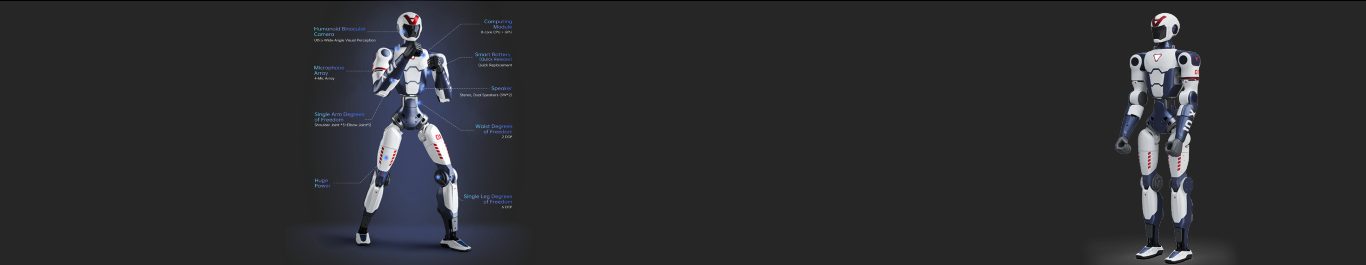


| UNITREE                                  |                                                                                      |                                                                 |                                                                                 |                                                                                     |                                                                                     |                                                                                             |                                                                                     |
|------------------------------------------|--------------------------------------------------------------------------------------|-----------------------------------------------------------------|---------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Parameter                                | R1 Basic                                                                             | R1 Edu Standard                                                 | R1 Edu Smart                                                                    | R1 Edu Pro A                                                                        | R1 Edu Pro B                                                                        | R1 Edu Pro C                                                                                | R1 Edu Pro D                                                                        |
| Picture                                  |    |                                                                 |                                                                                 |                                                                                     |                                                                                     |                                                                                             |                                                                                     |
| Total Degrees of Freedom (DOF, Actuated) | 24                                                                                   | 24                                                              | 26                                                                              | 40 (26+7+7)                                                                         | 40 (26+7+7)                                                                         | 38 (26+6+6)                                                                                 | 38 (26+6+6)                                                                         |
| Head DOF                                 | /                                                                                    | /                                                               | 2                                                                               | 2                                                                                   | 2                                                                                   | 2                                                                                           | 2                                                                                   |
| Dexterous Hand                           | /                                                                                    | /                                                               | /                                                                               | 2 × Dex3 (without tactile)                                                          | 2 × Dex3 (with 33 tactile sensor)                                                   | Revo 2, Basic                                                                               | Revo 2, Touch                                                                       |
| Hand DOF (per hand)                      | /                                                                                    | /                                                               | /                                                                               | 7                                                                                   | 7                                                                                   | 6                                                                                           | 6                                                                                   |
|                                          |                                                                                      |                                                                 |                                                                                 |  |  |          |  |
|                                          |                                                                                      |                                                                 |                                                                                 | <a href="https://www.unitree.com/Dex3-1">https://www.unitree.com/Dex3-1</a>         |                                                                                     | <a href="https://www.brainco.cn/#/product/Revo2">https://www.brainco.cn/#/product/Revo2</a> |                                                                                     |
| Compute Module                           | /                                                                                    | 40 TOPS                                                         | 100 TOPS                                                                        | 100 TOPS                                                                            | 100 TOPS                                                                            | 100 TOPS                                                                                    | 100 TOPS                                                                            |
| SDK / Dev Support                        | No                                                                                   | Yes (High-level/Low-level interfaces, supports Issac Sim, etc.) |                                                                                 |                                                                                     |                                                                                     |                                                                                             |                                                                                     |
| Warranty                                 | 8 months                                                                             | 12 months                                                       | 12 months                                                                       | 12 months                                                                           | 12 months                                                                           | 12 months                                                                                   | 12 months                                                                           |
| Max Payload (per arm)                    | 2 kg                                                                                 | 2 kg (Improving)                                                |                                                                                 |                                                                                     |                                                                                     |                                                                                             |                                                                                     |
| Size (H×W×D, standing)                   | 1210 × 357 × 190 mm                                                                  |                                                                 |                                                                                 |                                                                                     |                                                                                     |                                                                                             |                                                                                     |
| Weight (with battery)                    | Approx. 25 kg                                                                        |                                                                 |                                                                                 |                                                                                     |                                                                                     |                                                                                             |                                                                                     |
| Leg DOF (per leg)                        | 6                                                                                    |                                                                 |                                                                                 |                                                                                     |                                                                                     |                                                                                             |                                                                                     |
| Arm DOF (per arm)                        | 5                                                                                    |                                                                 |                                                                                 |                                                                                     |                                                                                     |                                                                                             |                                                                                     |
| Waist DOF                                | 2                                                                                    |                                                                 |                                                                                 |                                                                                     |                                                                                     |                                                                                             |                                                                                     |
| Perception Sensors                       | Stereo camera + 4-mic array + speaker                                                |                                                                 |                                                                                 |                                                                                     |                                                                                     |                                                                                             |                                                                                     |
| Wireless                                 | Wi-Fi 6, Bluetooth 5.2                                                               |                                                                 |                                                                                 |                                                                                     |                                                                                     |                                                                                             |                                                                                     |
| Power                                    | Lithium battery                                                                      |                                                                 |                                                                                 |                                                                                     |                                                                                     |                                                                                             |                                                                                     |
| Endurance                                | Approx. 1 hour                                                                       |                                                                 |                                                                                 |                                                                                     |                                                                                     |                                                                                             |                                                                                     |
| Wiring                                   | Hollow + Internal wiring                                                             |                                                                 |                                                                                 |                                                                                     |                                                                                     |                                                                                             |                                                                                     |
| Joint Encoders                           | Dual + Single encoders                                                               |                                                                 |                                                                                 |                                                                                     |                                                                                     |                                                                                             |                                                                                     |
| Joint Bearings                           | Crossed roller + double-row ball                                                     |                                                                 |                                                                                 |                                                                                     |                                                                                     |                                                                                             |                                                                                     |
| Joint Motors                             | Low-inertia high-speed internal rotor Permanent Magnet SynchronousMotor (PMSM)       |                                                                 |                                                                                 |                                                                                     |                                                                                     |                                                                                             |                                                                                     |
| Forearm + Upper Arm                      | 435 mm                                                                               |                                                                 |                                                                                 |                                                                                     |                                                                                     |                                                                                             |                                                                                     |
| Shank + Thigh                            | 675 mm                                                                               |                                                                 |                                                                                 |                                                                                     |                                                                                     |                                                                                             |                                                                                     |
| OTA                                      | Supported                                                                            |                                                                 |                                                                                 |                                                                                     |                                                                                     |                                                                                             |                                                                                     |
| Standard Packing List                    |  |                                                                 |                                                                                 |                                                                                     |                                                                                     |                                                                                             |                                                                                     |
| Standard Packing List                    | Robot × 1<br>battery × 1<br>charger × 1<br>joystick × 1                              |                                                                 | Robot × 1<br>battery × 1<br>charger × 1<br>joystick × 1<br>protection frame × 1 |                                                                                     |                                                                                     |                                                                                             |                                                                                     |