PHYSICAL AI

EliteMind

EliteMind 6101 Product Specifications

EliteMind 6101 is the EM Artificial Intelligence Standard Kit, a modular robotics training platform integrating controller, sensing, mechanical and programming modules for classroom building, hands-on programming and Physical AI practice.



Key Specifications

6 TOPS
AI Computing Power

5 MP × 2
Front and Rear Cameras

2.8"
Capacitive Touchscreen

20 Built-In
Vision AI Models

4-Wheel Drive
Up to 1 m/s Omnidirectional Motion

5 + 6
Expansion Ports and Bus Interfaces

Visual Reference



Gripper



AI VLM Module



Touchscreen Controller

Product Highlights

- **Standardized Modular Design —** Standardized interfaces simplify assembly and help students focus on AI practice rather than mechanical construction.
- **AI VLM for General AI Education —** Ready-to-use vision and voice capabilities support image classification, face recognition and dialogue with large AI models.
- **Flexible Robot and Sensor Compatibility —** Supports wheeled robots, legged robots, robotic arms and multiple sensor types.
- **Reusable Learning Platform —** The same hardware can be reused for classroom teaching, showroom demonstrations and technology competitions.

Controller

Core Control and Touch Interface

The integrated controller runs programs, displays sensor data and controls actuators through a 2.8-inch color capacitive touchscreen, with wireless connectivity, a control switch and six bus interfaces.

Detailed Specifications

Item	Specification
Clock Frequency	240 MHz
Memory	8 MB RAM + 16 MB Flash
Display	2.8 inch color capacitive touchscreen
Onboard Sensors	6 axis accelerometer and dual microphones
Onboard Actuator	1 speaker
Battery	11.1 V / 2500 mAh lithium battery
Wireless	Bluetooth, Wi-Fi
Buttons	2 buttons and 1 control switch
Bus Interfaces	6

AI VLM Dialogue Module

Vision Language Intelligence

The independent AI VLM module delivers 6 TOPS of computing power, dual 5 MP front and rear cameras, large-model dialogue and 20 built-in vision AI models.

Module Specifications

Item	Specification
AI Compute	6 TOPS
Memory	128 MB
Display	2.4 inch, 380 × 640 IPS, fully laminated capacitive touchscreen
Cameras	Dual 5 MP front and rear cameras
Audio	1 capacitive silicon microphone and 3 W acoustic-chamber speaker
Other	1 button, 1 fill light, 1 TF card slot and built-in Wi-Fi
Built in AI Models	20 models, including face detection and recognition; object recognition, tracking and classification; self-learning classification; color recognition; instance segmentation; palm detection; gesture recognition; human detection and human keypoint detection; pose recognition; license plate recognition; line tracking; label recognition; QR and barcode recognition; fall detection; and more
Built in Apps	Camera, video recording and real-time image transmission
AI Capability	Supports dialogue with large AI models

Motion

Chassis, Gripper, Sensors, and Interfaces

The four-wheel independent-drive mecanum chassis enables omnidirectional movement, while the gripper, sensors and expansion interfaces support real-world building and experimentation.



Mecanum-Wheel Chassis

Drive	**4-wheel independent drive**
Size	**190 × 202 × 90 mm**
Rated No-Load Speed	**360 ± 10 rpm**
Max Speed	**1 m/s**

Motion **Forward, reverse, left, right, diagonal movement and in-place rotation**

External Modules and Expansion

Gripper

- 1 motor
- Operating voltage 5 V
- No-load speed 60 ± 10 rpm

External Sensors

- 1 light sensor
- 1 TOF sensor
- Wireless connection
- Broadcast and point to point transmission

Expansion

- 5 expansion ports
- Supports external sensors, AI Modules and other expansion modules

Visual Reference



Light Sensor



TOF Sensor



Expansion Area