

# Hardware

| 850                                 | ROBOT SPECS               |
|-------------------------------------|---------------------------|
| *Ambient Temperature Range          | 0-50°C                    |
| Power Consumption                   | Typical 240 W, Max 1000 W |
| Input Power Supply                  | 48VDC 20.8A               |
| Footprint                           | Ø 190 mm                  |
| Materials                           | Aluminum, Carbon Fiber    |
| Base Connector Type                 | M8*4                      |
| ISO Class Cleanroom                 | 5                         |
| Robot Mounting                      | Any                       |
| End Effector Communication Protocol | Modbus RTU                |
| End Effector I/O                    | DI*2/DO*2/AI*2/RS485*1    |
| Communication Mode                  | Ethernet                  |

|                    |                              |                               |
|--------------------|------------------------------|-------------------------------|
| Product            | AC Control Box               |                               |
| Input              | 100-240VAC 50/60Hz           |                               |
| Output             | 48VDC 20.8A                  |                               |
| Weight             | 4.8kg                        |                               |
| Dimension(L*W*H)   | 345*135*101mm                |                               |
| Control Box IO     | CI*8+DI*8<br>(Digital Input) | CO*8+DO*8<br>(Digital Output) |
| Communication Mode | Ethernet, RS485 Master*1     |                               |

The control box is included in default.

# Comparison

|                        | UFactory 850 | xArm 5  | xArm 6  | xArm 7  |
|------------------------|--------------|---------|---------|---------|
| Payload                | 5 kg         | 3 kg    | 5 kg    | 3.5 kg  |
| Reach                  | 850 mm       | 700 mm  | 700 mm  | 700 mm  |
| Degrees of freedom     | 6            | 5       | 6       | 7       |
| Repeatability          | ±0.02 mm     | ±0.1 mm | ±0.1 mm | ±0.1 mm |
| Maximum Speed          | 1 m/s        | 1 m/s   | 1 m/s   | 1 m/s   |
| Weight(robot arm only) | 20 kg        | 11.2 kg | 12.2 kg | 13.7 kg |

|               | UFactory 850 | xArm 5       | xArm 6       | xArm 7       |
|---------------|--------------|--------------|--------------|--------------|
| Maximum Speed | 180°/s       | 180°/s       | 180°/s       | 180°/s       |
| Joint 1       | ±360°        | ±360°        | ±360°        | ±360°        |
| Joint 2       | -132° ~ 132° | -118° ~ 120° | -118° ~ 120° | -118° ~ 120° |
| Joint 3       | -242° ~ 3.5° | -225° ~ 11°  | -225° ~ 11°  | ±360°        |
| Joint 4       | ±360°        | -97° ~ 180°  | ±360°        | -11° ~ 225°  |
| Joint 5       | -124° ~ 124° | ±360°        | -97° ~ 180°  | ±360°        |
| Joint 6       | ±360°        |              | ±360°        | -97° ~ 180°  |
| Joint 7       |              |              |              | ±360°        |