HICAT Livera Robot kit

SKU 110090161

Livera robot kit is an easy to build small size robot, by assembling and programming this robot you can develop a basic understanding of:
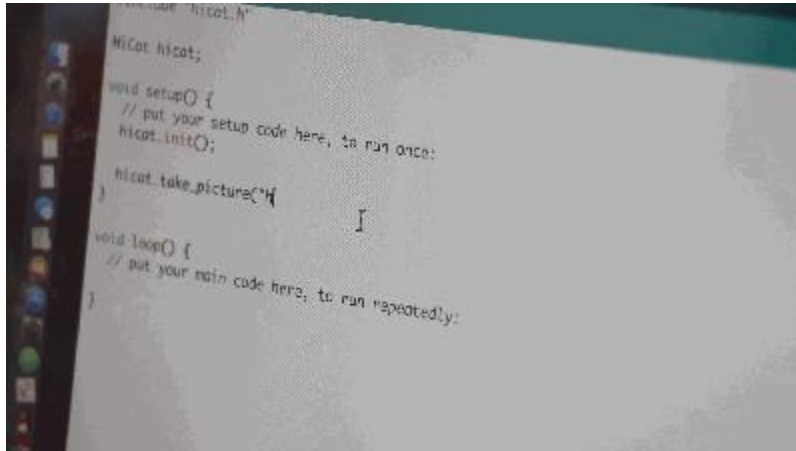
- Robot mechanical drive mechanics and dynamics.
- Coding for motors in dynamic situations.
- Machine vision for tracking objects and colors.

Features:

- 720hd video and photo capturing & openCV enabled image processing
- Image capturing and data recording onto the onboard SD card
- Mobile observation and manipulation from our custom apps (web-based and native)
- Visual enabled line follower, color sensing.
- Small size easy to build
- Pre-installed program with no software set up cost
- Low battery consumption
- Wi-Fi enabled wireless control
- Programmable and open source.

Livera is a combination of Wi-Fi router, web cam, accelerometer, Arduino and Raspberry Pi, within a small board size.

Image Capturing

Livera is a great platform for image capturing and processing. You can simply get images or videos by writing code,

- Arduino library with APIs within Arduino IDE
- Web API, there is a CGI server we have built on which APIs like photo and video capturing, video downloads, camera resolution setting etc.
- Cross compiles and run plain C program (adding node.js support) within Linux.
- Or using the custom Web or android app
- Using the native app or web app we've build for you by simply touch buttons.

Line tracking

This is an image capture and openCV line tracking app, we provide a C program which keep getting images (yuv format) from Livera, then using openCV api to detect the black line and draws down marks on the image, constantly updating and viewing the updated image through web interface.

Part List

HICAT Livera Board	1
Motor Driver Board	1
Camera Module	1
Livera Camera Extend Cable	1
2G SD Card with firmware built in	1
Hicat Livera Guidebook	1
Battery Case	1
E-MAX SERVO	1
DC Gear Motor set (Motor + Motor Carrier + Wheels)	2
Robot Base Acrylic Panel	1
Robot Top Acrylic Panel	1
Omni-directional Wheel Set	1
M2x15 (+6) mm Nylon Stud	4
M2x6mm Nylon Stud	4

M2x6 (+6) mm Nylon Stud	8
M2x10 (+6) mm Nylon Stud	8
M2 Nylon Nut	4
LASER Bean	1
Stickers	1
USB Cable	1
Screwdriver (+, -)	1

Technical Details

Dimensions	193mm x 123mm x 80mm
Weight	G.W 360g
Battery	Exclude

Documents

- How to build it.
- HiCAT Livera Document