Robot Kit “Rapiro”

Rapiro, humanoid DIY robot kit was released by Switch Science Inc. in February 2014. Though having 12 servos, it retails for $450, which is less expensive compared to other humanoid robot kits. And Rapiro’s eye catching cute body was delivered by high quality injection molded parts. Not only for research, education, study in robot engineering and software, Rapiro is made also as hobby robot. It consists of many parts and might take a few hours to assemble the kit, but the assembly work can be done simply with screwdrivers. The behavior and actions of Rapiro can be programmed using a computer.

Generally speaking, humanoid robot kits are not easily affordable as they are available for the price range approximately 1000 US dollars to 3000 US dollars. Those robots also tend not to be appealing to the eyes, having the metal parts and servo motors that make up their robot body all exposed. With this in mind, Rapiro was developed into a DIY robot kit that resolves both aesthetic and price issues.

Its body consists of 30 pieces of plastic parts and 12 servo motors (2 per leg, 3 per arm, 1 for the waist, and 1 for the neck). The eyes light up in multiple colors with full-color LEDs.

Rapiro uses Arduino-compatible servo control board (open-source microcontroller development environment) to keep the development cost lower and to make programming by users easier. You can program it from a computer via USB connection.

Rapiro is designed to work with the Raspberry Pi, a small low-cost computer which runs Linux, and can be connected to a PC display, speakers, and USB devices like Wi-Fi and Bluetooth. You can also add the Raspberry Pi camera module into the little head.

Rapiro is powered by Five AA Ni-MH batteries or AC adapter. AA Ni-MH batteries should last between 45 to 90 minutes.

- Contents
    - 30 x Plastics body parts
    - 12 x Servo motors
    - 50 x Screws
    - 2 x Cables
    - 2 x PCB (assembled)

- Assembly
    - Screwdriver
    - Size
    - H257mm x W196mm x D159mm
    - Weight
    - 1kg (when assembled)
    - Recommended Ages
    - Kids (and big kids) aged 15 and above

- To Be Purchased Separately
    - Computer
      (Windows or Mac OSX)
    - USB cable (Micro-B)
    - Five AA Ni-MH batteries
    - AC adapter
    - Raspberry Pi
        - Raspberry Pi
        - SD card
        - Camera module
- Product
    - Product planning and development by Kiluck Corporation
    - Sold by Switch Science Inc.
    - JAN code: 4560349503809
    - Price: 495 US Dollars
    - Package: Dimensions 165mm × 340mm × 420mm
    - Weight: 2.5kg

How Rapiro Project Evolved

Rapiro is a collaborative project between three companies: Kiluck Corp., Miyoshi, and Switch Science Inc. In this project, Kiluck took a role of planning the product, managing the process, and designing 3D plastic body prototype. Miyoshi took the manufacturing role, including fabrication of metal molds, injection molding, and assembly of the final product. And Switch Science Inc. developed and manufactured the controller board, besides being the distributor of the final product.

Some crowdfunding campaigns contributed to bring Rapiro project into market. On the Kickstarter, Rapiro campaign was successful raising 3.5 times our target of 20,000 British Pounds. It made a sensational debut as the very first successful Kickstarter project from Japan. Rapiro also proved it promising in Makuake, Japanese crowdfunding promotion, reaching almost twice our fund-raising goal. As a result, about 400 Rapiro kits were delivered as reward for fund-raising backers.

Kickstarter campaign page
https://www.kickstarter.com/projects/shota/Rapiro-the-humanoid-robot-kit-for-your-raspberry-p

Makuake campaign page
https://www.makuake.com/project/Rapiro/

Distribution

Switch Science is the exclusive agent of Rapiro for both Japan and outside Japan. Rapiro is available for purchase on our web store, Amazon market place, and through resellers of our products. In March 2014, Rapiro acquired CE Marking and became available through resellers outside Japan.

Official Product Page
http://www.Rapiro.com/

Rapiro on Switch Science site (For Japan)
http://www.switch-science.com/catalog/1550/

Rapiro on Switch Science International Site
http://international.switch-science.com/catalog/1550/

Amazon Marketplace
http://www.amazon.co.jp/dp/B00IOE8BHI

Amazon USA Marketplace
http://www.amazon.com/dp/B00IOE8BHI

Kiluck Corporation

http://www.kiluck.co.jp/
KILUCK CORPORATION designs and develops products, and fabricates prototypes for PR, toys, electronics, and automotive industries. All projects raging in various industries are realized by applying its technological and designing strengths.

Miyoshi Co. Ltd.

http://www.miyoshi-mf.co.jp/
Miyoshi Co. Ltd. is a plastic injection molding company that provides prototype manufacturing service in Tokyo. The services provided range from designing, engineering to injection molding.

Switch Science Inc.

http://www.switch-science.com/
Founded in 2008 by Shigeru Kanemoto, Switch Science is a Japanese retailer of open-source hardware, electronic modules, components, and kits imported from all over the world. In addition to distributing over 1500 selected items online, Switch Science also develops original modules and parts with the goal of making individual electronics creations easy to start and handle.