A1

More Dexterity, More Possibilities

UNITREE

A1 Standard

- Equipped with smart camera (Depth camera)
- Support real-time HD video transmission
- Secondary development (High-level and low-level real-time API)
- Human follow, Body recognition, Depth perception
- Multiplayer mode (Battle mode), Group control

A1 Explorer (With all the functions of A1 standard)

- **Optional** Lidar:

  Dynamic obstacle avoidance

  Navigation planning

  Map construction

  Autonomous positioning

- **Optional** AI module etc. :

  Skeleton recognition, Gesture recognition, Visual SLAM

  Professional secondary development (Machine learning, Reinforcement
   learning etc.)

ROBOT

- Machine Weight (with battery): 12kg
- Dimensions (Stand): 500×300×400mm(L×W×H)
- Dimensions (Folded): 450×300×150mm(L×W×H)
- Maximum Walking Speed: 3.3m/s
- Operating Time: 1-2.5h
- Real-time HD video transmission: 0.1-0.2s delay
- 12 DOFS
- Payload: 5kg
- Abundant External Interface：
  HDMI×2, FE×2, USB 3.0×4

MOTOR

- Joint torque: 33.5NM
- Joint maximum speed: 21 rad/s
- Joints support quick disassembly
  and easy maintenance
- Read all sensor data
- Send position, speed and torque
  commands to each motor

SUPPORT FUNCTION

- 3 Protection Modes:
  Emergency stop, Fall protection, Overheat
- 4 Warning Systems:
  Low voltage, High temperature
  Short circuit, Overcharge
- 2 RTOS:
  Motion control: Ubuntu
  Environmental awareness: Ubuntu-ROS
- 4 Foot Froce Sensors:
  Get the foot support imformation directly,
  more reliable, efficient and convenient
- Power Outputs: 5V，12V，19V

APPLICATION

- Research and STEM
- Entertainment
- Security and Inspection
- Exploration and Rescue
- Express and Logistics
- Care

Unitree Robotics
宇树科技

Follow us@Unitree Robotics