



adafruit CYBERDECK Bonnet and HAT for Raspberry Pi 400 Instructions

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adafruit learning system
CYBERDECK Bonnet and HAT for Raspberry Pi 400
Created by Kattni Rembor



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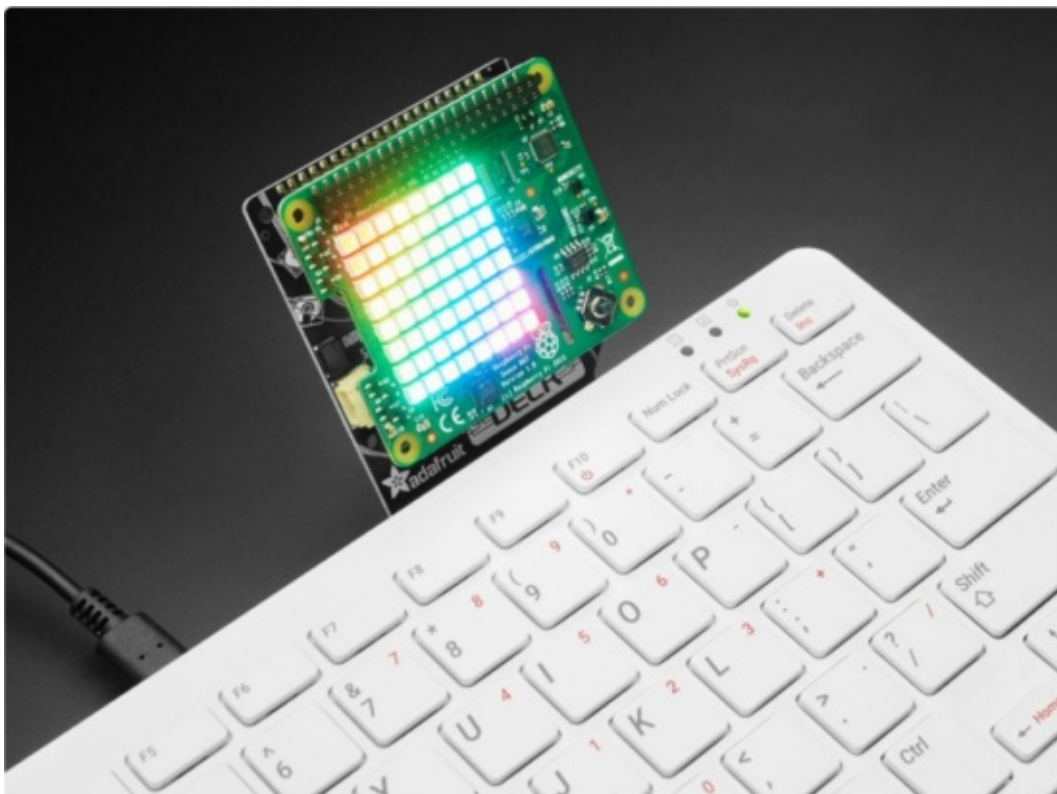
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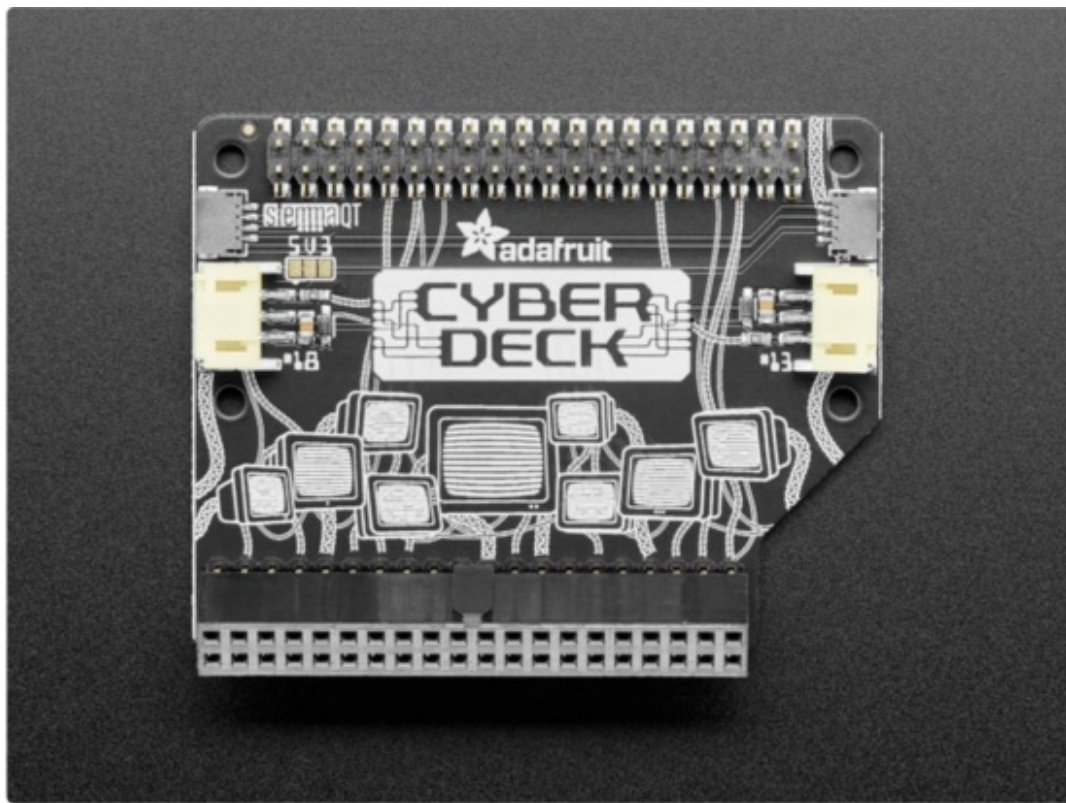
Overview



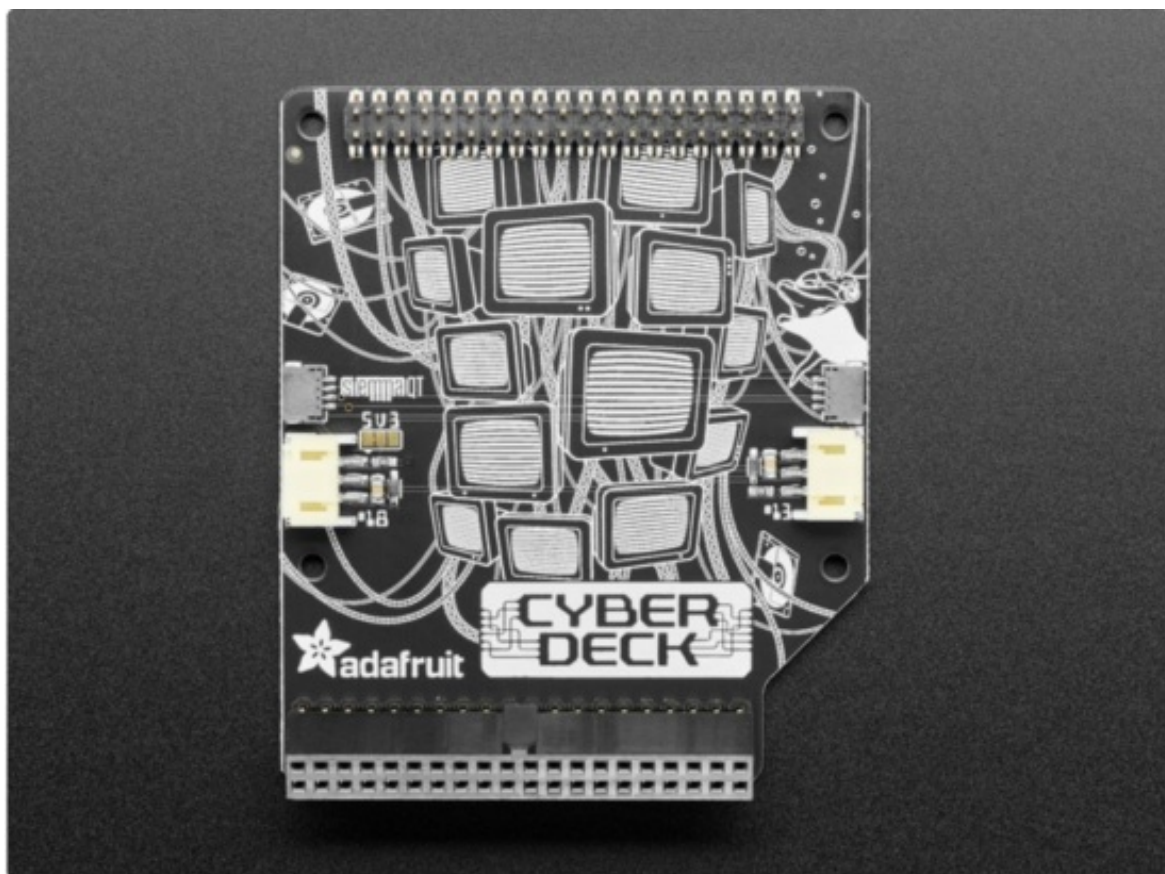
Howdy keyboard cowboys, are you surfing the information superhighway with a Pi 400? Want a cool heads-up display, or maybe you need to wire up some NeoPixel wetware...?



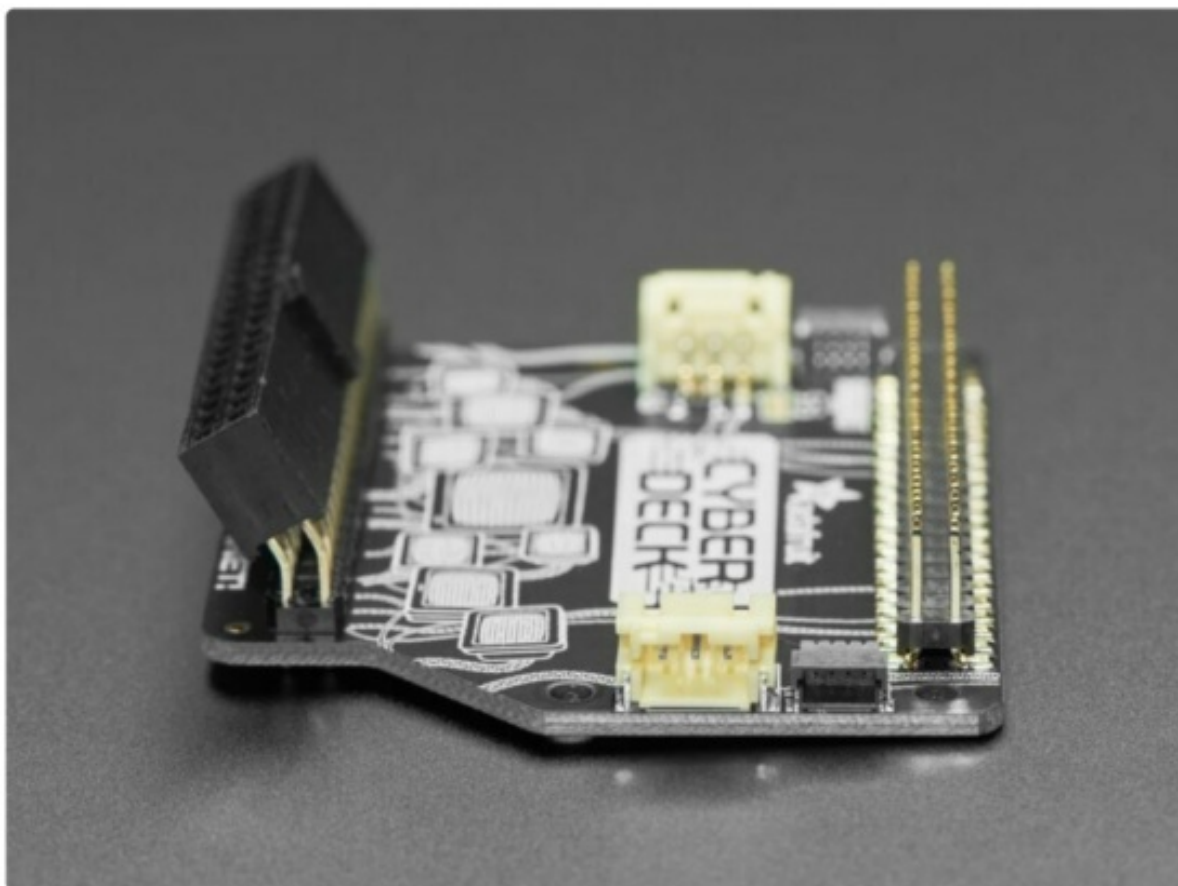
Cyber-warriors, listen up here! We've got some zero-day unreleased hardware we just dumpster-dived. Now you can crack codes, and write scripts with style, thanks to the CYBERDECK HAT and Bonnet for Raspberry Pi 400 from Adafruit zaibatsu.



Well, we just fenced 12 megabytes of ram and some angled socket header from the underground hacker club next to the chat sub, and it's a major upgrade to our extender board – now you can jack in any Pi bonnet or HAT into the back of your Pi 400's skull at a cool angle, perfect for augmenting your deck!

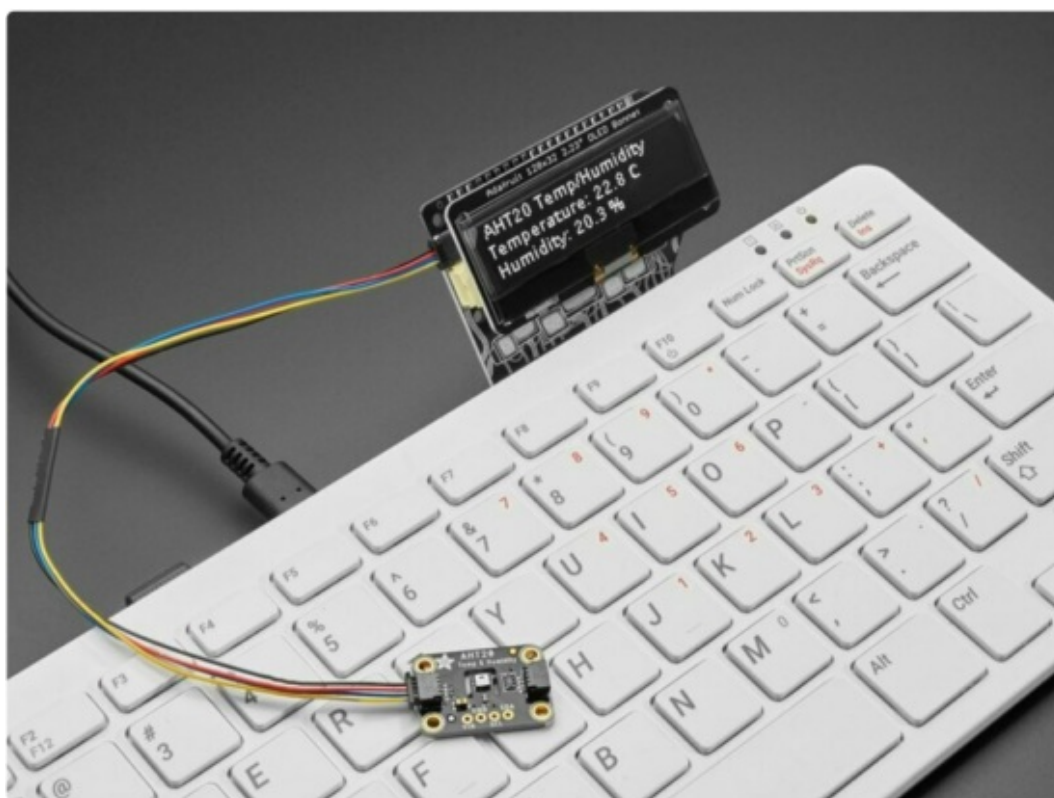


We also give you two STEMMA (JST 3-PH) connectors on GPIO #18 and #13, and twin STEMMA QT I2C port plugs, for additional upgrades ([cables sold separately](https://adafruit.com/products/4444) (<https://adafruit.com/products/4444>))

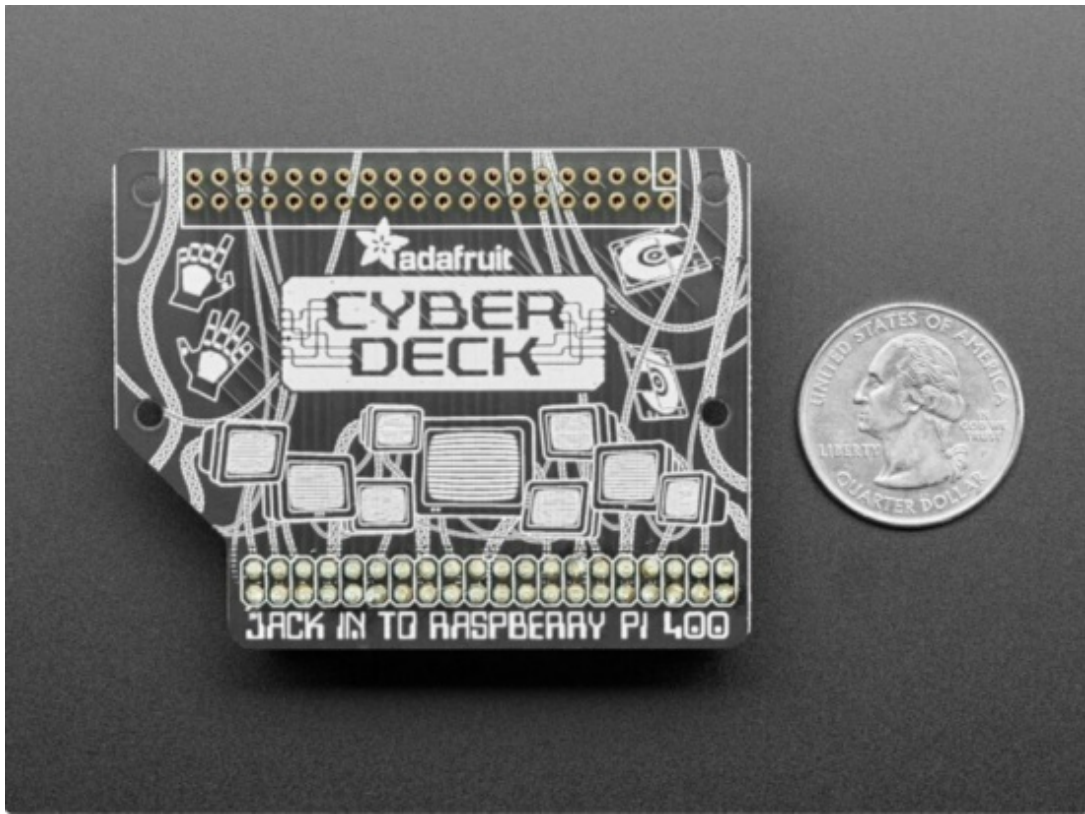


This is the same hardware Kevin Mitnick used when he popped Sidewinder! Ok, maybe not, but it will definitely let you create a stand-alone Kali deck by plugging in one of our many display Bonnets or HATs.

Comes completely pre-assembled and tested so you don't need to do anything but plug it in. Works best with the Pi 400 computer.

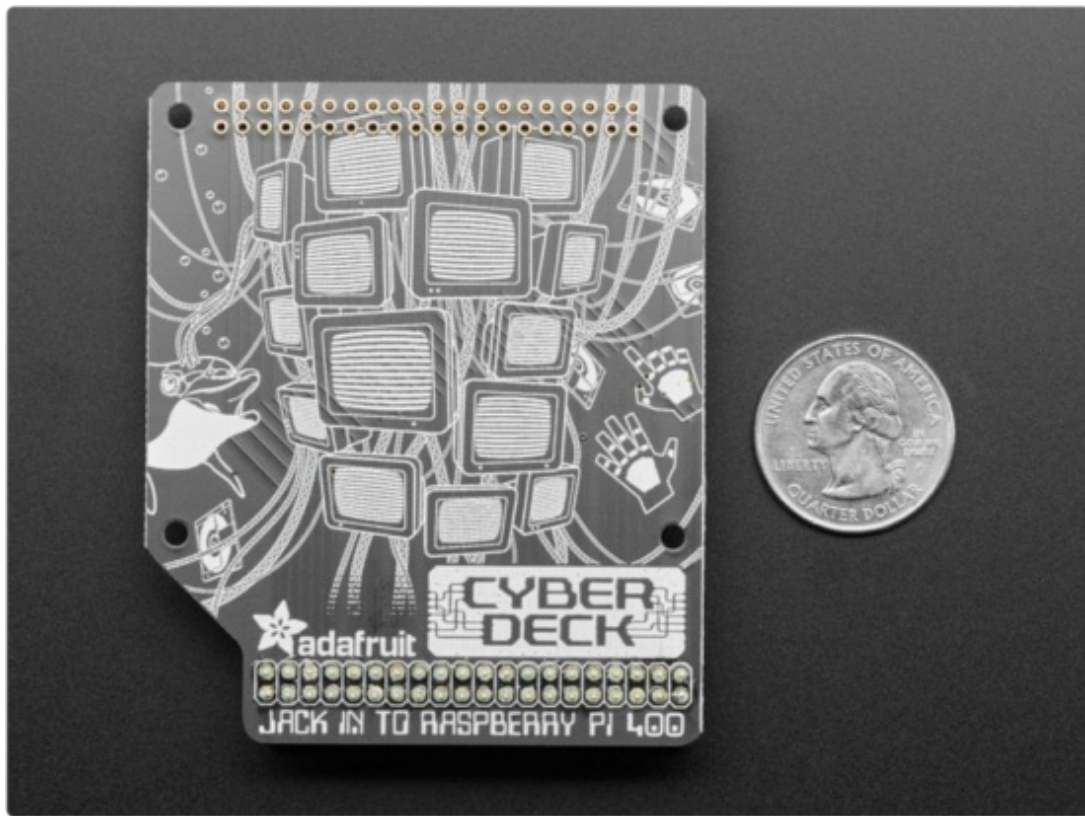


The demo images show the Bonnet with **one of our 128×32 OLED bonnets plugged in** (<https://adafru.it/RfQ>). Any bonnet/mini-HAT/pHAT etc should work just fine with the Bonnet as every pin is duplicated from input to output.



Here are some of our favorite displays we recommend for the Bonnet:

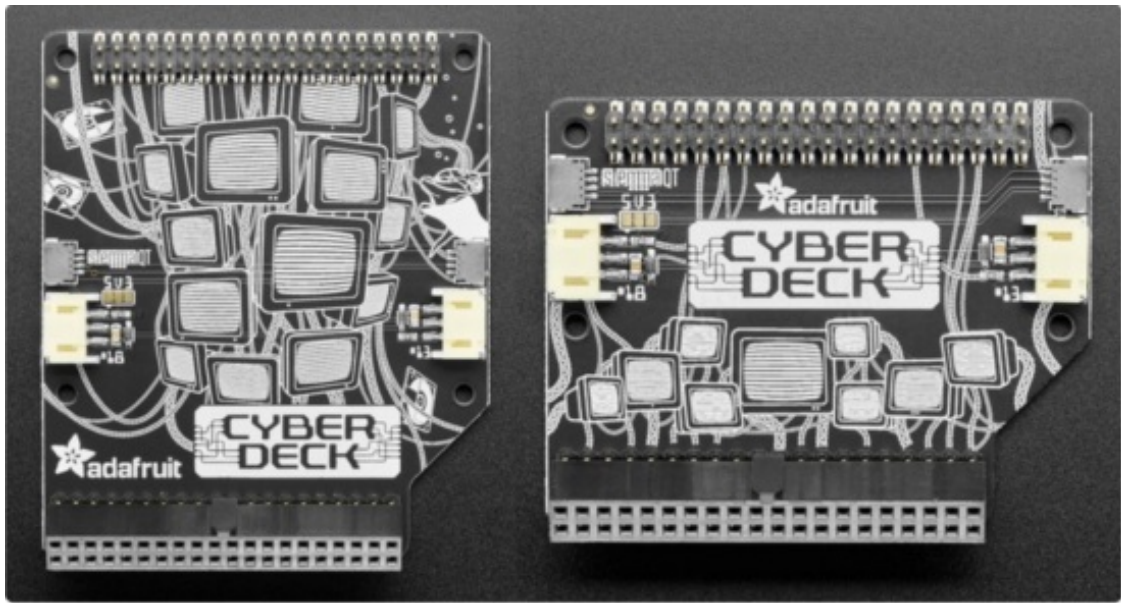
- Adafruit 2.23" Monochrome OLED Bonnet for Raspberry Pi (<https://adafru.it/RfQ>)
- Adafruit 2.13" Monochrome E-Ink Bonnet for Raspberry Pi – THINK INK (<https://adafru.it/RfR>)
- Adafruit 128×64 OLED Bonnet for Raspberry Pi (<https://adafru.it/RfS>)
- Adafruit Mini PiTFT 1.3" – 240×240 TFT Add-on for Raspberry Pi (<https://adafru.it/RfT>)
- Adafruit Mini PiTFT – 135×240 Color TFT Add-on for Raspberry Pi (<https://adafru.it/RfT>)
- Adafruit 1.3" Color TFT Bonnet for Raspberry Pi – 240×240 TFT + Joystick Addon (<https://adafru.it/NFh>)
- Adafruit PiOLED – 128×32 Monochrome OLED Add-on for Raspberry Pi (<https://adafru.it/NFh>)
- Pimoroni Inky pHAT for Raspberry Pi – 3 Color eInk Display (<https://adafru.it/RfU>)
- Pimoroni Inky pHAT – 3 Color eInk Display – Yellow/Black/White (<https://adafru.it/RfV>)



Here are some of our favorite displays we recommend for the HAT:

- Adafruit PiTFT 2.2" HAT Mini Kit – 320×240 2.2" TFT – No Touch (<https://adafru.it/RfX>)
- Adafruit PiTFT 2.4" HAT Mini Kit – 320×240 TFT Touchscreen (<https://adafru.it/RfY>)
- PiTFT Plus Assembled 320×240 2.8" TFT + Resistive Touchscreen (<https://adafru.it/eZS>)
- PiTFT 2.8" TFT 320×240 + Capacitive Touchscreen for Raspberry Pi (<https://adafru.it/e9Y>)
- Adafruit PiTFT Plus 320×240 2.8" TFT + Capacitive Touchscreen (<https://adafru.it/CFo>)
- Adafruit PiTFT – 320×240 2.8" TFT+Touchscreen for Raspberry Pi (<https://adafru.it/dDE>)
- PiTFT Plus 320×240 3.2" TFT + Resistive Touchscreen (<https://adafru.it/RfZ>)
- PiTFT – Assembled 480×320 3.5" TFT+Touchscreen for Raspberry Pi (<https://adafru.it/e27>)
- PiTFT Plus 480×320 3.5" TFT+Touchscreen for Raspberry Pi (<https://adafru.it/Rf->)
- Pimoroni HyperPixel – 4.0" Hi-Res Display for Raspberry Pi (<https://adafru.it/Rga>)
- Pimoroni HyperPixel – 4.0" Hi-Res Display for Raspberry Pi – Non-Touch (<https://adafru.it/Rgb>)
- Pimoroni Inky wHAT (ePaper/eInk/EPD) – Red/Black/White (<https://adafru.it/Rgc>)
- Pimoroni Inky wHAT (ePaper/eInk/EPD) – Black/White (<https://adafru.it/Rgd>)
- Pimoroni HyperPixel 4.0 Square – Touch Display for Raspberry Pi – Capacitive Touch PIM470 (<https://adafru.it/Rge>)

Pinouts



I2C Connectors

- STEMMA QT – These are the smaller connectors on either side of the HAT and Bonnet. You can use STEMMA QT cables (<https://adafru.it/GfR>) to connect up a bunch of different sensors and breakouts (<https://adafru.it/HMF>) with no soldering or breadboard needed! (Cables sold separately.)
- These two connectors are connected together in parallel. You can daisy-chain sensors and breakouts connected to them.

STEMMA QT / Qwiic JST SH 4-pin to Premium Male Headers Cable

This 4-wire cable is a little over 150mm / 6" long and fitted with JST-SH female 4-pin connectors on one end and premium Dupont male headers on the other. Compared with the...\$0.95

In Stock

Add to Cart

STEMMA QT / Qwiic JST SH 4-pin Cable – 100mm Long

This 4-wire cable is a little over 100mm / 4" long and fitted with JST-SH female 4-pin connectors on both ends. Compared with the chunkier JST-PH these are 1mm pitch instead of... \$0.95

In Stock

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STEMMA (3-pin JST PH) Connectors

- These are the larger connectors on either side of the HAT and Bonnet. You can use these to connect up NeoPixels and more with no soldering or breadboard required! (Cables sold separately.)
- They are labeled with their pin numbers: 18 and 13.

Here are some accessories we recommend using with your STEMMA JST PH connectors!

STEMMA JST PH 3-Pin to Male Header Cable – 200mm

This cable will let you turn a JST PH 3-pin cable port into 3 individual wires with high-quality 0.1" male header plugs on the end. We're carrying these to match up with our... \$1.25

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STEMMA JST PH 3-Pin to Female Socket Cable – 200mm

This cable will let you turn a JST PH 3-pin cable port into 3 individual wires with high-quality 0.1" female header sockets on the end. We're carrying these to match up with... \$1.25

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JST PH 3-pin Plug to Color Coded Alligator Clips Cable

This cable will let you turn a JST PH 3-pin cable port into 3 individual wires with grippy mini alligator clips. We're carrying these to match up with any of our boards or... \$1.95

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Adafruit NeoPixel LED Strip with 3-pin JST PH Connector

Plug in and glow, this Adafruit NeoPixel LED Strip with JST PH Connector has 30 total LEDs in a "60 LED per meter" spacing,... \$12.50

In Stock

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Your browser does not support the video tag.

Adafruit STEMMA Non-Latching Mini Relay

STEMMA plug-and-play parts make your next project soldering-free! This is the STEMMA Non-Latching Mini Relay. It gives you power to control, and control over...\$5.95

In Stock

Add to Cart

Raspberry Pi Headers

On the top and bottom of the HAT and Bonnet are the Raspberry Pi headers.

- The bottom is meant to plug into a Pi (works best with Pi 400!). They are at an angle to facilitate the Pi 400.
- The top headers are to allow you to plug in a HAT or Bonnet. The pinouts are identical – just plug in any HAT or Bonnet!

Adafruit 2.23" Monochrome OLED Bonnet for Raspberry Pi

If you're looking for a bright, readable OLED display for a Raspberry Pi (most likely a \$22.50

In Stock

Add to Cart

PiTFT Plus 480×320 3.5" TFT+Touchscreen for Raspberry Pi

Is this not the cutest, little display for the Raspberry Pi? It features a 3.5" display with 480×320 16-bit color pixels and a resistive touch overlay

Out of Stock

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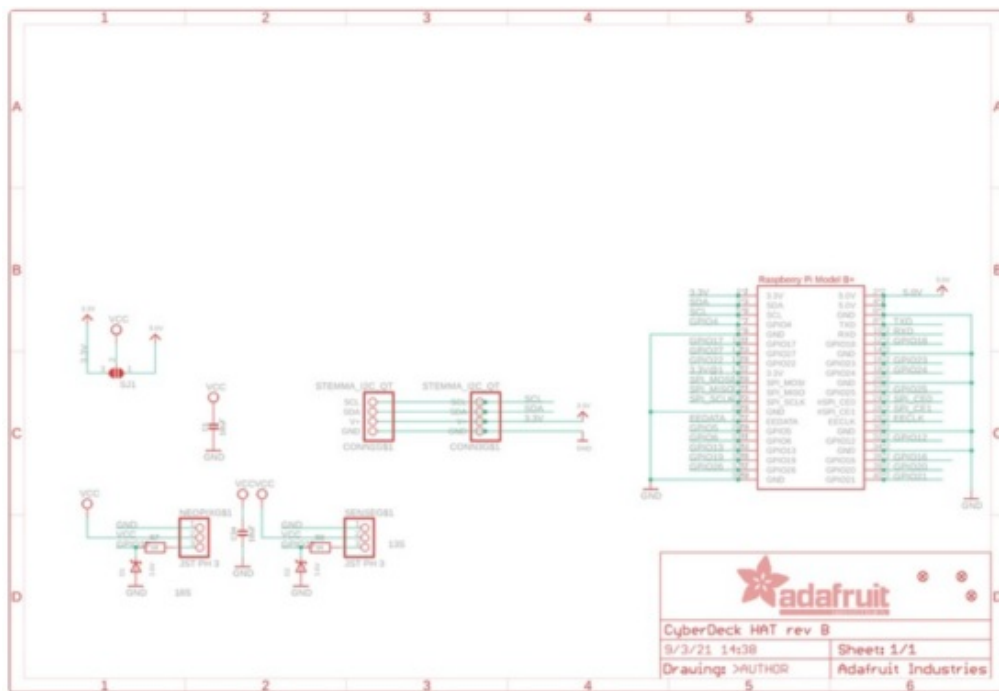
Downloads

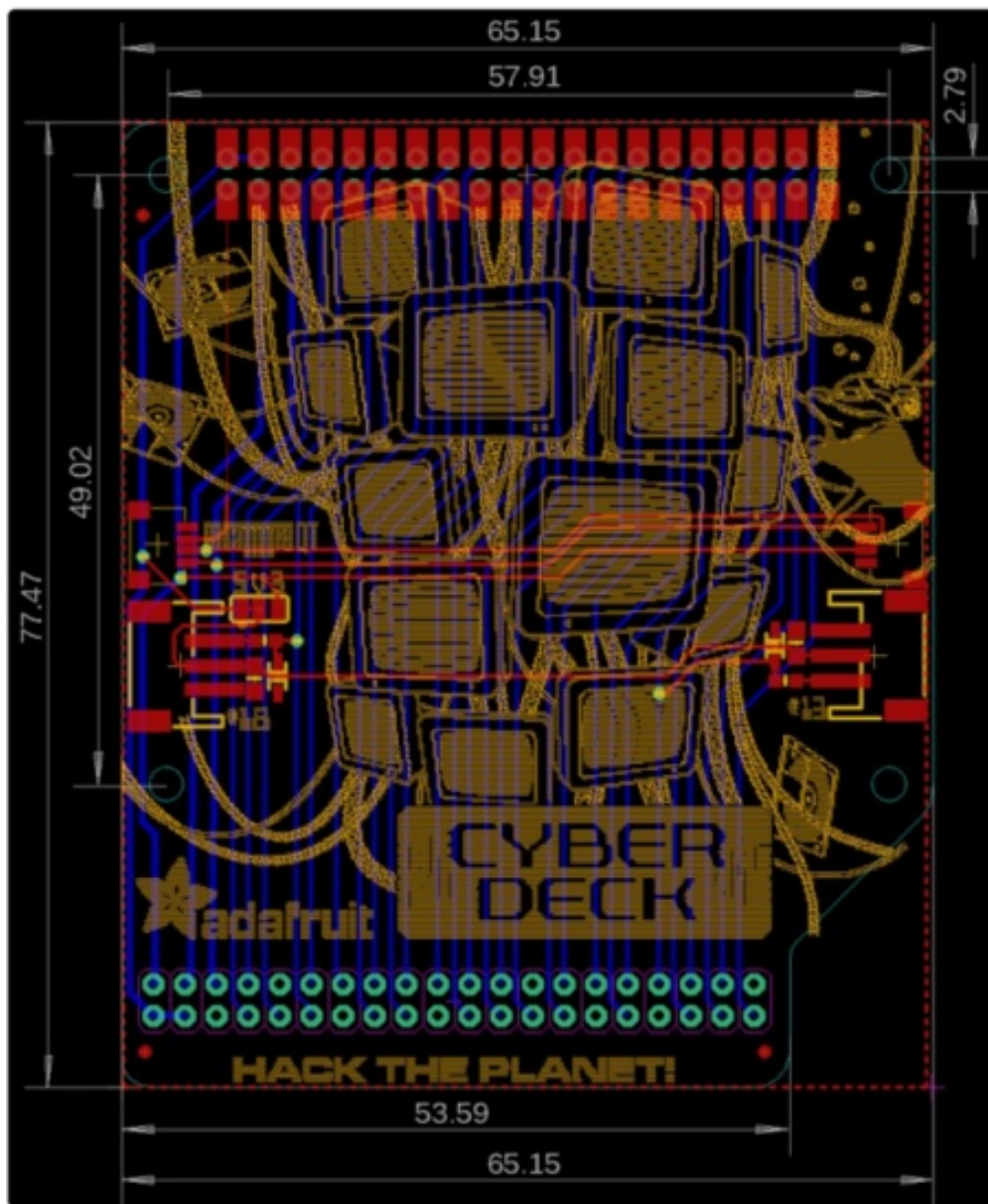
Files:

- Fritzing object for HAT in Adafruit Fritzing Library (<https://adafru.it/Rgf>)
- Fritzing object for Bonnet in Adafruit Fritzing Library (<https://adafru.it/RgA>)
- EagleCAD PCB files on GitHub (<https://adafru.it/RgB>)
- 3D Model for HAT on GitHub (<https://adafru.it/RkA>)

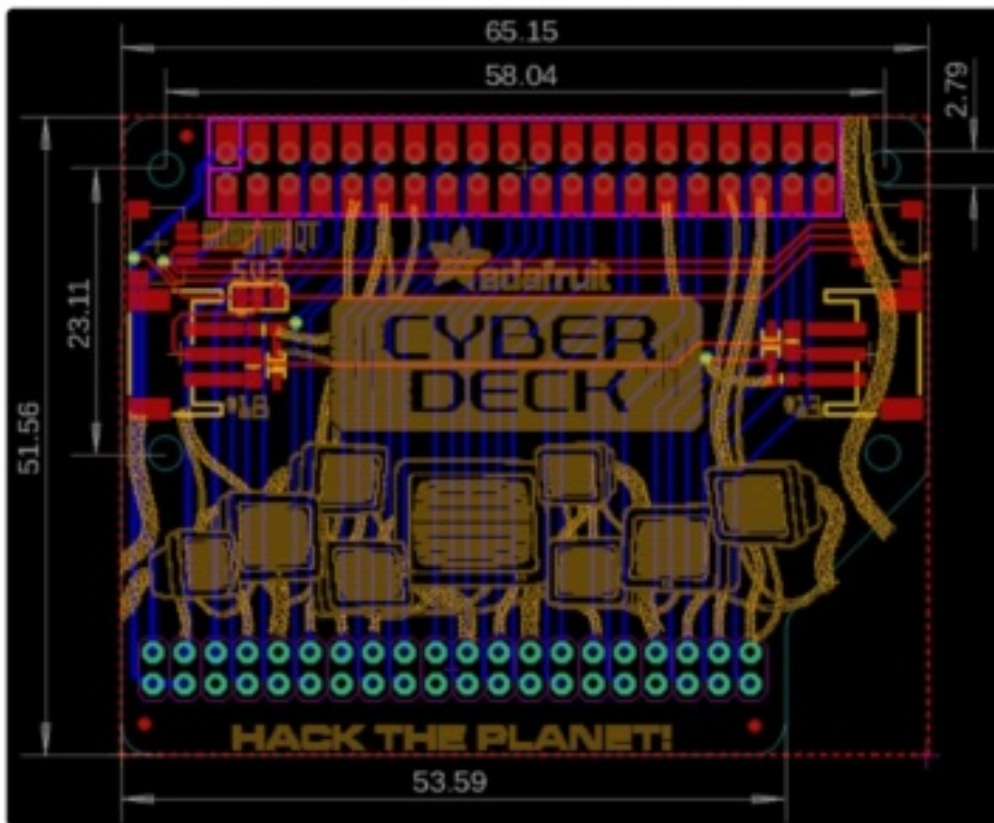
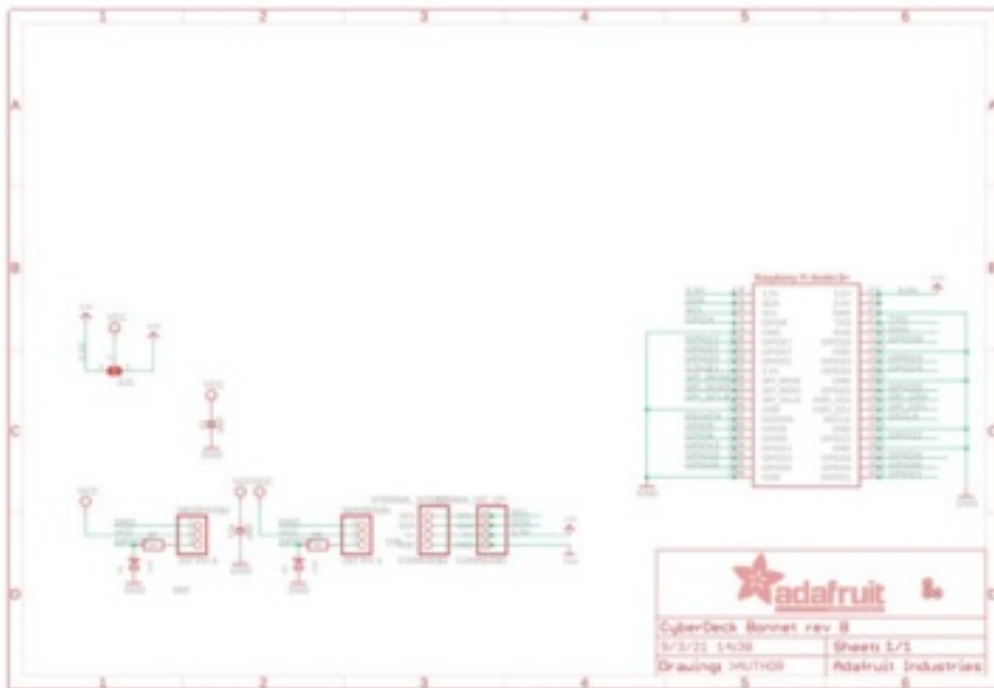
- 3D Model for Bonnet on GitHub (<https://adafru.it/Rsb>)

Schematic and Fab Print for CYBERDECK HAT





Schematic and Fab Print for CYBERDECK Bonnet



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Documents / Resources



[adafruit CYBERDECK Bonnet and HAT for Raspberry Pi 400](#) [pdf] Instructions
CYBERDECK, Bonnet and HAT for Raspberry Pi 400, CYBERDECK Bonnet and HAT for Raspb
erry Pi 400

References

- [!\[\]\(ba3216d69f468f236e1d04b7d0e65923_img.jpg\) Adafruit Mini PiTFT 1.3 - 240x240 TFT Add-on for Raspberry Pi : ID 4484 : \\$14.95 : Adafruit Industries, Unique & fun DIY electronics and kits](#)
- [!\[\]\(fd21eb2b7bde1d62aa23cc122d69349a_img.jpg\) Adafruit PiTFT Plus 320x240 2.8 TFT + Capacitive Touchscreen : ID 2423 : \\$44.95 : Adafruit Industries, Unique & fun DIY electronics and kits](#)
- [!\[\]\(7bc6efac5be8a57f742cddf3c5b5db36_img.jpg\) Adafruit PiTFT - 320x240 2.8 TFT+Touchscreen for Raspberry Pi : ID 1601 : \\$34.95 : Adafruit Industries, Unique & fun DIY electronics and kits](#)
- [!\[\]\(ce247c342301314020a84f1a39257c80_img.jpg\) PiTFT - Assembled 480x320 3.5 TFT+Touchscreen for Raspberry Pi : ID 2097 : \\$44.95 : Adafruit Industries, Unique & fun DIY electronics and kits](#)
- [!\[\]\(26f7a4f41bac56293de17e7f3075a3cb_img.jpg\) PiTFT 2.8 TFT 320x240 + Capacitive Touchscreen for Raspberry Pi : ID 1983 : \\$44.95 : Adafruit Industries, Unique & fun DIY electronics and kits](#)
- [!\[\]\(3ef891075b7e0640e1868c31f0e0f074_img.jpg\) PiTFT Plus Assembled 320x240 2.8 TFT + Resistive Touchscreen : ID 2298 : \\$34.95 : Adafruit Industries, Unique & fun DIY electronics and kits](#)
- [!\[\]\(0d7e4a9cd86e8c45cd3a4122f6276ed1_img.jpg\) Adafruit Industries, Unique & fun DIY electronics and kits](#)
- [!\[\]\(58f90ac06aeffc79f60a70146662f706_img.jpg\) STEMMA Products Category on Adafruit Industries](#)
- [!\[\]\(e5f87d3cc6e840f315ac6bd82980973e_img.jpg\) STEMMA, STEMMA QT \(JST SH 1mm\), Cables and Connectors Products Category on Adafruit Industries](#)
- [!\[\]\(f1bccec08f53d73cc6dd81c747c4a793_img.jpg\) Adafruit 1.3 Color TFT Bonnet for Raspberry Pi \[240x240 TFT + Joystick Add-on\] : ID 4506 : \\$17.50 : Adafruit Industries, Unique & fun DIY electronics and kits](#)
- [!\[\]\(3c1ef41087ea713bb17b3a1c674f1676_img.jpg\) PiTFT Plus 480x320 3.5 TFT+Touchscreen for Raspberry Pi : ID 2441 : \\$44.95 : Adafruit Industries, Unique & fun DIY electronics and kits](#)
- [!\[\]\(804669950f15f866a866621f0651160b_img.jpg\) Adafruit 2.23 Monochrome OLED Bonnet for Raspberry Pi : ID 4567 : \\$22.50 : Adafruit Industries, Unique & fun DIY electronics and kits](#)
- [!\[\]\(0b417939604b72a1e1a545b7e543cbb1_img.jpg\) Adafruit 2.13 Monochrome E-Ink Bonnet for Raspberry Pi \[THINK INK\] : ID 4687 : \\$19.95 : Adafruit Industries, Unique & fun DIY electronics and kits](#)
- [!\[\]\(ec18bfb00c0fe2c71554a6002c055286_img.jpg\) Adafruit 128x64 OLED Bonnet for Raspberry Pi : ID 3531 : \\$22.50 : Adafruit Industries, Unique & fun DIY electronics and kits](#)
- [!\[\]\(bb4f9229280ea938ef0192f70a48863e_img.jpg\) Adafruit Mini PiTFT 1.3 - 240x240 TFT Add-on for Raspberry Pi : ID 4484 : \\$14.95 : Adafruit Industries, Unique & fun DIY electronics and kits](#)
- [!\[\]\(af6777e7824e264929196d7bd950d9ef_img.jpg\) Pimoroni Inky pHAT for Raspberry Pi - 3 Color eInk Display : ID 3743 : \\$26.50 : Adafruit Industries, Unique & fun DIY electronics and kits](#)
- [!\[\]\(141b97255a68f6c547f660041bd47667_img.jpg\) Pimoroni Inky pHAT - 3 Color eInk Display \[Yellow/Black/White\] : ID 3933 : \\$26.50 : Adafruit Industries, Unique & fun DIY electronics and kits](#)
- [!\[\]\(3c724ed640726653480fa55b60417369_img.jpg\) Pimoroni Inky pHAT - eInk Display - Black/White : ID 3934 : \\$24.95 : Adafruit Industries, Unique & fun DIY electronics and kits](#)
- [!\[\]\(f246702f3d786ebe1fa9261767a0e476_img.jpg\) Adafruit PiTFT 2.2 HAT Mini Kit - 320x240 2.2 TFT - No Touch : ID 2315 : \\$24.95 : Adafruit Industries, Unique & fun DIY electronics and kits](#)
- [!\[\]\(c5e5d48ecb009ff160a6dead99c90d8b_img.jpg\) Adafruit PiTFT 2.4 HAT Mini Kit - 320x240 TFT Touchscreen : ID 2455 : \\$34.95 : Adafruit Industries, Unique & fun DIY electronics and kits](#)
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- [!\[\]\(fd39d59957cf5e35db502801440821bd_img.jpg\) Pimoroni HyperPixel - 4.0 Hi-Res Display for Raspberry Pi : ID 3578 : \\$64.95 : Adafruit Industries, Unique & fun DIY electronics and kits](#)

- [!\[\]\(772eaad309179eadc0d453409c5b8a86_img.jpg\) GitHub - adafruit/Adafruit-CYBERDECK-PCB: PCB files for Adafruit CYBERDECK HAT and Bonnet.](#)
- [!\[\]\(0c92eae87afd8e406cb2f9e6a9ad3ac2_img.jpg\) Pimoroni Inky wHAT \(ePaper/eInk/EPD\) - Red/Black/White : ID 4143 : \\$64.95 : Adafruit Industries, Unique & fun DIY electronics and kits](#)
- [!\[\]\(3bc2ea6fe8b34a8403f47efb7eadba72_img.jpg\) Pimoroni Inky wHAT \(ePaper/eInk/EPD\) - Black/White : ID 4142 : \\$54.95 : Adafruit Industries, Unique & fun DIY electronics and kits](#)
- [!\[\]\(db2c3258ee7e87ee4e634ef7e3495477_img.jpg\) Pimoroni HyperPixel 4.0 Square - Touch Display for Raspberry Pi \[Capacitive Touch - PIM470\] : ID 4499 : \\$78.95 : Adafruit Industries, Unique & fun DIY electronics and kits](#)
- [!\[\]\(2948f837b3cd4e74769462642b6408ab_img.jpg\) Fritzing-Library/Adafruit CYBERDECK HAT.fzpz at master · adafruit/Fritzing-Library · GitHub](#)
- [!\[\]\(da1507fe5416083761c35bb1cc4b8919_img.jpg\) Adafruit_CAD_Parts/4863 CYBERDECK Hat at main · adafruit/Adafruit_CAD_Parts · GitHub](#)
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- [!\[\]\(171ef5b572d039e2f52700a5a28af2b1_img.jpg\) Overview | CYBERDECK Bonnet and HAT for Raspberry Pi 400 | Adafruit Learning System](#)