
Building Alexa Skills for Home Automation with Raspberry Pi

Course Hardware

Raspberry Pi 3 Kit

- Raspberry Pi 3
- HDMI Cable
- Power Adapter
- Micro SD Card

List of some Raspberry Pi 3 Kit Options

https://www.amazon.com/CanaKit-Raspberry-Starter-Premium-Black/dp/B07BCC8PK7/ref=as_li_ss_tl?ie=UTF8&linkCode=ll1&tag=arduinoibake-20&linkId=f937f582689f0bf27eab438f1b4c9687&language=en_US

https://www.amazon.com/V-Kits-Raspberry-Model-Starter-Latest/dp/B07BDRD3LP/ref=as_li_ss_tl?s=electronics&ie=UTF8&qid=1536512454&sr=1-1-spons&keywords=raspberry+pi+3+b+&kit&psc=1&linkCode=ll1&tag=arduinoibake-20&linkId=a5214965dec2e4ff82f5c27234248a2f&language=en_US

https://www.amazon.com/CanaKit-Raspberry-Premium-Clear-Supply/dp/B07BC7BMHY/ref=as_li_ss_tl?ie=UTF8&linkCode=ll1&tag=arduinoibake-20&linkId=ea62b6941b870cdbde6bfdbbc443bfdb&language=en_US

https://www.amazon.com/CanaKit-Raspberry-Ultimate-Starter-Clear/dp/B07BC567TW/ref=as_li_ss_tl?ie=UTF8&linkCode=ll1&tag=arduinoibake-20&linkId=b00e27b97012c31bc35b6927cee645d2&language=en_US

Just the plain Raspberry Pi 3 B+ without a Kit

https://www.amazon.com/ELEMENT-Element14-Raspberry-Pi-Motherboard/dp/B07BDR5PDW/ref=as_li_ss_tl?s=electronics&ie=UTF8&qid=1536512370&sr=1-3&keywords=raspberry+pi+3+b+&linkCode=ll1&tag=arduinoibake-20&linkId=53416bc552d8c1a4251253340e8cc650&language=en_US

- Any USB Mouse
- Any USB Keyboard

LED Control Project

- LED
- 330 Ω resistor
- Breadboard

https://www.amazon.com/Veewon-SYB-170-Color-Breadboard-Circuit/dp/B00OP4FQVU/ref=as_li_ss_tl?s=electronics&ie=UTF8&qid=1536513969&sr=1-7&keywords=small+breadboard&linkCode=ll1&tag=arduinoibake-20&linkId=e03978934a0107a99726a9de80349f70&language=en_US

https://www.amazon.com/Qunqi-Experiment-Breadboard-5-5%C3%978-2%C3%970-85cm-4packs/dp/B01IMNVZDC/ref=as_li_ss_tl?s=electronics&ie=UTF8&qid=1536513969&sr=1-1&keywords=small+breadboard&linkCode=ll1&tag=arduinoibake-20&linkId=7f1a402fdb3b821a5bd03af9f2b49793&language=en_US

- **Male-Female / Male-Male / Female-Female connecting wires**

https://www.amazon.com/Breadboard-Wires-Aoyoho-Multicolored-Jumper/dp/B01GK2Q4ZQ/ref=as_li_ss_tl?s=electronics&ie=UTF8&qid=1495919642&sr=1-2&keywords=male+to+female+connection+wire+for+arduino&linkCode=ll1&tag=arduinoibake-20&linkId=dbeda9eebe19f78562f08862f1957f89

Relay Control Project

- **4-channel 5V Relay Module - Can control up to 4 devices**

https://www.amazon.com/JBtek-Channel-Module-Arduino-Raspberry/dp/B00KTEN3TM/ref=as_li_ss_tl?s=electronics&ie=UTF8&qid=1536513097&sr=1-9&keywords=raspberry+pi+relay&linkCode=ll1&tag=arduinoibake-20&linkId=8cef1f49e1fd9b7c7ddb9a10d4b29ac4&language=en_US

https://www.amazon.com/ELEGOO-Channel-Optocoupler-Arduino-Raspberry/dp/B01HEQF5HU/ref=as_li_ss_tl?s=electronics&ie=UTF8&qid=1536513097&sr=1-13&keywords=raspberry+pi+relay&linkCode=ll1&tag=arduinoibake-20&linkId=c08ad612bfcbe144e9791b19faa0133c&language=en_US

https://www.amazon.com/Channel-Module-Arduino-Raspberry-K49/dp/B01BACQF1Y/ref=as_li_ss_tl?s=electronics&ie=UTF8&qid=1536513097&sr=1-22&keywords=raspberry+pi+relay&linkCode=ll1&tag=arduinoibake-20&linkId=f610af3936872c9345e686e20b531be0&language=en_US

- **2-channel 5V Relay Module - Can control up to 2 devices**

https://www.amazon.com/SunFounder-Channel-Optocoupler-Expansion-Raspberry/dp/B00E0NTPP4/ref=as_li_ss_tl?s=electronics&ie=UTF8&qid=1536513097&sr=1-4&keywords=raspberry+pi+relay&linkCode=ll1&tag=arduinoibake-20&linkId=2f1292b76242fdb53117f621dc0e7f50&language=en_US

- **Male-Female / Male-Male / Female-Female connecting wires**

https://www.amazon.com/Breadboard-Wires-Aoyoho-Multicolored-Jumper/dp/B01GK2Q4ZQ/ref=as_li_ss_tl?s=electronics&ie=UTF8&qid=1495919642&sr=1-2&keywords=male+to+female+connection+wire+for+arduino&linkCode=ll1&tag=arduinoipibake-20&linkId=dbeda9eebe19f78562f08862f1957f89

- **Extension Cord**

https://www.amazon.com/KMC-3-Outlet-Extension-Tamper-40302-1606B/dp/B0776CL9N6/ref=as_li_ss_tl?s=electronics&ie=UTF8&qid=1536513523&sr=1-15-spons&keywords=extension+cord&psc=1&linkCode=ll1&tag=arduinoipibake-20&linkId=06e603ca4c18ab7f174b6333836f4bdc&language=en_US

https://www.amazon.com/Cable-Matters-2-Pack-Extension-Outlet/dp/B01MTYL3HS/ref=as_li_ss_tl?s=electronics&ie=UTF8&qid=1536513523&sr=1-8&keywords=extension+cord&linkCode=ll1&tag=arduinoipibake-20&linkId=1c3bd3fb1fef029ba5d7d222edcfddec&language=en_US

TV Control Project

- **Breadboard**

https://www.amazon.com/Veewon-SYB-170-Color-Breadboard-Circuit/dp/B00OP4FQVU/ref=as_li_ss_tl?s=electronics&ie=UTF8&qid=1536513969&sr=1-7&keywords=small+breadboard&linkCode=ll1&tag=arduinoipibake-20&linkId=e03978934a0107a99726a9de80349f70&language=en_US

https://www.amazon.com/Qunqi-Experiment-Breadboard-5-5%C3%978-2%C3%970-85cm-4packs/dp/B01IMNVZDC/ref=as_li_ss_tl?s=electronics&ie=UTF8&qid=1536513969&sr=1-1&keywords=small+breadboard&linkCode=ll1&tag=arduinoipibake-20&linkId=7f1a402fdb3b821a5bd03af9f2b49793&language=en_US

- **Infrared LED**

https://www.digikey.com/product-detail/en/lumex-opto-components-inc/OED-EL-1L2/67-1001-ND/270797?gclid=Cj0KCQjwidPcBRCGARIsALM--eMlwoHVUGB2eT3fEFY-ZUBewufTylrjedzwH2q1Am4xqUdh10xh96waApdoEALw_wcB

<https://www.adafruit.com/product/387>

<https://www.digikey.com/catalog/en/partgroup/5mm-infrared-led-emitters/11636>

- **Infrared Receiver**

https://www.adafruit.com/product/157?gclid=Cj0KCQjwidPcBRCGARIsALM--eMEX62aGA4ZhncGARvGAaAEILNftxxVCbQ44zo1qftkh18xeuYMTllaAjG4EALw_wcB

https://www.tme.eu/en/details/tsop32238/ir-receiver-modules/vishay/?brutto=1&gclid=Cj0KCQjwidPcBRCGARIsALM--eNYZmVJF-FZV5T-XrMZnJh7diGNkGmNEhouRHxnlbgaGoyDnqQmPbsaAg-VEALw_wcB

- **2N3904 NPN Transistor**

https://www.mouser.com/ProductDetail/ON-Semiconductor-Fairchild/2N3904TA?qs=IjbEvF4DwOOn1Ev%2FzRYaoA%3D%3D&gclid=Cj0KCQjwidPcBRCGARIsALM--eMIEc2k0LDJUJbfMTH542Ehe6S3kkkKDMlySpHiHnhZ2MAmXm0sJRMaAqPHEALw_wcB

https://www.jameco.com/z/2N3904-Major-Brands-Transistor-2N3904-NPN-General-Purpose_38359.html?CID=GOOG&gclid=Cj0KCQjwidPcBRCGARIsALM--eOTrt4FWbLuophxuJGhVPKHUQGhMZOUyDlaLLINUBsOhhxSOs6bNCkaAluaEALw_wcB

https://www.amazon.com/Transistors-Transistor-Assortment-2N3904-MPS2907-Ltvystore/dp/B06Y26T3WM/ref=as_li_ss_tl?s=electronics&ie=UTF8&qid=1536514968&sr=1-4&keywords=2n3904&linkCode=ll1&tag=arduino-pibake-20&linkId=f2324406928046bd3053f0dda7c9aeb3&language=en_US

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https://www.amazon.com/Breadboard-Wires-Aoyoho-Multicolored-Jumper/dp/B01GK2Q4ZQ/ref=as_li_ss_tl?s=electronics&ie=UTF8&qid=1495919642&sr=1-2&keywords=male+to+female+connection+wire+for+arduino&linkCode=ll1&tag=arduino-pibake-20&linkId=dbeda9eebe19f78562f08862f1957f89

Extras

- **HDMI to VGA Cable if needed**

https://www.amazon.com/gp/product/B01IFPZC04/ref=as_li_ss_tl?portal-device-attributes=desktop&redirect=true&ref=pe_152810_135491720_em_1p_0_ti&pldnSite=1&linkCode=ll1&tag=arduino-pibake-20&linkId=ee3b29fa9ee15bac439d5f42eb6d7e2a

- **Logitech wireless keyboard/mouse combined [Optional, but nice to have when working with Raspberry Pi]**

https://www.amazon.com/Logitech-Professional-Wireless-Touch-Keyboards/dp/B06Y1PGF1X/ref=as_li_ss_tl?encoding=UTF8&pd_rd_i=B06Y1PGF1X&pd_rd_r=c4d3259e-b452-11e8-9f1d-0fd2b561195&pd_rd_w=lzxxG&pd_rd_wg=PfEiy&pf_rd_i=desktop-dp-sims&pf_rd_m=ATVPDKIKX0DER&pf_rd_p=0bb14103-7f67-4c21-9b0b-31f42dc047e7&pf_rd_r=MSX7AGGW1E8K98S27BRN&pf_rd_s=desktop-dp-sims&pf_rd_t=40701&psc=1&refRID=MSX7AGGW1E8K98S27BRN&linkCode=ll1&tag=arduinopibake-20&linkId=de1b1b80f4c63a5e6fa66404e13b9516&language=en_US

Alexa Devices

[Echo Dot](#)

[Echo Spot](#)

[Echo](#)

[Echo Show](#)