BB-Config

BeagleBoard.org Foundation
Jun 29, 2025

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Chapter 1

BB-Config Detail

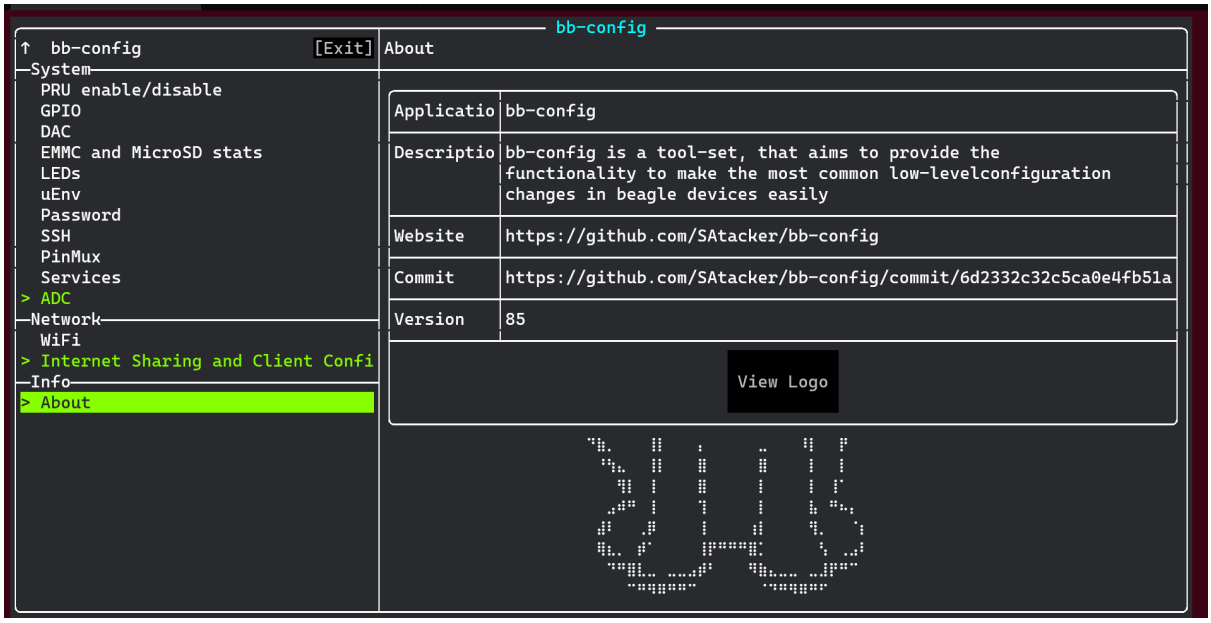
Configure your beagle devices easily.

Github

1.1 What is BB-Config

BB-Config is software that makes the most common low-level configuration changes of beagle devices easily and provides a terminal UI.

BB-Config is using FTXUI (C++ Functional Terminal User Interface) which provides a simple and elegant looking UI.


bb-config
↑ bb-config [Exit]
About
System
PRU enable/disable
GPIO
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uEnv
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Services
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Info
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Applicatio bb-config
Descriptio bb-config is a tool-set, that aims to provide the functionality to make the most common low-levelconfiguration changes in beagle devices easily
Website https://github.com/SAtacker/bb-config
Commit https://github.com/SAtacker/bb-config/commit/6d2332c32c5ca0e4fb51a
Version 85
View Logo

Chapter 2

Build from Source

2.1 Dependencies

- g++
- cmake
- glib-2.0
- libnm

2.2 Build

```
git clone https://git.beagleboard.org/gsoc/bb-config
cd bb-config
mkdir build
cd build
cmake ..
make -j$(nproc)
```

2.3 Install

```
sudo make install
```

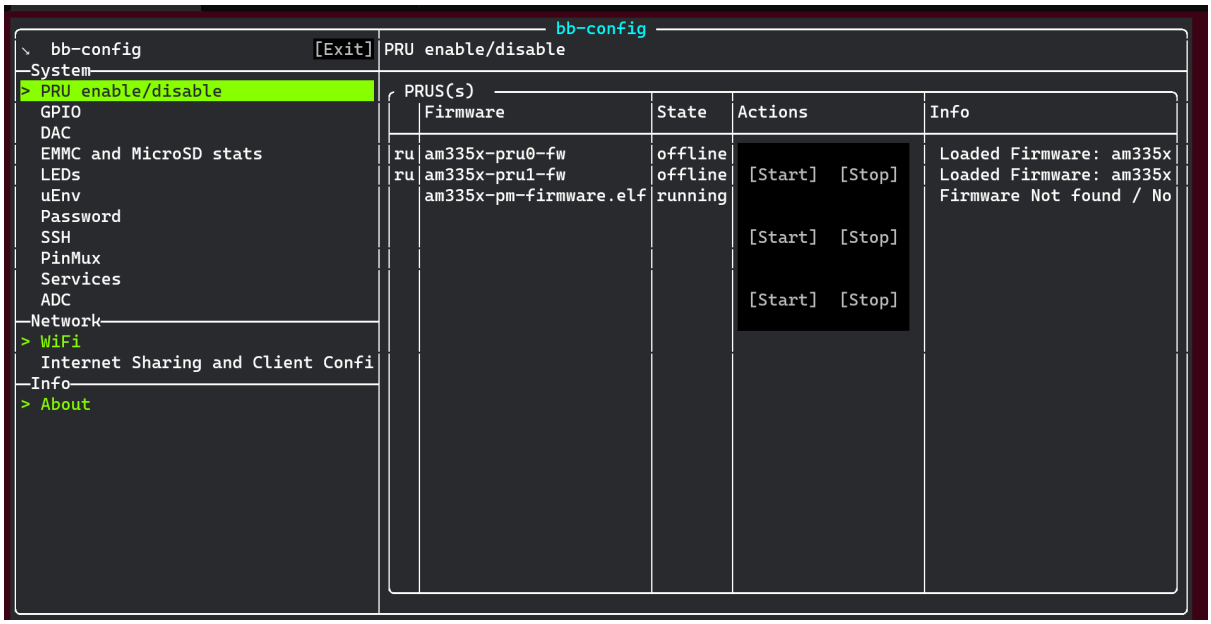
Chapter 3

Features

3.1 BB-Config v1.x

3.1.1 PRU Enable/Disable

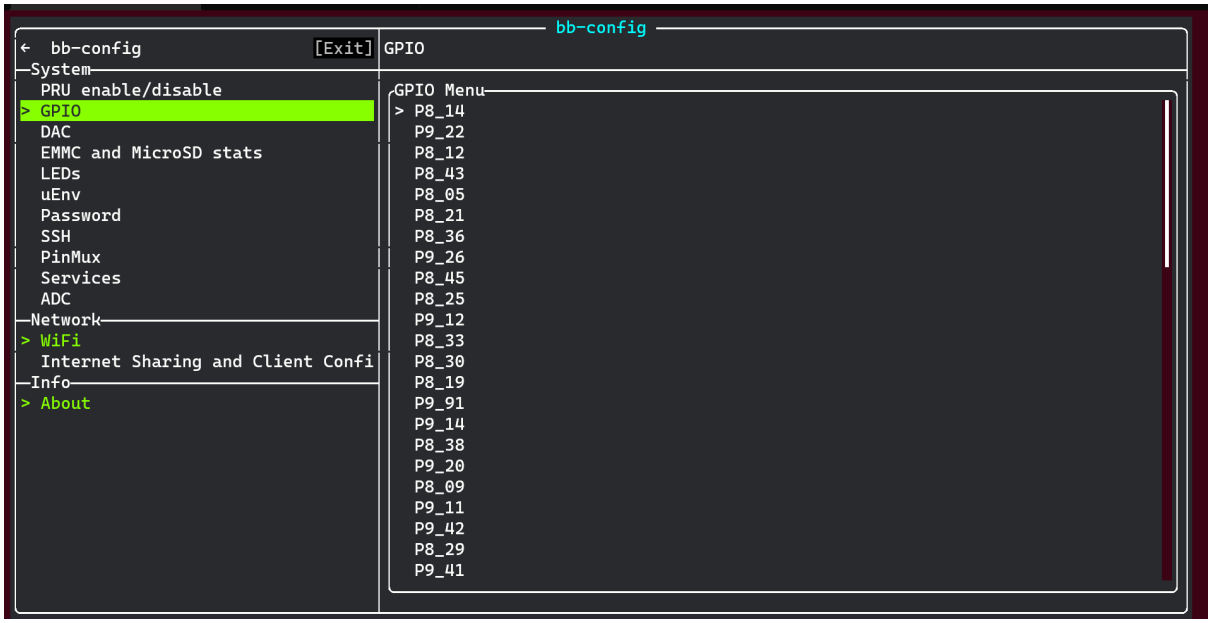
- Enable/Disable PRU



3.1.2 GPIO

- Turn On/Off gpio

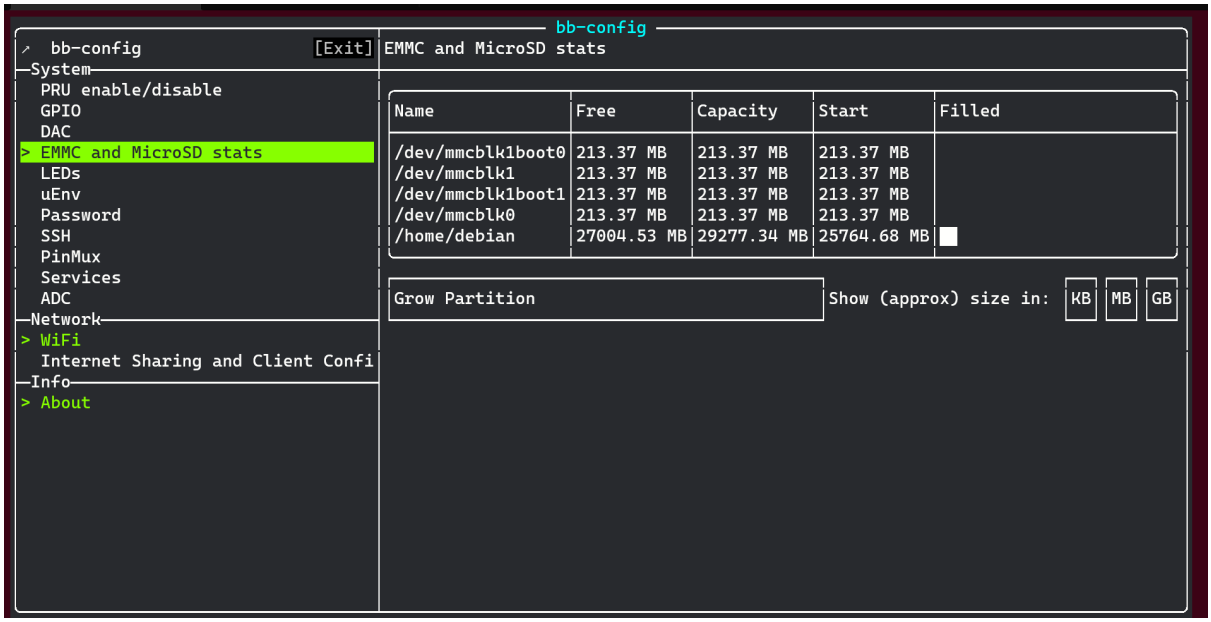
GPIO Menu



GPIO Setting

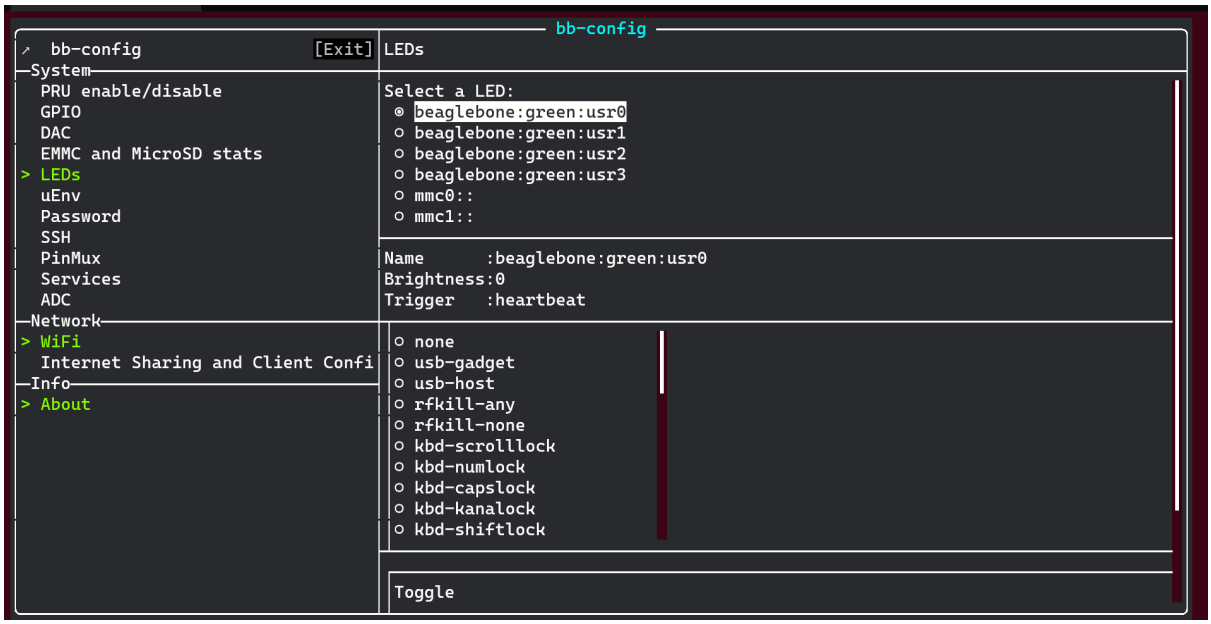
3.1.3 EMMC and MicroSD Stats

- Storage stats & grow partition



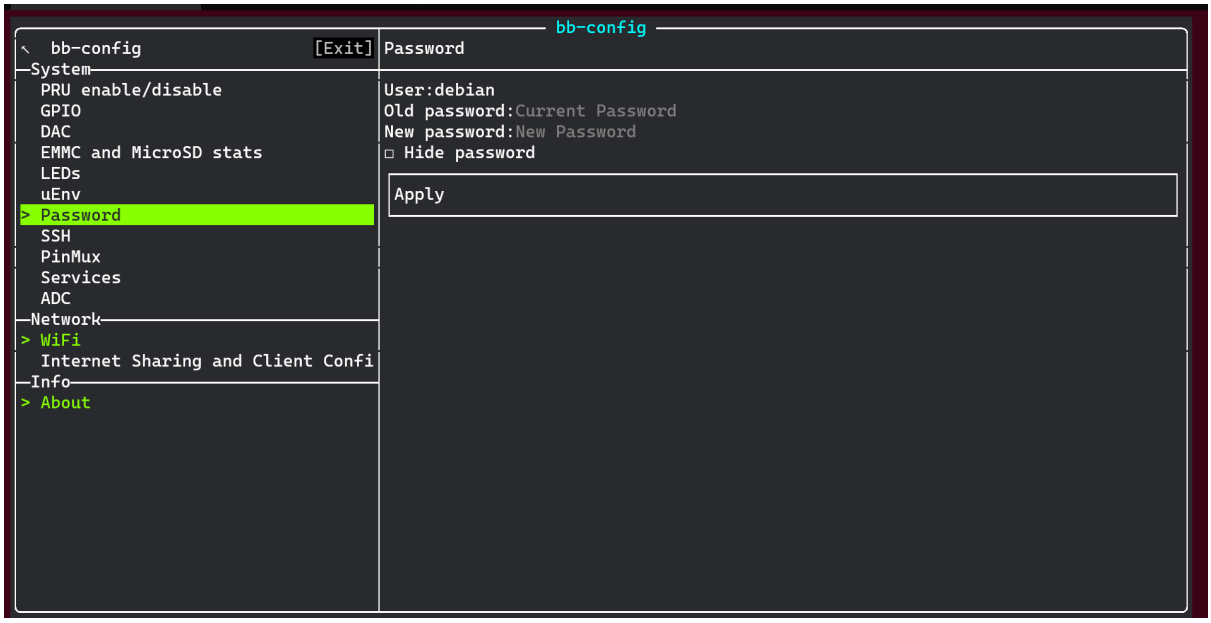
3.1.4 LEDs

- Config board build in LEDs



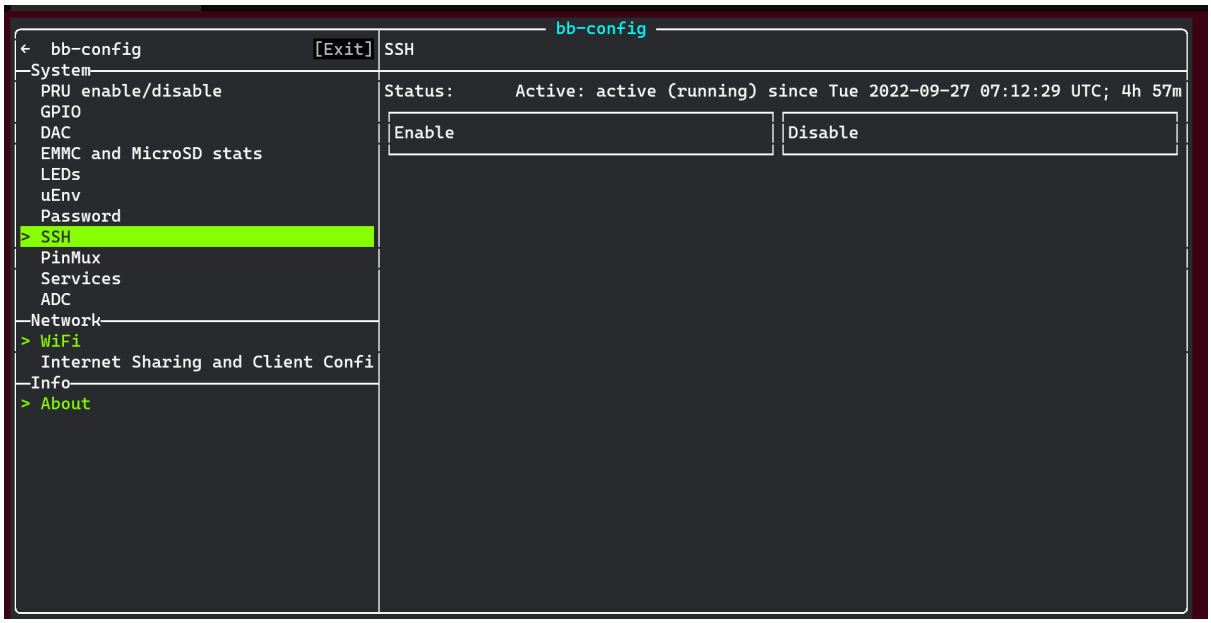
3.1.5 Password

- Change users password



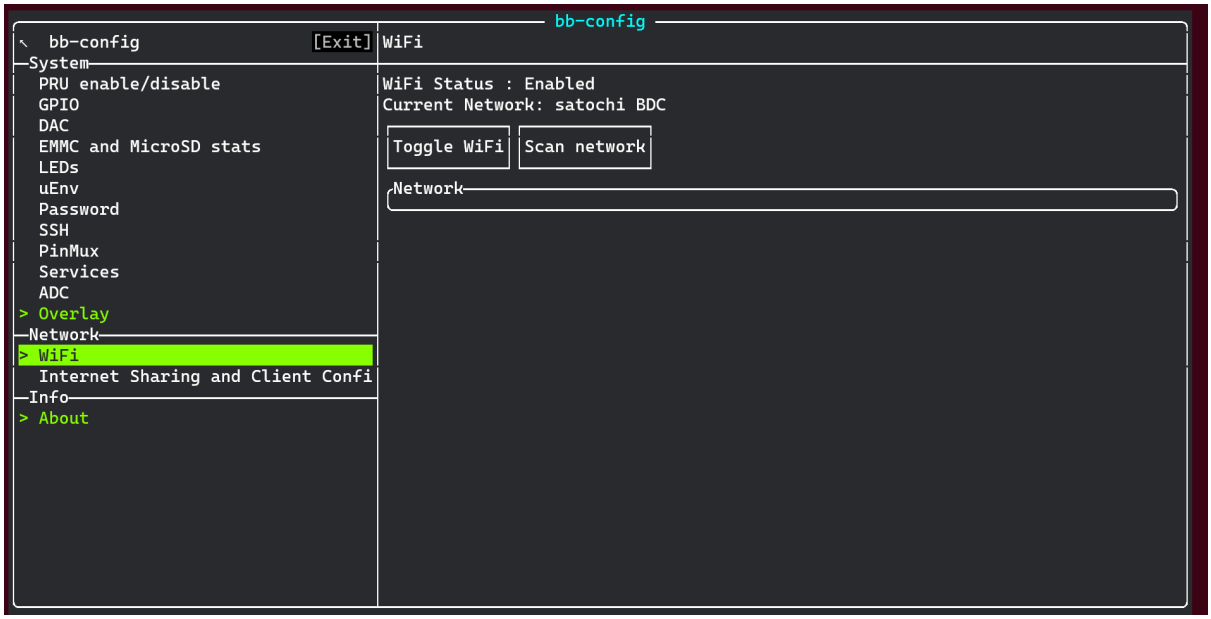
3.1.6 SSH

- Enable/Disable SSH

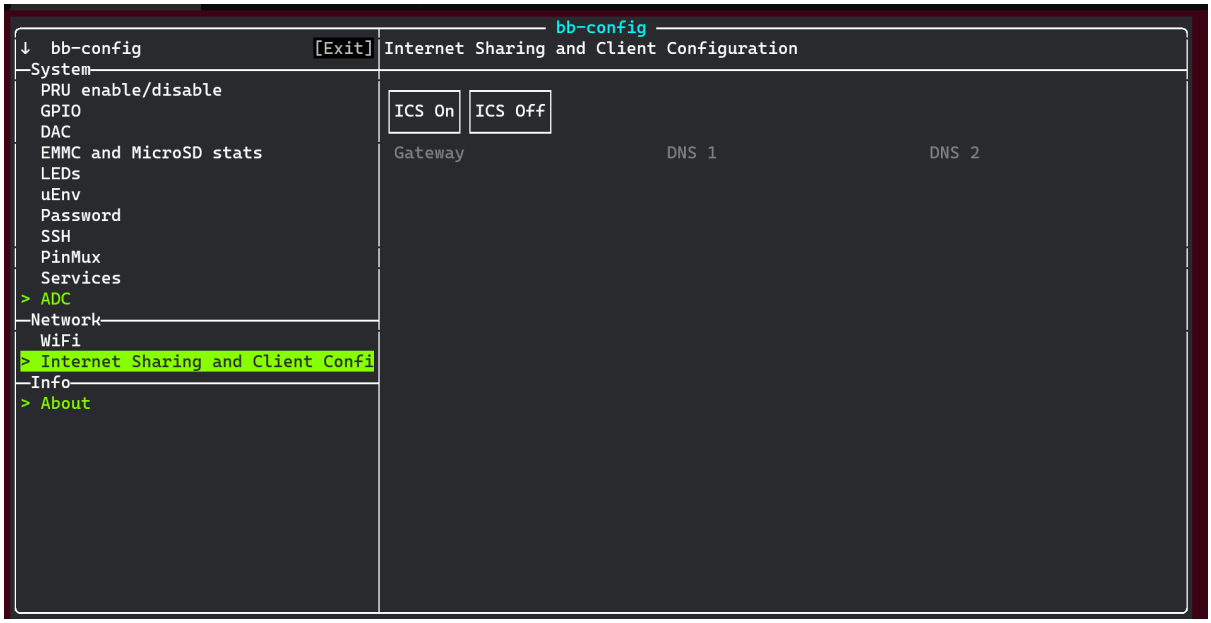


3.1.7 WiFi

- Connect to Wi-Fi



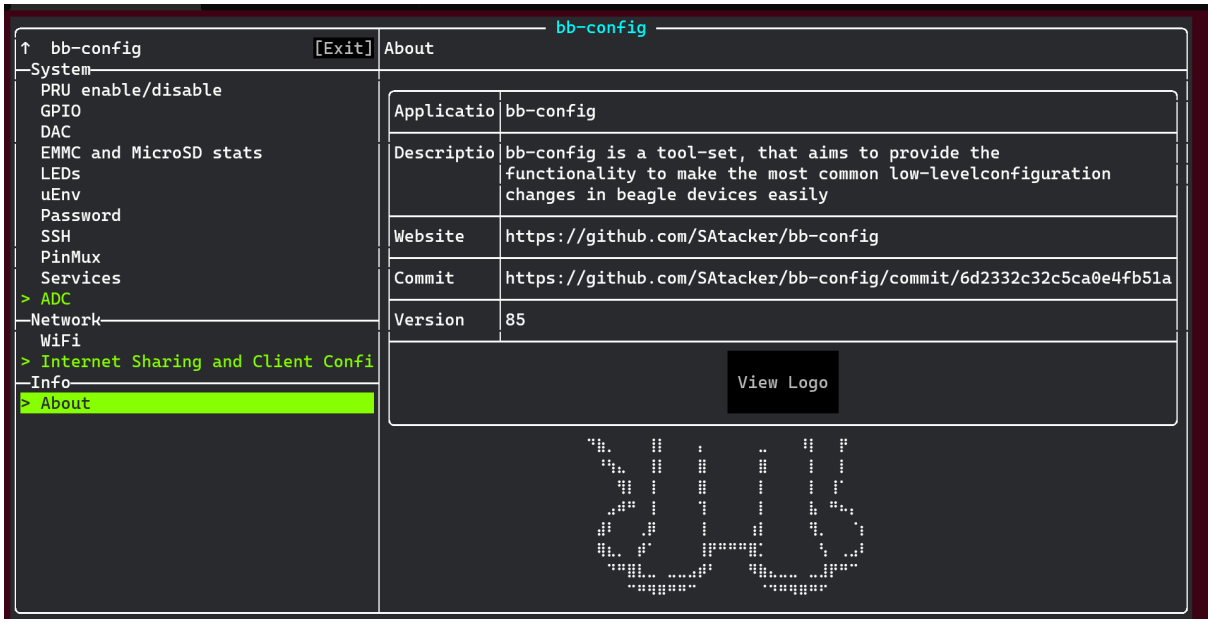
3.1.8 Internet Sharing and Client Config



- Note: You'll have to configure your host Following is an example script:

```
echo 1 > /proc/sys/net/ipv4/ip_forward
iptables --table nat --append POSTROUTING --out-interface wlp4s0 -j␣
↪MASQUERADE
iptables --append FORWARD --in-interface wlp4s0 -j ACCEPT
```

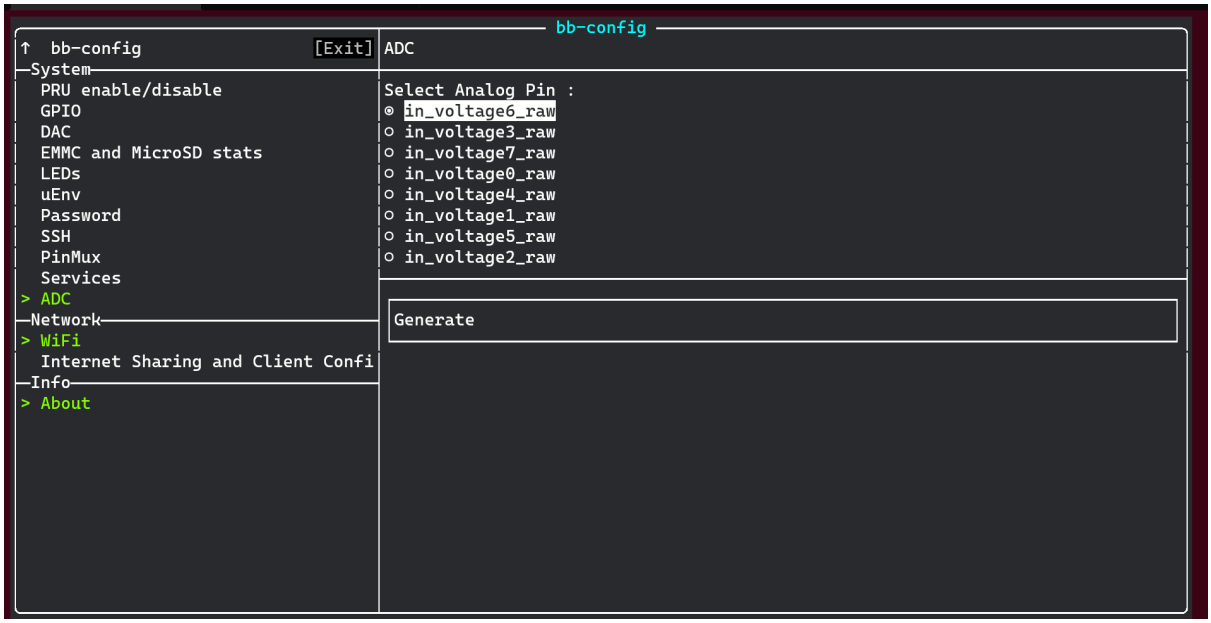
3.1.9 About



3.2 BB-Config v2.x

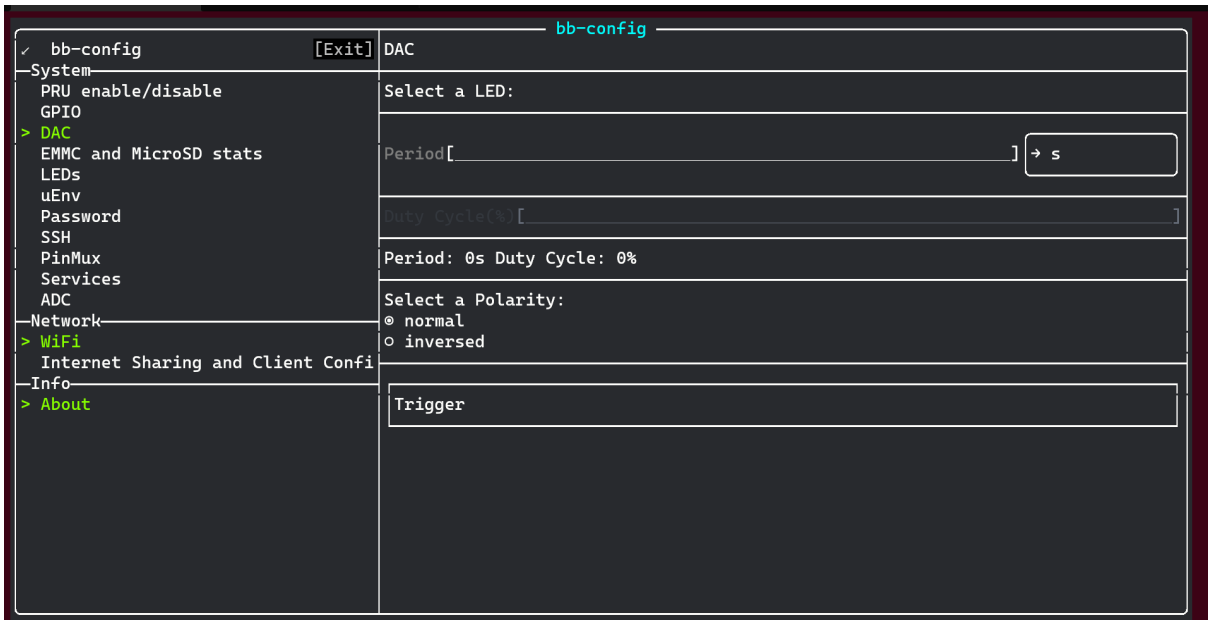
3.2.1 ADC (Graph)

- Plot graph for Analogue pin



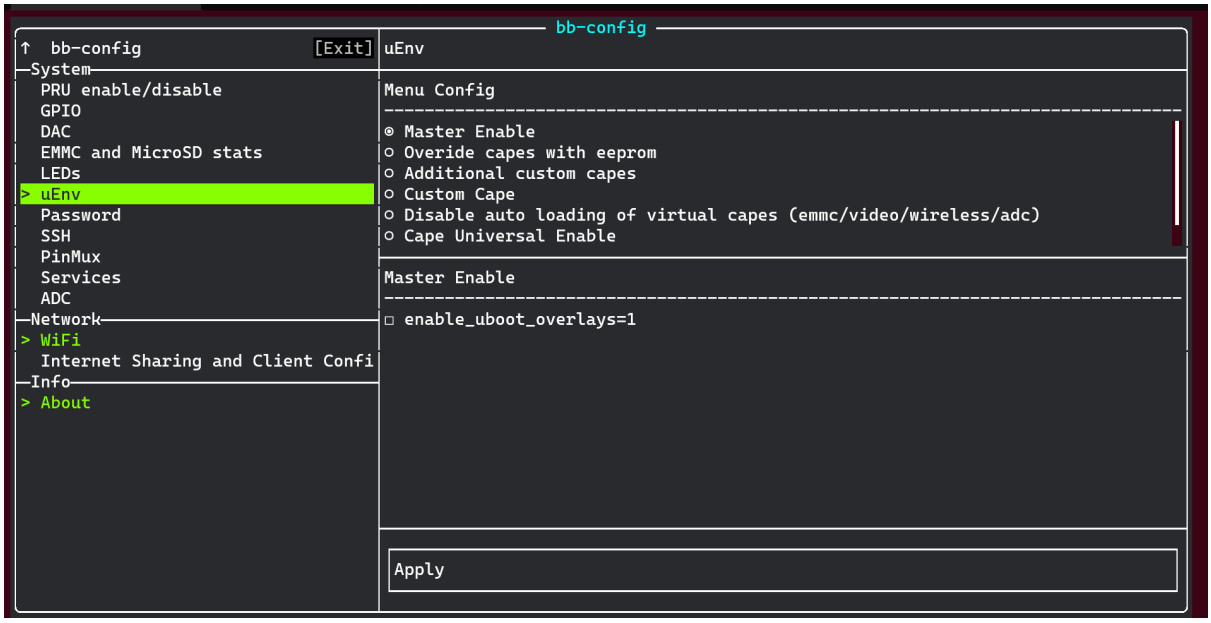
3.2.2 DAC (PWM)

- Generate PWM waveform



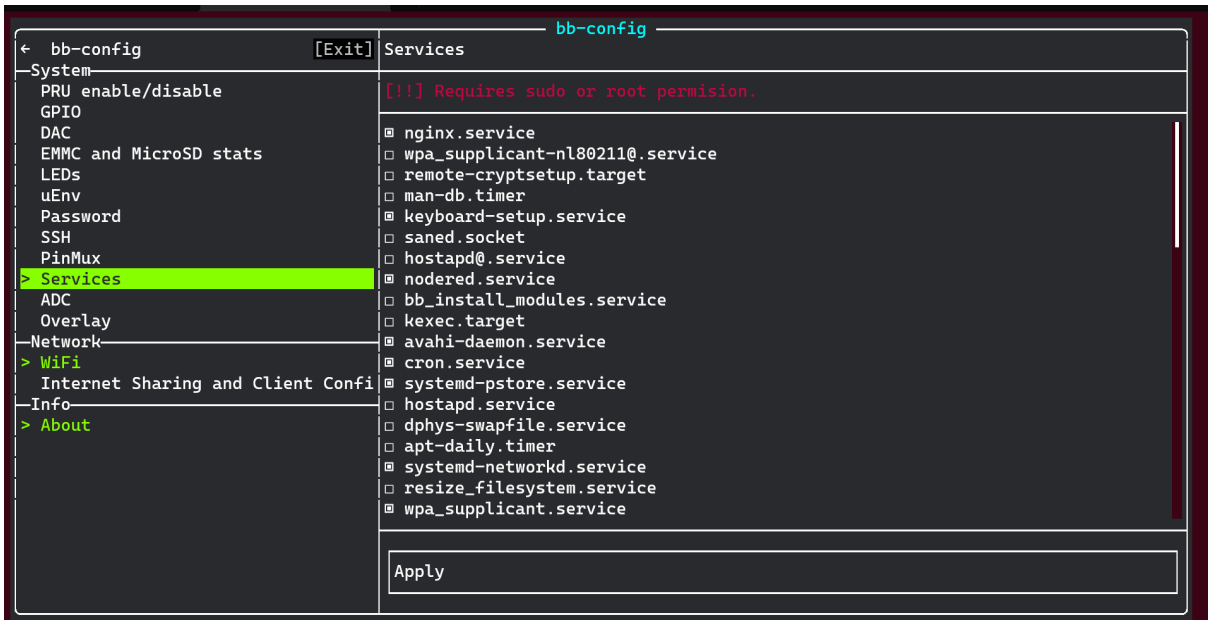
3.2.3 uEnv

- Enable/Disable boot configuration



3.2.4 services

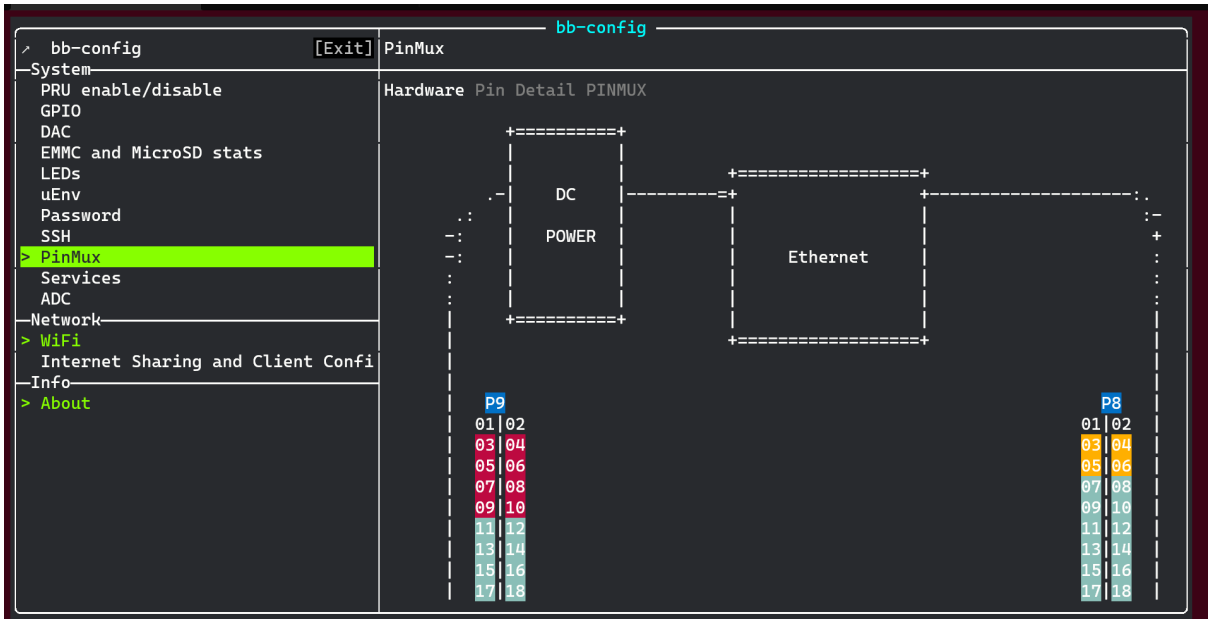
- Enable/Disable services startup at boot



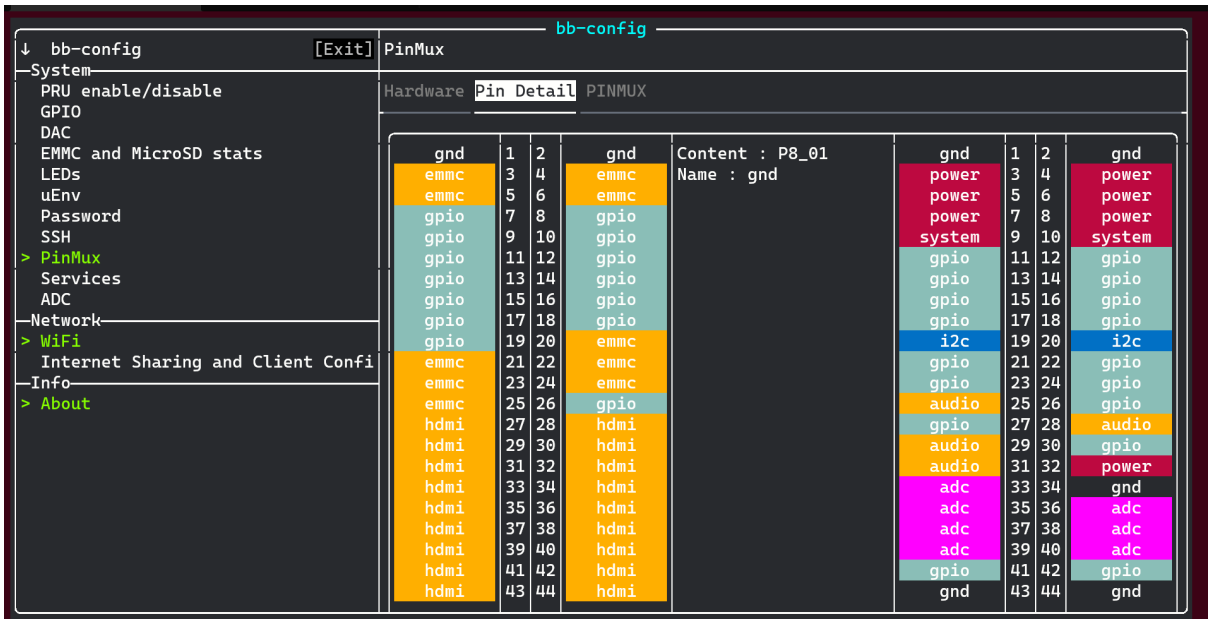
3.2.5 PINMUX

- Display PIN I/O detail
- Config PINMUX

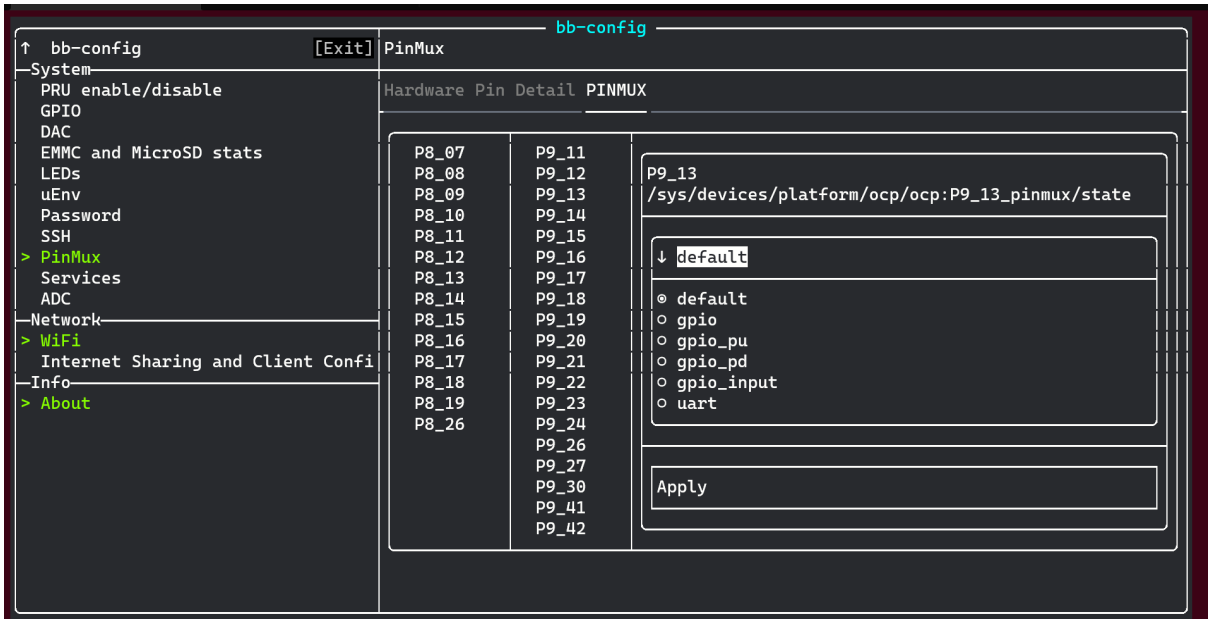
Hardware Display



Pin Table References

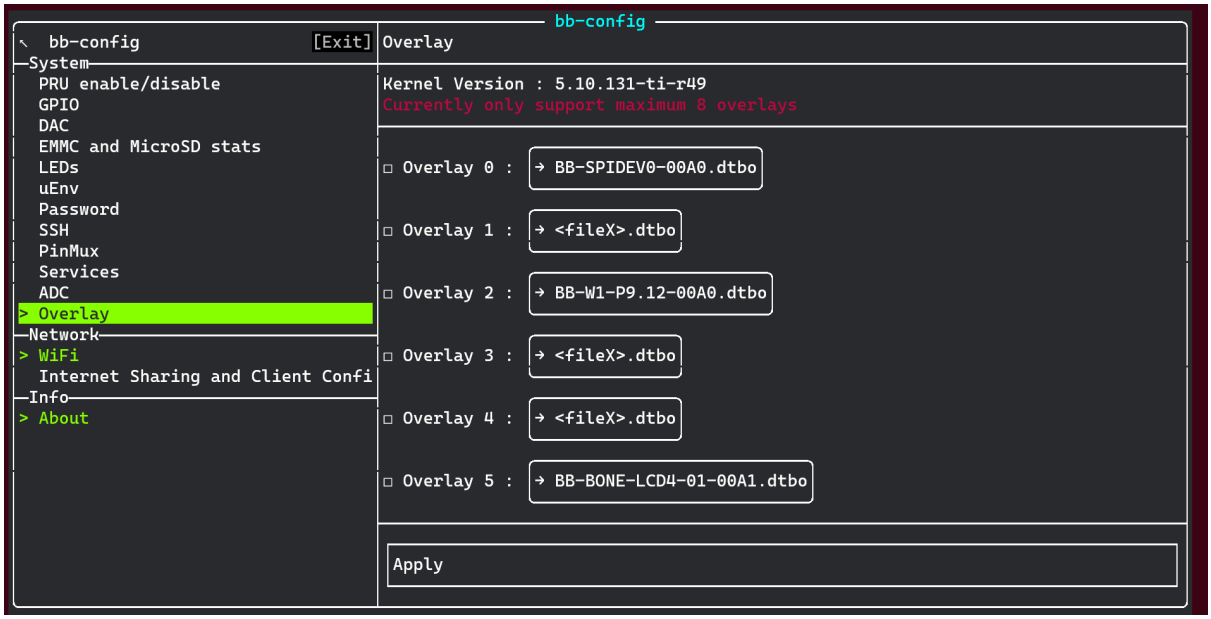


Pin Config



3.2.6 Overlay (dts)

- Enable/Disable Device Tree Overlay in Boot option
- Select dtbo file and automate update in uEnv.txt



3.2.7 WiFi (D-Bus)

- Connect to WiFi with wpa_supplicant
- Support for Debian 11


bb-config
bb-config [Exit]
WiFi
System
PRU enable/disable
GPIO
DAC
EMMC and MicroSD stats
LEDs
uEnv
Password
SSH
PinMux
Services
> ADC
Network
> WiFi
Internet Sharing and Client Confi
Info
> About
TYPE : wlan0
OPERATIONAL : routable
SETUP : configured
Refresh
Connect Network

Chapter 4

Version

4.1 GSOC@21 BB-Config v1.x

- Name: Shreyas Atre
- Mentors: Arthur Sonzogni, Abhishek Kumar, Deepak Khatri.
- Organization: BeagleBoard.org
- Code: https://github.com/SAtacker/beagle-config
- Project Page: https://summerofcode.withgoogle.com/projects/#6718016412188672
- Progress Log: https://satacker.github.io/gsoc-log/
- Kanban: https://github.com/SAtacker/beagle-config/projects/1
- Initial Video: https://youtu.be/vFUWCzqE6xI

4.2 GSOC@22 BB-Config v2.x

- Name: Seak Jian De
- Mentors: Shreyas Atre, Vedant Paranjape, Vaishnav Achath.
- Organization: BeagleBoard.org
- Code: https://git.beagleboard.org/gsoc/bb-config
- Project Page: https://summerofcode.withgoogle.com/programs/2022/projects/2DbiYPlY
- Progress Log: https://forum.beagleboard.org/t/weekly-progress-report-bb-config-improvements-gpio-benchmark/32357/2
- Initial Video: https://youtu.be/V_Euk5uWY1o