Specification of AISTEAM 205S

Contains 1 set of controller,
1 set of AI vision module,
5 motors,
1 servo motor
1 screen,
1 set of grayscale,
4 Mecanum wheels and 500+ building blocks can be used to build 4 Mecanum wheels Omnidirectional motion chassis. Combined with sensors, it can realize various robot forms such as line following robots and AI intelligent recognition robots, and can participate in the popularization of national GAR contests and other official contests.
1 controller, using ARM Cortex-M3 architecture with a main frequency not lower than 72MHz, built-in 1 Micro:bit interface (compatible with v1.5, v2.0, supporting Makecode programming), 5 RJ11-I/O interfaces (4 & 1 channel I2C port, 1 channel serial port), 2 channels XH-2PIN open-loop motor interface, 1 channel XH-3PIN analog servo interface, 1 channel USB data interface, 3 groups of 4PIN pins (including G/V/S) support no less than 20 kinds of open source hardware, one RJ45-10PIN module expansion interface supports bus series connection, two PH-6PIN bus interfaces, one 5264-3PIN digital servo interface, and the shell is compatible with LASY and LEGO construction systems;
AI vision module: viewing angle: 72° ; maximum resolution: 320X240; maximum video bit rate: 30Mbps; image sensor: 1/4 inch CMOS/effective pixel 300,000; operating environment: -10 to 40° C; Artificial intelligence technologies such as color block recognition, Tag code recognition, and visual line inspection;
One motor expansion module, which supports bus series connection, and a single module supports expansion of 4-way closed-loop motors;

4 130 closed-loop motors, no-load speed: 270Rpm; rated speed: 1750 ± 10%Rpm; maximum torque: 0.38N.m; working voltage: DC 6V; encoding parameters: AB two-phase incremental/12-wire encoder; control mode : Speed closed loop; motor drive: over current protection/overheat protection;

One open-loop geared motor, rated speed 200RPM ± 10%, reduction ratio 1:120;

1 analog steering gear, rated speed: 200RPM ± 10%, working voltage 5V, no-load current 50mA;

1 expansion screen, the expansion screen module adopts 0.96-inch low-power OLED module, resolution 128*64, full viewing angle display, SPI communication; the exterior is equipped with a high-transmittance acrylic protection board; the back supports building blocks for expansion and construction;

1 integrated grayscale, integrated 5-channel ground grayscale sensor, with 5 light sources for anti-interference;

1 lithium battery module, discharge voltage 7.4V, discharge capacity 1100mAh, charge voltage 8.4V, charge current 1.0~2.0A;

1 charger, output voltage 8.4V, output current 1.0A;

1 set of Mecanum wheels, 2 left wheels, 2 right wheels, diameter 5.8cm ± 0.1cm, 9 sub-wheels, silent and wear-resistant environmental protection rubber;

There are no less than 500 building blocks, compatible with Lego building expansion;

1 set of programming software, which supports building-block graphical programming and Python code comparison.

Controller *1

Motor expansion module *1

Servo motor (3pin) *1

Vision module *1

Display screen *1

Lithium battery *1

130 Closed-loop motor *1

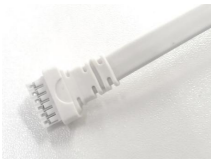
Ordinary motor *1

Integrated 5-grayscales sensor *1

Sensor’s cable *2

Encoder motor’s cable *5

Vision’s cable *1



Software:

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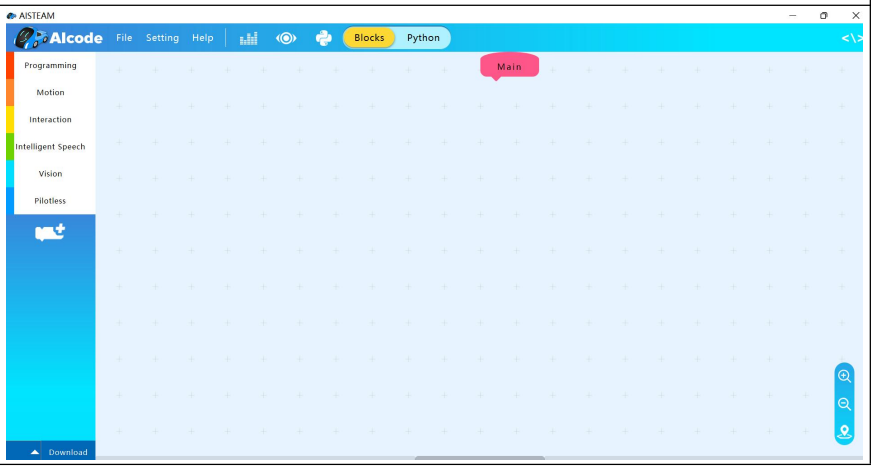
AICODE (windows version)	

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