

AI Experiment Box with Open Source Hardware

This open source hardware AI experiment box integrates a 7-inch display with various sensors and output modules. Supporting Python and C/C++ programming, it features an AI development interface package for machine learning.



Overview



The complete AI experiment kit in its portable carrying case, featuring integrated display and input peripherals.

Integrated AI Learning Platform

This advanced AI experiment box is a comprehensive teaching tool designed for junior high and high school students. It integrates a 7-inch display, various sensors, and output modules into a single portable unit, supporting Python and C/C++ programming. By combining visual recognition with machine learning capabilities, it provides a practical, hands-on environment for mastering artificial intelligence concepts.

System Architecture

Operating System	Linux vvBoard OS (Kernel 4.4.159)
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Hardware Specifications

Memory & Storage

2 GB

RAM

32 GB

eMMC Storage

CPU	Quad-core Cortex-A53 1.5GHz
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GPU	Mali-450MP2
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Display & Connectivity

Display	12.5 inch, 1366 x 768 resolution
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Wireless	2.4G WiFi, Bluetooth 4.0
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Integrated Modules

Built-in Sensors & Modules

- Temperature and humidity sensor
- Light sensor
- Ultrasonic sensor
- Human infrared sensor
- Microphone
- 5MP Camera
- LED (RGB)
- Dot matrix display
- Digital tube
- Steering gear
- Buzzer
- Sliding rheostat

Software Environment

Pre-installed Software

Python 3.5 • Arduino IDE 1.6.10 • ArduBlock • Processing IDE 3.3.7.2 • Jupyter 1.0.0 • Scratch 1.4

Included Accessories

Package Contents

- Wireless keyboard
- Wireless mouse
- 7.6V 7000mAh battery
- 9V 2A power adapter