       |          |           | 500g                                          |       |          |           |
| Working Range            | 50mm ~ 320mm                                 |       |          |           | 50mm ~ 320mm                                  |       |          |           |
| Max. Speed               | 167mm/s                                      |       |          |           | 100mm/s                                       |       |          |           |
| Connector                | Micro USB                                    |       |          |           | Micro USB                                     |       |          |           |
| Wireless                 | Bluetooth 4.0                                |       |          |           | Bluetooth 4.0                                 |       |          |           |
| Input Voltage            | DC 6V                                        |       |          |           | DC 12V                                        |       |          |           |
| Power Adapter            | Input:100 ~ 240V 50/60Hz<br>Output: 6V5A 30W |       |          |           | Input:100 ~ 240V 50/60Hz<br>Output: 12V5A 60W |       |          |           |
| Working Temp.            | 0 ~ 40C°                                     |       |          |           | 0 ~ 40C°                                      |       |          |           |
| Hardware                 |                                              |       |          |           |                                               |       |          |           |
|                          | uArm Swift                                   |       |          |           | uArm Swift Pro                                |       |          |           |
| Joint Type               | Customized RC Servo                          |       |          |           | Customized Gearbox + Stepper                  |       |          |           |
| Position Feedback        | Potentiometer                                |       |          |           | 12 bit Encoder                                |       |          |           |
| Reducer                  | Servo gearbox                                |       |          |           | Customized ultra-thin Gearbox                 |       |          |           |
| Dimension(L*W*H)         | 150mm*132mm*281mm                            |       |          |           | 150mm*140mm*281mm                             |       |          |           |
| Mother Board             | Arduino MEGA 2560                            |       |          |           | Arduino MEGA 2560                             |       |          |           |
| Material                 | Aluminum                                     |       |          |           | Aluminum                                      |       |          |           |
| Baud Rate                | 115200bps                                    |       |          |           | 115200bps                                     |       |          |           |
| Extendable I/O Interface | I/O *3, 5V*1, IIC *1                         |       |          |           | I/O *27, IIC *1, 5V*1, 12V*1, Stepper*1       |       |          |           |
| Software                 |                                              |       |          |           |                                               |       |          |           |
|                          | uArm Swift                                   |       |          |           | uArm Swift Pro                                |       |          |           |
| PC Control               | uArm Studio                                  |       |          |           | uArm Studio                                   |       |          |           |
| App Control              | uArm Play                                    |       |          |           | uArm Play                                     |       |          |           |
| For Developer            | Python/Arduino/ROS                           |       |          |           | Python/Arduino/ROS                            |       |          |           |
| Feature                  | Open Source                                  |       |          |           | Open Source                                   |       |          |           |
| Joint Speed & Torque     |                                              |       |          |           |                                               |       |          |           |
|                          | uArm Swift                                   |       |          |           | uArm Swift Pro                                |       |          |           |
|                          | Angle                                        | Speed | Lifetime | Torque    | Angle                                         | Speed | Lifetime | Torque    |
| Base Motor               | 0° ~ 180°                                    | 60°/s | 500h     | 12kg · cm | 0° ~ 200°                                     | 40°/s | >3000h   | 12kg · cm |
| Left Motor               | 0° ~ 130°                                    | 60°/s | 500h     | 12kg · cm | 0° ~ 135°                                     | 40°/s | >3000h   | 12kg · cm |
| Right Motor              | 0° ~ 106°                                    | 60°/s | 500h     | 12kg · cm | 0° ~ 100°                                     | 40°/s | >3000h   | 12kg · cm |
| End-effector Motor       | 0° ~ 180°                                    | 60°/s | 500h     | 2kg · cm  | 0° ~ 180°                                     | 60°/s | 500h     | 2kg · cm  |
| Accessories              |                                              |       |          |           |                                               |       |          |           |
| Pump                     | Suction Diameter                             |       |          |           | 5mm ~ 10mm                                    |       |          |           |
|                          | Max. Pressure                                |       |          |           | 33kPa                                         |       |          |           |
|                          | Max. Lifting Weight                          |       |          |           | 1000g                                         |       |          |           |
|                          | Feature                                      |       |          |           | With feedback                                 |       |          |           |

|                                       |                         |                                         |
|---------------------------------------|-------------------------|-----------------------------------------|
| Universal Holder                      | Weight                  | 36g                                     |
|                                       | Dimension(L*W*H)        | 62mm*25mm*15mm                          |
|                                       | Material                | Aluminum                                |
|                                       | Holder Diameter         | 14mm                                    |
| Gripper                               | Weight                  | 58g                                     |
|                                       | Dimension(L*W*H)        | 92mm*50mm*18mm                          |
|                                       | Material                | Aluminum                                |
|                                       | Max. Force              | 800g                                    |
|                                       | Max. Open Distance      | 40mm                                    |
|                                       | Max. Speed              | 20mm/s                                  |
|                                       | Drive Mode              | Electrically-driven                     |
|                                       | Working Voltage/Current | 6V/200mA                                |
| OpenMV Camera                         | Focal Length            | 2.8mm                                   |
|                                       | FOV                     | 115°                                    |
|                                       | F-number                | f2.0                                    |
|                                       | Programmable Method     | Micro Python                            |
|                                       | Weight                  | 16g                                     |
|                                       | Dimension(L*W*H)        | 45mm*36mm*30mm                          |
| 3D Printing Kit<br>(ONLY For Pro)     | Consumption             | 35W                                     |
|                                       | Precision               | 0.2mm                                   |
|                                       | Material                | 1.75mm PLA                              |
|                                       | Max. Printing Speed     | 20mm/s                                  |
|                                       | File Format             | .gcode                                  |
|                                       | Printing Size(L*W*H)    | 100mm*100mm*100mm                       |
| Laser Engraving Kit<br>(ONLY For Pro) | Laser Power             | 500mW                                   |
|                                       | Working Voltage/Current | 12V/5A                                  |
|                                       | Wave Length             | 405nm                                   |
|                                       | Weight                  | 140g                                    |
|                                       | Dimension(L*W*H)        | 55mm*33mm*88mm                          |
|                                       | Materials to Engrave    | Wood,Plastic,Leather,Feather,Paper,etc. |

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