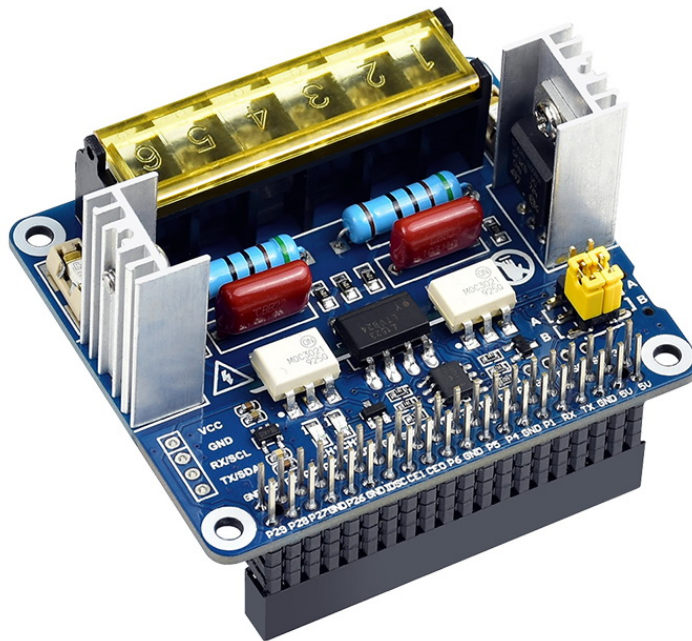


Dual Channels Triac HAT

Bidirectional SCR Isolated HAT, Dual Channels Triac Output Control

Designed for Raspberry Pi



Advantages Over Relay

High Efficiency, No Mechanical Noise Or Wear, Quick Response, Adjustable Output



HIGH EFFICIENCY



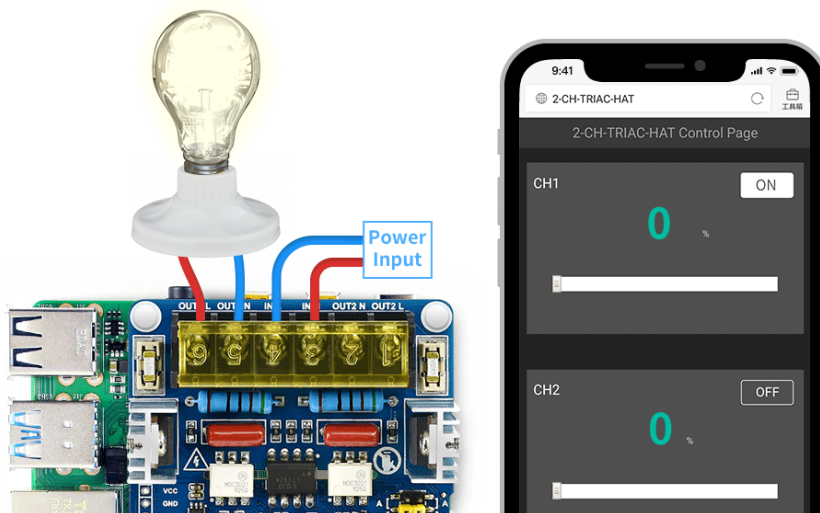
NOISE FREE



QUICK RESPONSE

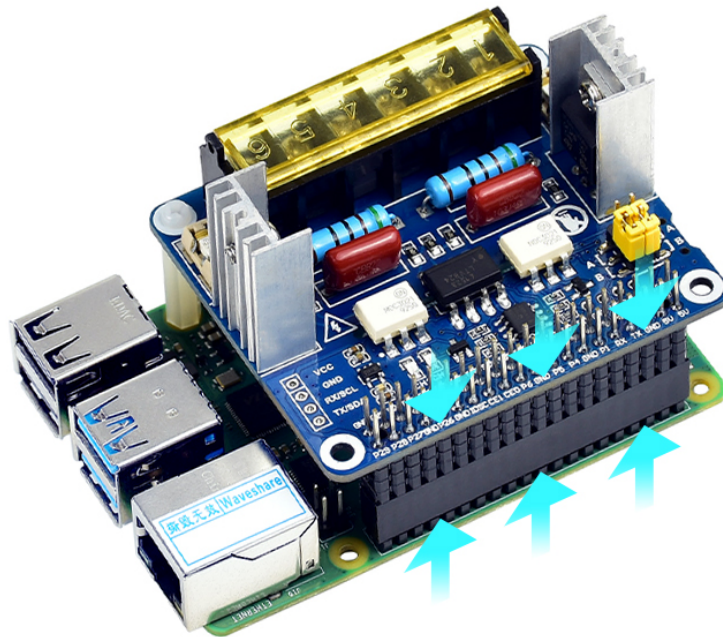


CONTACTLESS SWITCHING



Designed For Raspberry Pi Series

Standard Raspberry Pi 40PIN GPIO Header, Customized For Raspberry Pi Series Boards

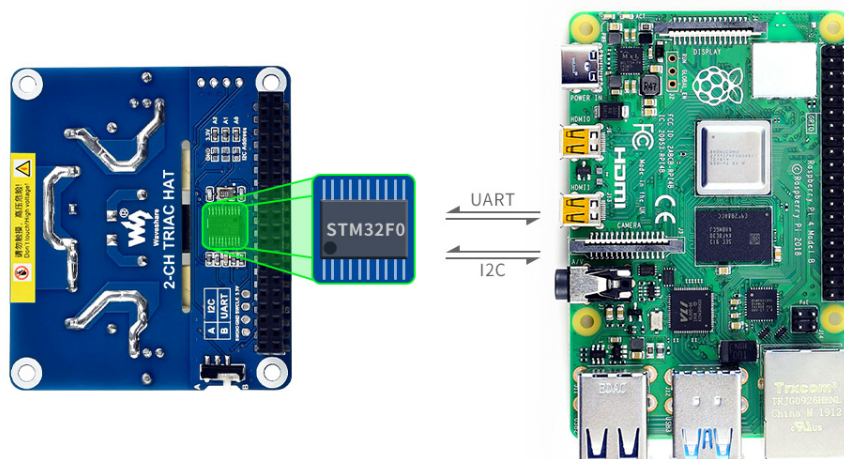


FEATURES AT A GLANCE

- STM32F0 MCU controller, requires minimal Raspberry Pi resource, UART / I2C communication
- RC snubber circuit, protect the triac from power fluctuation
- Up to 4400W output power, under ideal heat dissipation condition
- Optocoupler isolation, preventing interference from the high voltage circuit
- Indicator for easy checking the status of triac
- Reserved UART and I2C interface, for working with other host control boards
- Data rate: up to 921.6kbps for UART, up to 1024kbps for I2C
- Comes with development resources and manual (examples in C and Python)

STM32F0 MCU Onboard

Integrates STM32F030 MCU, Supports Directly Command Control, Easy For Developing Quicker Response, Requires Minimal Resource From The Raspberry Pi



High Data Rate, Always One Step Ahead

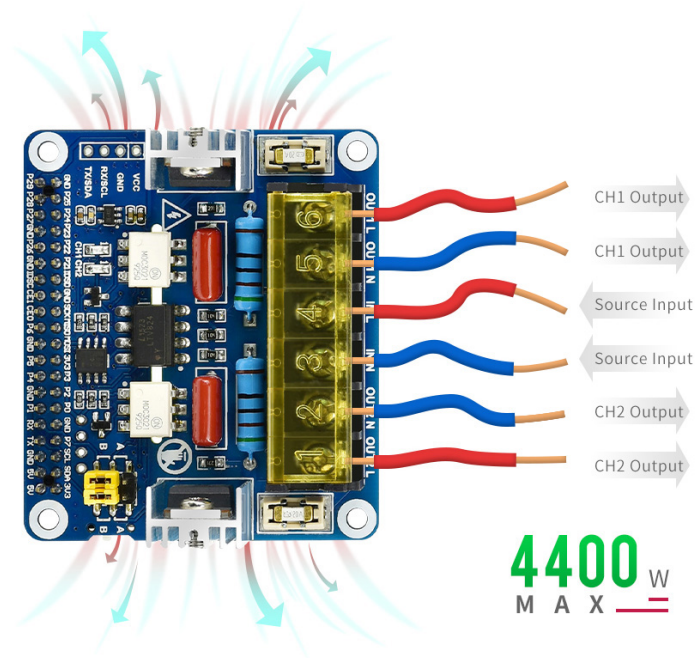
Up To 921.6kbps For UART, Up To 1024kbps For I2C

921.6 kbps
U A R T

1024 kbps
I 2 C

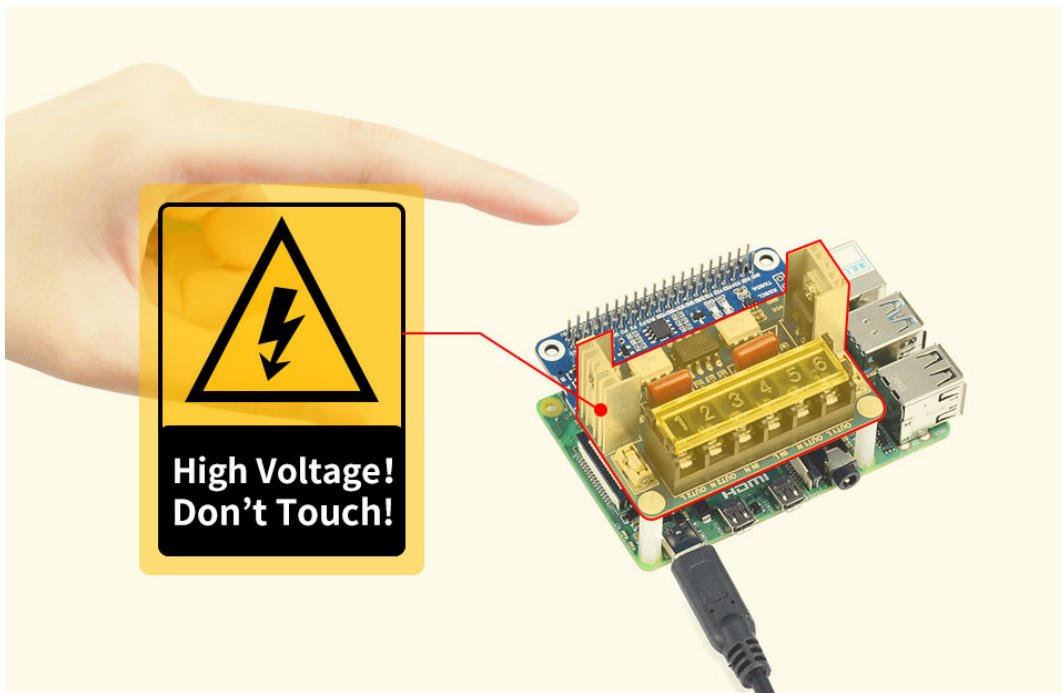
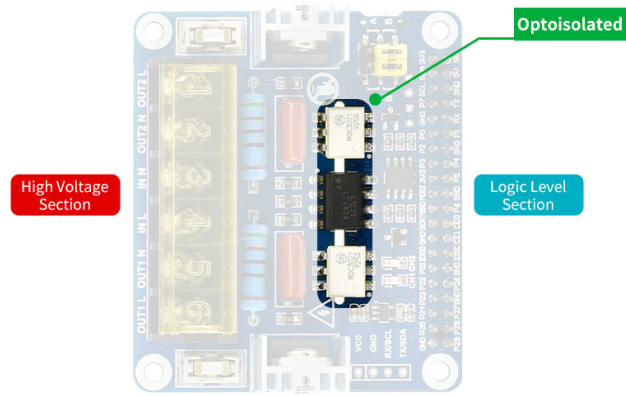
Powerful Output Power

Up To 4400W Output Power, Under Ideal Heat Dissipation Condition



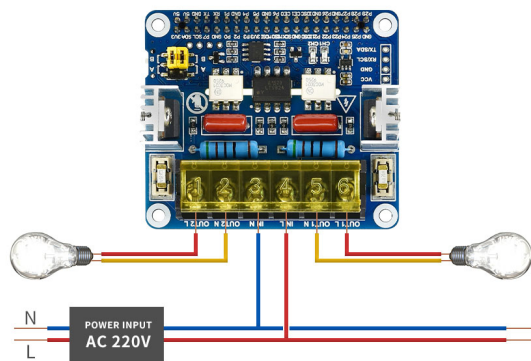
Optocoupler Isolation **Safety First!**

Optoisolated Solution, Preventing Interference From The High Voltage Circuit



Home Appliance Support

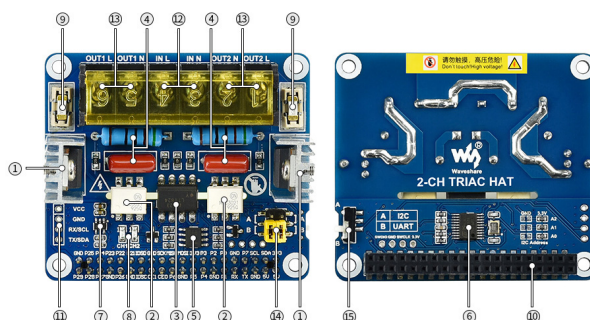
In The Example Of Controlling 220VAC Home Appliances



Applications



What's On Board



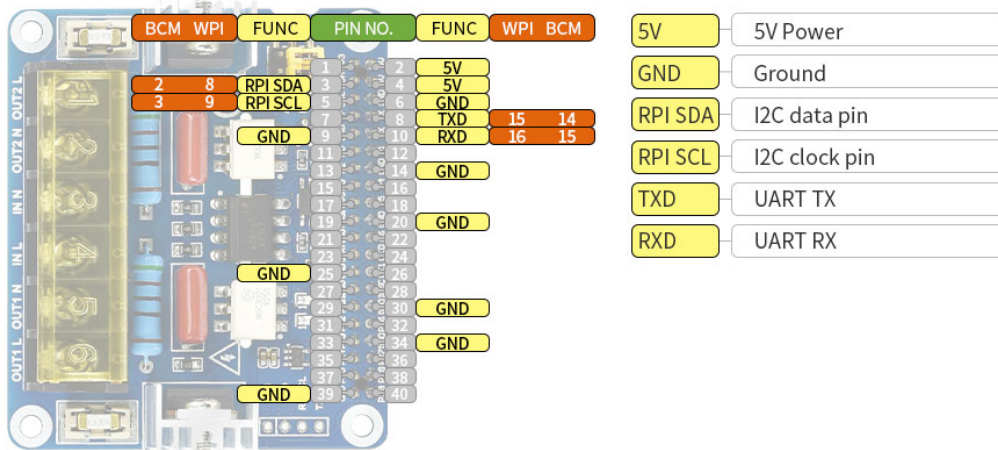
1. BTA24-600 high power bidirectional triac
2. MOC3021S photocoupler, the triac driver
3. LTV-824S AC photocoupler
4. RC snubber circuit
5. LM358DR OP amplifier
6. STM32F030F4P6 main controller
7. RT9193-33PB power chip
8. Output indicator
9. 20A blow fuse

10. Standard Raspberry Pi 40PIN GPIO header
11. MCU control interface, for use with other host control boards like Arduino
12. AC input
13. AC output
14. Data bus selection
 - A: use Raspberry Pi I2C bus
 - B: use Raspberry Pi UART bus
15. Mode selection
 - A: I2C mode
 - B: UART mode

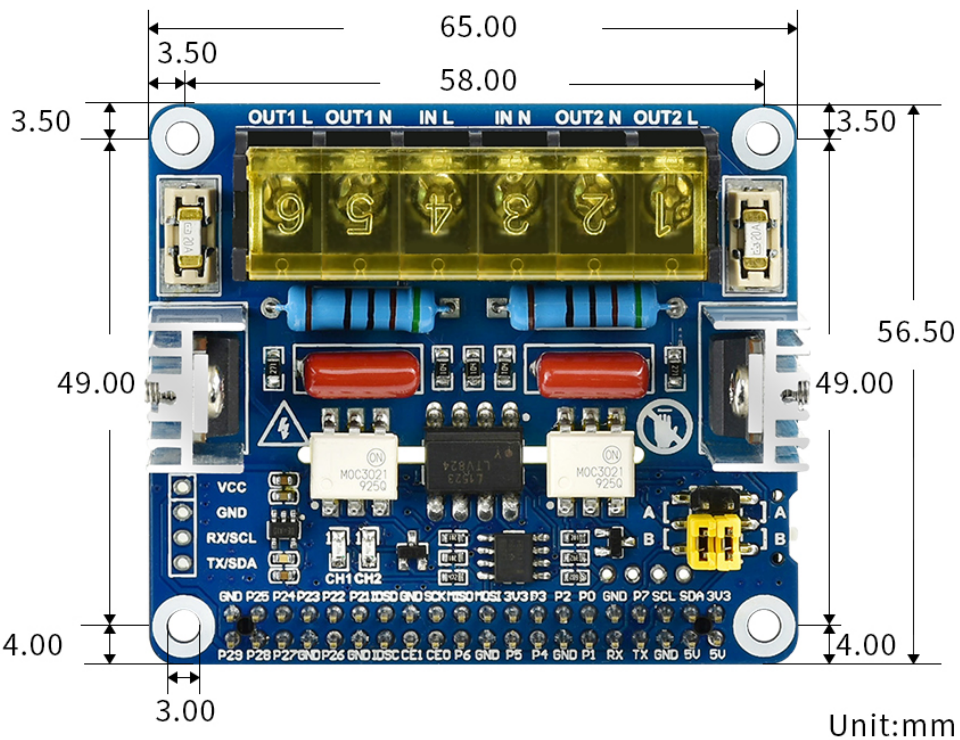
Specifications

AC VOLTAGE	100 ~ 600V	UART DATA RATE	1.2 ~ 921.6 kbps
AC CURRENT	0~20A	I2C DATA RATE	1024 kbps
CONTROLLER	STM32F030	LOGIC LEVEL VOLTAGE	3.3V/5V
COMMUNICATION BUS	I2C/UART	DIMENSIONS	65 × 56.5(mm)

Pinout Definition



Outline Dimensions



Resources & Services



WAVESHARE ORIGINAL



PROFESSIONAL TECH SUPPORT



RICH RESOURCES MANUAL & DEMO



User Manual



Circuit Diagram



Example Code



Dev Resources

Comes with example in C and Python

WIKI: [www.waveshare.com/wiki/2-CH TRIAC HAT](http://www.waveshare.com/wiki/2-CH_TRIAC_HAT)