

Wireless Hacking with 'HackCUBE'

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UnicornTeam, 360 Technology

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What's the HackCUBE?

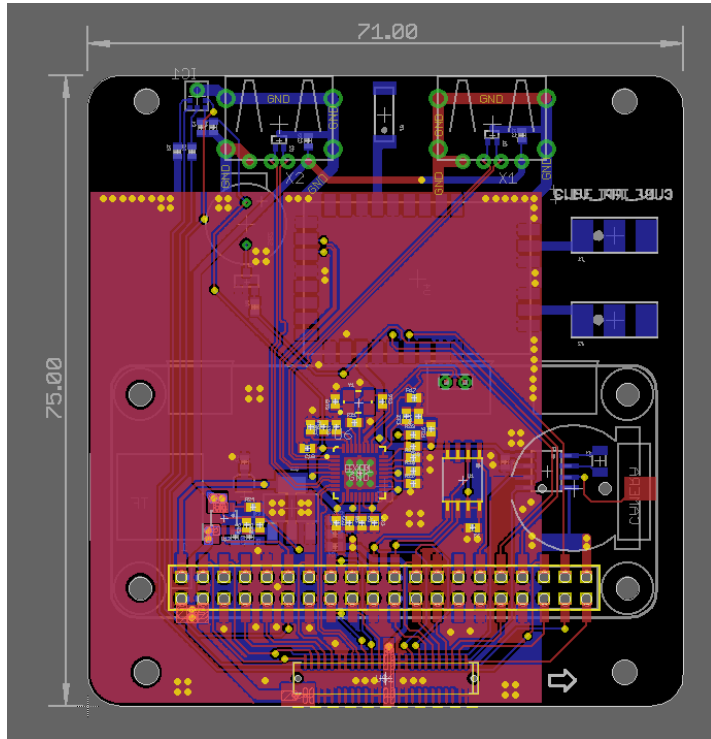


- HackCUBE is a hardware testing platform
- HackCUBE is a so opened platform
- HackCUBE is a well - designed and good - looking platform

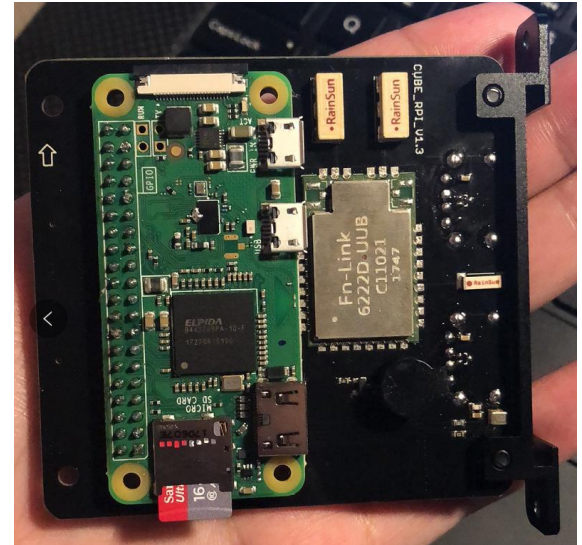
The HackCUBE



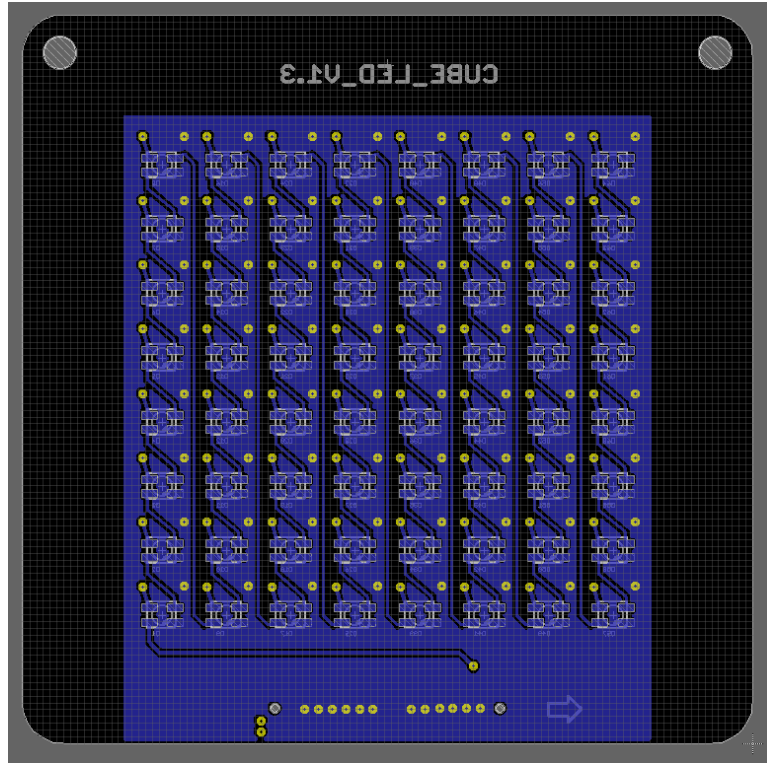
Core Board of HackCUBE



- Raspberry Pi Zero W
- USB2514B 4*USB HUB
- RTL8822BU 2.4G/5.8G WIFI
- DS1307 RTC
- SPI Flash
- Beep
- MIC

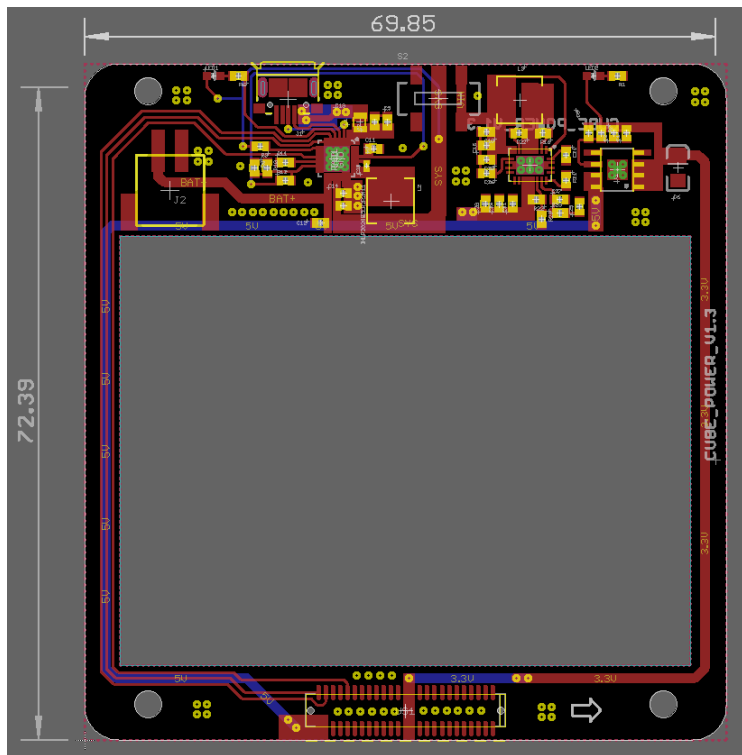


RGB LED Board



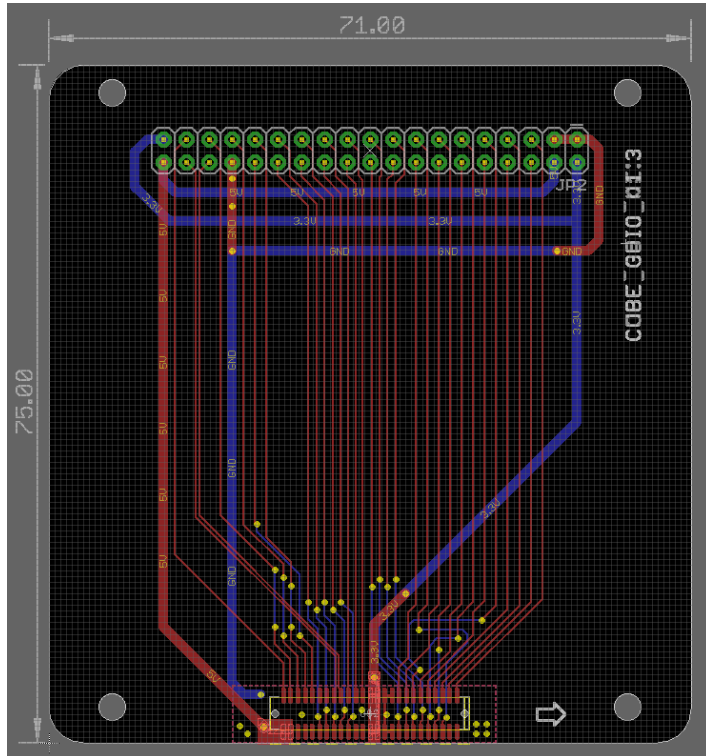
- 8*8 RGB LED
- Show Light
- Show Logo
- Flashlight

Power Board

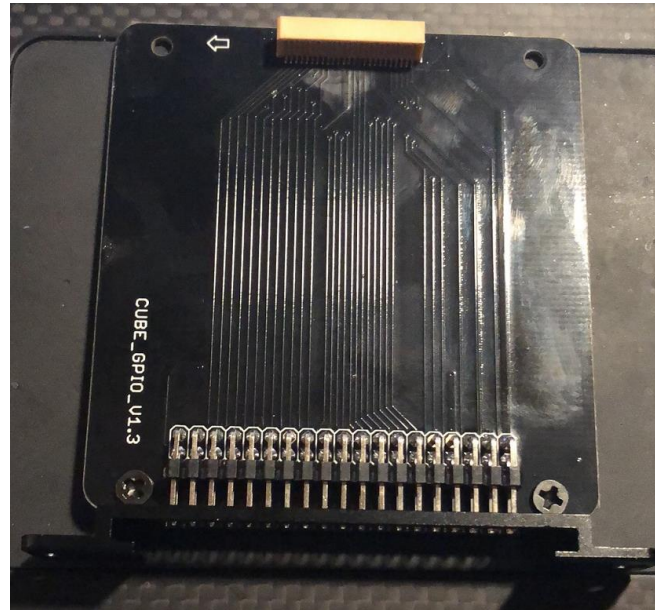


- TI BQ25895
 - Supports Max Charge (QC3.0)
- TI TPS61088
 - Boost to 5V

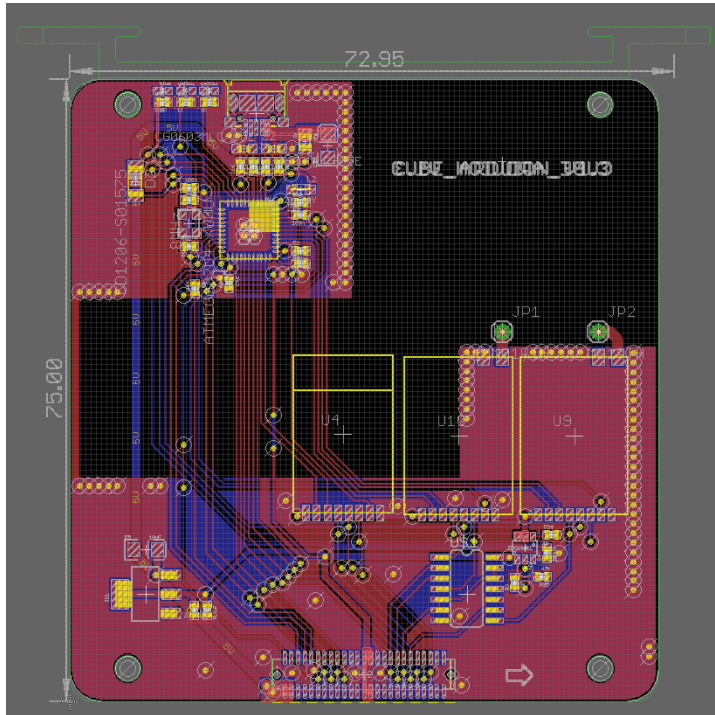
GPIO Board



- ALL GPIO Extended

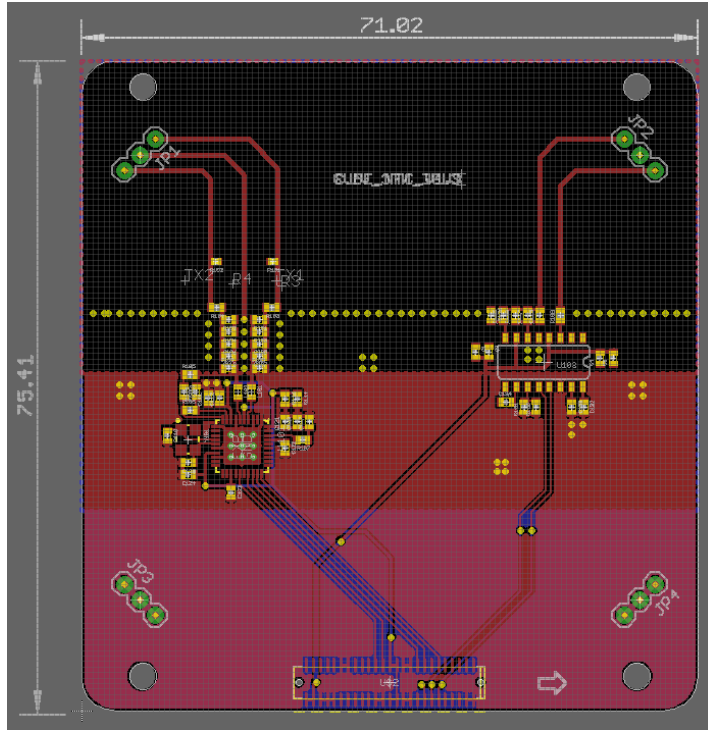


Arduino Board

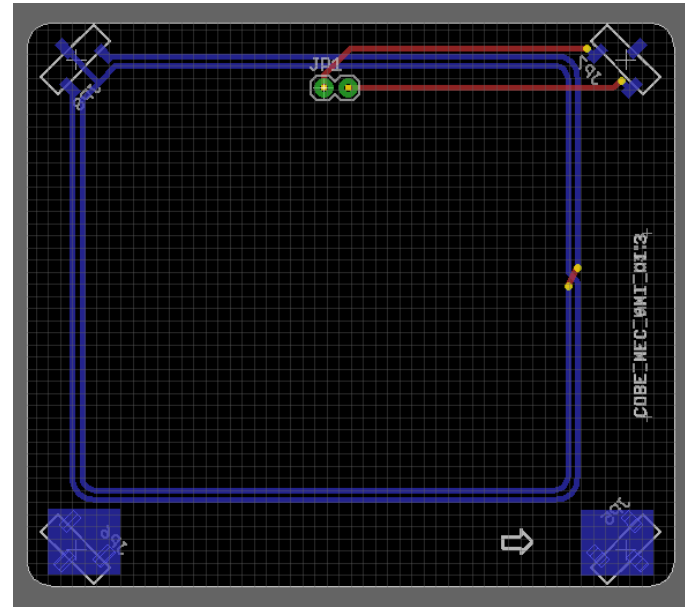


- Arduino Micro Pro 3.3V
- CC1101 433MHz
- CC1101 315MHz
- nRF24L01+ PA

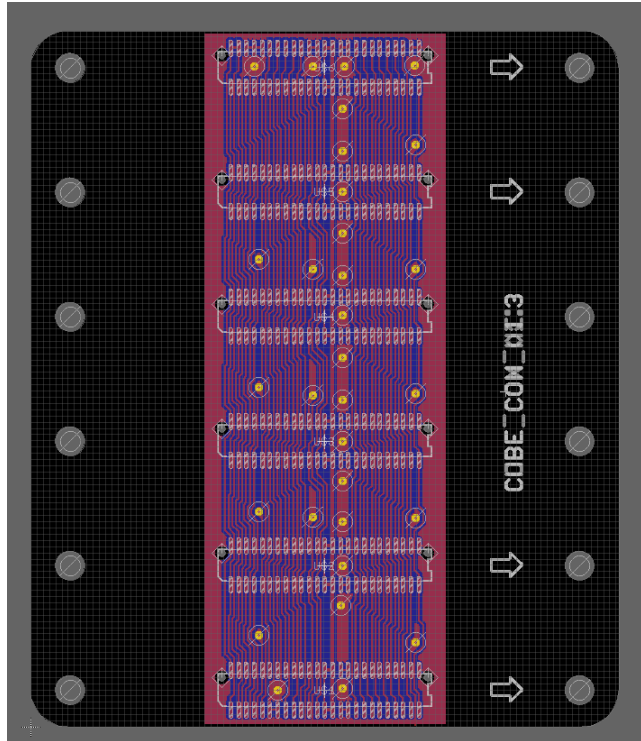
NFC & Anttan Board



- PN532
- EM4095



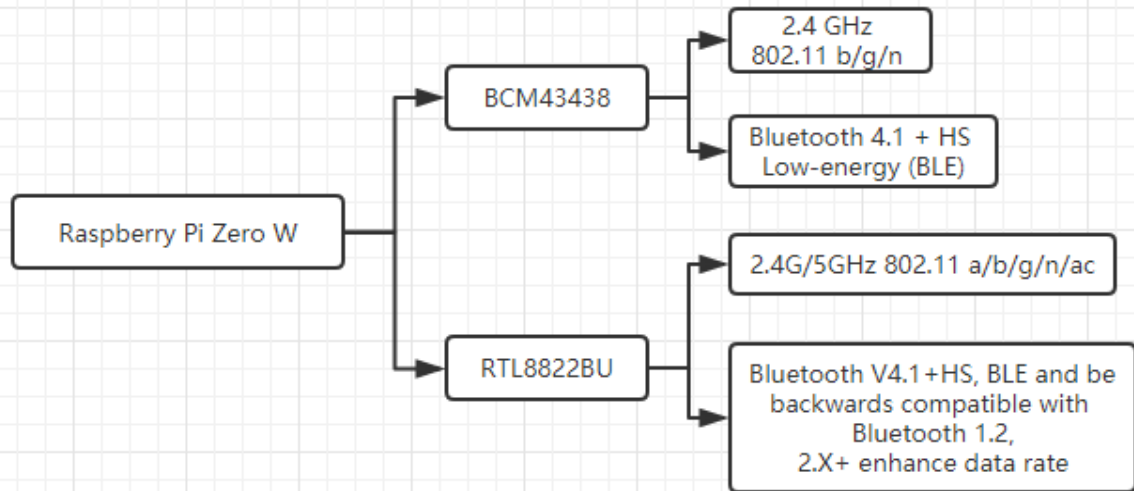
Connect Board



- 2*25P 0.8mm BTB Connector
- 6*Connector



What can we do: WIFI / BLE



- WIFI Router
- WIFI Advertising
- WIFI Blocking Attack
- WIFI Fishing
- WIFI IOT Gateway
- WIFI ...

- Bluetooth Advertising
- Bluetooth Keyboard/Mouse
- Bluetooth IOT Gateway
- Bluetooth ...

Demo 1: Wifi Attack

- WIFI AP: HackCUBE_xx:xx:xx
- WIFI Password: hackcube123
- Web Address: 192.168.2.3
- SSH User: root
- SSH Password: hackcube

192.168.2.3

Warning! ×

This equipment is limited to risk demonstration, please pay attention to consciously abide by relevant laws and regulations.

Cube Wifi Manage

Security Risk Detection on 2.4Ghz 5Ghz Devices

WiFi List 11 Stop

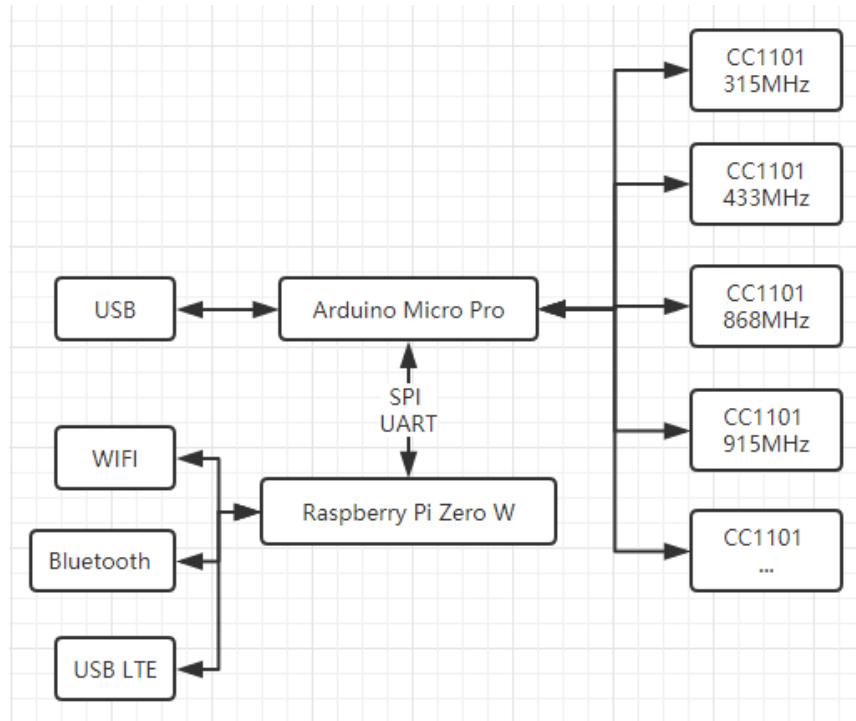
SSID	BSSID	RSSI	JAM
knakworst	08:76:FF:83:2C...	-97	Run
HackCUBE_30:...	B8:27:EB:30:1E...	-61	Run

« < 1 > »

Client List

MAC	BSSID	RSSI	JAM
2C:F0:EE:26:AF...	None	-65	Run
8C:85:90:31:E5:B3	None	-109	Run

What can we do: RF



- IOT Sub-1GHz RF Board
- RFCat
- HID Attack Tool
- Remote Control Tool
- Wireless Keyboard
- RF Transmit Mode

Demo 2: RF Control Car



Demo 3: RF Control Quadcopter



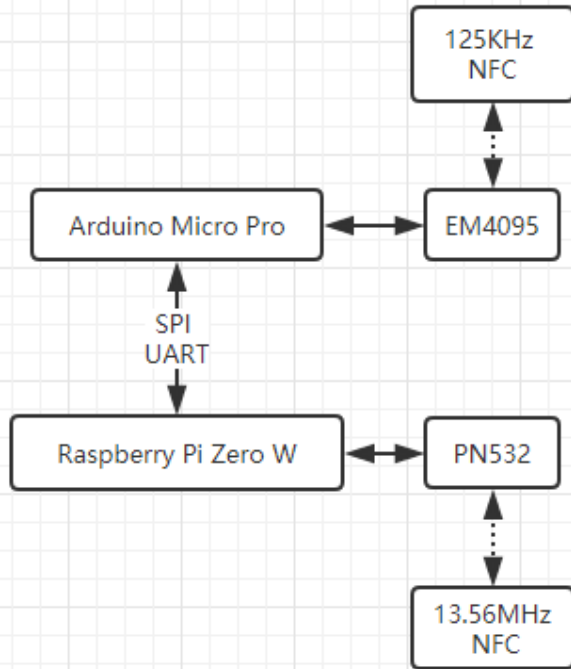
Demo 4: Wireless Keyboard



- Keyboard
- USB Network Card
- USB Disk
- BadUSB

What can we do: NFC

- 125KHz NFC Read/Write/Simulation
- Passive Keyless Enter
- 13.56MHz NFC Read/Write
- Crack Mifare Card



Demo 5: NFC Read/Write

Cube NFC Manage
Safety Risk Detection for
Cards Working at 125Khz,
13.5Mhz.

Read

VID	ID	WRITE	SIMULATE
050	6835882	<input type="checkbox"/>	<input type="checkbox"/>

Write

VID ID

Simulate

VID ID

```
nfc-list uses libnfc 1.7.1
NFC device: pn532_spi:/dev/spidev0.0 opened
1 ISO14443A passive target(s) found:
ISO/IEC 14443A (106 kbps) target:
  ATQA (SENS_RES): 00 04
  UID (NFCID1): 0a 1a cd 09
  SAK (SEL_RES): 08
```

Cube NFC Manage
Safety Risk Detection for
Cards Working at 125Khz,
13.5Mhz.

Read

VID	ID	WRITE	SIMULATE
050	6835882	<input type="checkbox"/>	<input type="checkbox"/>

Write

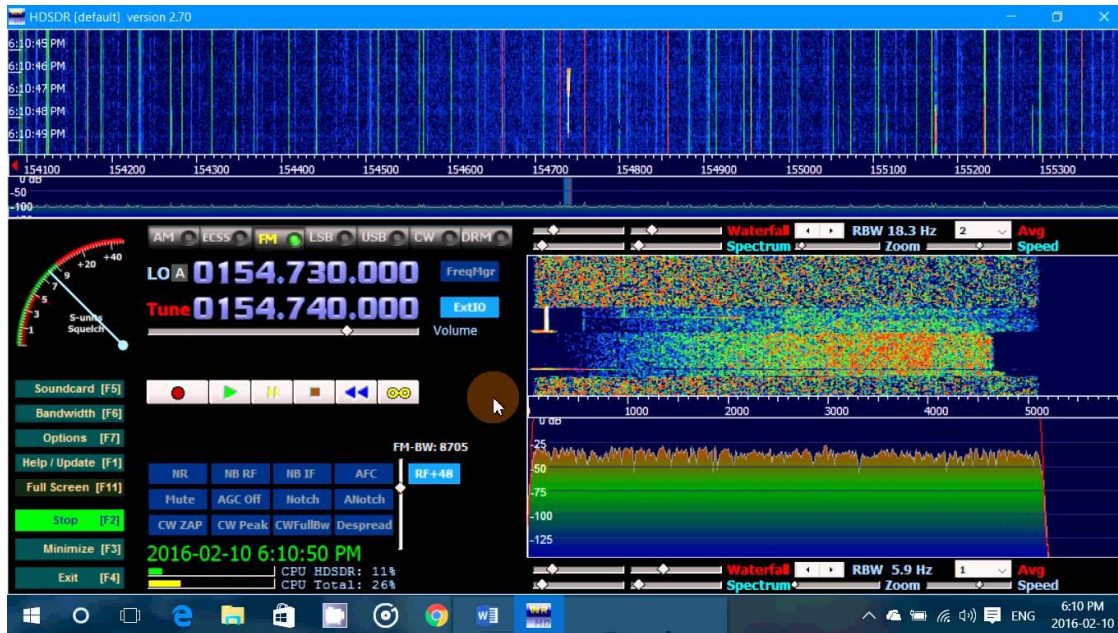
VID ID

Simulate

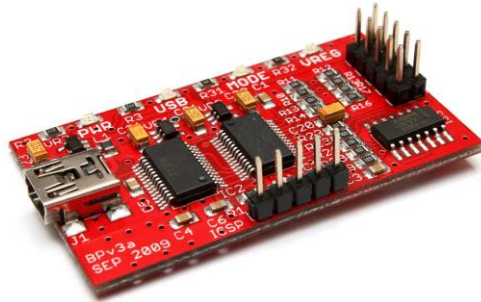
VID ID

```
nfc-list uses libnfc 1.7.1
NFC device: pn532_spi:/dev/spidev0.0 opened
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ISO/IEC 14443A (106 kbps) target:
  ATQA (SENS_RES): 00 04
  UID (NFCID1): ce 79 4f 3f
  SAK (SEL_RES): 08
```

Our Plan: SDR

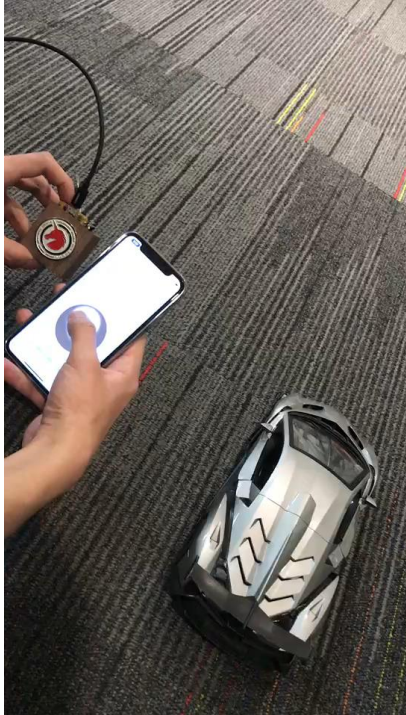


Our Plan: Debugger Tool



- OpenJTAG
- Buspirate
- CC Debugger
- Logic Analyzer
- IR Analyzer
- CAN Bus Analyzer
- Zigbee Sniffer
- BLE Sniffer
- Other ...

Next: HackCUBE Mini



- Small
- Portable
- High Intergration
- Low Price
- Other ...

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How to get it ?

<https://github.com/UnicornTeam/hackcube.git>

HackCUBE Pre-Order



Only limited units for USD299

The official release will be USD399

Option 0: Price are without USD50 shipping cost. World wide.

Option 1: Pay now and collect at #HITB2018SG USD299 NETT

Thank You ~