

There are two versions of JY Mini: Basic version and the advanced version, the difference is the Advanced version has Laser sensor, it has a better perception ability. 1-26 in the sheet are for basic version and 27-30 (marked by red) are for the advanced version.

| | Name | Parameters |
|----|---|--|
| 1 | Dimensions | 0.7m*0.4m*0.55m |
| 2 | Gross weight (includes battery and laser sensor) | 22kgs |
| 3 | Battery capacity | ≥600W |
| 4 | High-speed communication bus | EtherCAT speed up to 100m/s |
| 5 | Processor | Intel i5 |
| 6 | OS | Motion : QNX(Industrial grade/aerospace grade real-time operating system) Perception: Ubuntu-ROS |
| 7 | Encoder | High-precision multi-turn absolute encoder, the single-turn resolution is not less than 20 bits |
| 8 | Pay-load | 5kg-10kgs |
| 9 | Battery life | Continuous walking 2-4 hours Standby 5 hours (turned on) |
| 10 | Highest speed | 2.5 metres/per second |
| 11 | Maximum climbing angle | 25° |
| 12 | DOF | 12 in total; each leg 3 DOFs |
| 13 | Attitude sensor | Industrial grade inertial sensor, 6 DOFs, 0.3 Dynamic attitude accuracy |
| 14 | Motion control cycle | ≥1ms |
| 15 | Planning cycle | 40ms≥ planning cycle ≥25ms |
| 16 | Force control requirements | No force sensor is needed. Equipped with force control precision algorithm, JYMini can calculate the three-dimensional contact force of the plantar without blind spots and can accurately identify the load |

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| 17 | In-depth camera | Recognise objectives and action/movements, high-precision map construction and positioning |
| 18 | Control model | Tablet PC remote control and autonomous mode |
| 19 | Communication cycle | 0.25ms |
| 20 | Development environment | Configures autonomous positioning and navigation development environment and provides algorithm use cases |
| 21 | Robot default skills | <ol style="list-style-type: none"> 1. One button to turn on: 2. Step, walk, trot, slide, jump, run and jump functions and support other high-performance gait development 3. Anti-disturbance balance control, autonomous climbing, creeping, head-up, and head-turning functions after falling 4. When walking, JYMini can move back and forth, left and right, up and down, and turn in situ 5. A wireless hardware emergency stop function |
| 22 | Protection model | Over heating temperature protection, fall protection, soft and hard emergency stop protection |
| 23 | Communication interface | HDMI X1, USB3.0 X3, Gigabit Ethernet |
| 24 | Power connector | Standard 5V, 12V, 24V (30V base on request) |
| 25 | Obstacle crossing ability | <ol style="list-style-type: none"> 1. Can stably climb 10cm stairs 2. Stable walking on gravel roads and other road types, soil, snow and construction sites |
| 26 | Others | <ol style="list-style-type: none"> 1. User manual includes SDK instruction 2. 1 year warranty 3. Free online operations training |

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| 27 | <p>16-line laser. Measurement is accurate to within $\pm 3\text{cm}$.</p> <p>Optional Advanced version</p> | <p>Can complete 3D map construction, autonomous positioning and navigation and dynamic obstacle avoidance capabilities.</p> <p>Can support depth camera, inertial navigation and a lidar multi-transmission fusion algorithm.</p> <p>Can establish a more accurate navigation algorithm</p> |
| 28 | Optional TX2 | Can support machine learning and related artificial intelligence algorithm development |
| 29 | Processor | Optional Intel i7 (customizable) |
| 30 | Navigation software package | <p>Can support a depth camera, inertial navigation and a lidar multi-transmission fusion algorithm</p> <p>Can achieve more accurate navigation and positioning, path planning and obstacle avoidance</p> |