

F81xxx_WDT_Driver_User_Guide

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1. Install Ubuntu 16.04 (64-bit)

Step 1. Install Ubuntu 16.04.4 (64-bit), and check the version

\$ lsb_release -a

```
aaeon@aaeon-desktop:~$ lsb_release -a
No LSB modules are available.
Distributor ID: Ubuntu
Description:   Ubuntu 16.04.4 LTS
Release:      16.04
Codename:     xenial
```

Step 2. Check the Ubuntu kernel version (4.13.0)

\$ uname -a

```
aaeon@aaeon-desktop:~$ uname -a
Linux aaeon-desktop 4.13.0-36-generic #40~16.04.1-Ubuntu SMP Fri Feb 16 23:25:58
UTC 2018 x86_64 x86_64 x86_64 GNU/Linux
```

2. Install F81xxx WDT driver

Step 1. Move the base driver file to the directory of your choice.

(You need to check your driver file "aaeon_F81xxx_wdt_VX.X.X.X", and we use "aaeon_F81xxx_wdt_V1.0.0.0" as the sample.)

For example, use '/home/username/driver/'

Step 2. Install F81xxx WDT driver

- a. \$ cd ~/driver/aaeon_F81xxx_wdt_V1.0.0.0/
- b. \$ chmod +x install.sh
- c. \$ sudo ./install.sh

```
aaeon@aaeon-desktop:~$ cd ~/driver/aaeon_F81xxx_wdt_V1.0.0.0/
aaeon@aaeon-desktop:~/driver/aaeon_F81xxx_wdt_V1.0.0.0$ chmod +x install.sh
aaeon@aaeon-desktop:~/driver/aaeon_F81xxx_wdt_V1.0.0.0$ sudo ./install.sh
-----
Install AAEON F81xxx WDT Driver.
-----
Check old driver and unload it.
Build the module and install.
Update driver.
Load module: f81xxx_wdt .
Add driver to init.
Completed.
```

- d. \$ sudo reboot

3. How To Access WDT

Step 1. AAEON Watchdog Access Code:

```
$ cd ~/driver/aaeon_F81xxx_wdt_V1.0.0.0/example/  
$ sudo ./f81xxx_wdt_demo
```

```
aaeon@aaeon-desktop:~$ cd ~/driver/aaeon_F81xxx_wdt_V1.0.0.0/example/  
aaeon@aaeon-desktop:~/driver/aaeon_F81xxx_wdt_V1.0.0.0/example$ sudo ./f81xxx_wdt_demo  
Current watchdog interval is 60  
Last boot is caused by : Power-On-Reset  
Use:  
<w> to kick through writing over device file  
<i> to kick through IOCTL  
<x> to exit the program  
x  
Goodbye !
```

Step 2. Change the watchdog interval time

```
$ cd ~/driver/aaeon_F81xxx_wdt_V1.0.0.0/example/  
$ sudo ./f81xxx_wdt_demo -i [interval]
```

(Set the watchdog interval time)

Ex: `$ sudo ./f81xxx_wdt_demo -i 10`

```
aaeon@aaeon-desktop:~$ cd ~/driver/aaeon_F81xxx_wdt_V1.0.0.0/example/  
aaeon@aaeon-desktop:~/driver/aaeon_F81xxx_wdt_V1.0.0.0/example$ sudo ./f81xxx_wdt_demo -i 10  
Set watchdog interval to 10  
Current watchdog interval is 10  
Last boot is caused by : Power-On-Reset  
Use:  
<w> to kick through writing over device file  
<i> to kick through IOCTL  
<x> to exit the program
```

Step 3. If your board with the standard start-kick-stop things, you can also try out other watchdog features:

- a. Set the watchdog timeout. Use IOCTL with WDIOC_SETTIMEOUT
- b. Get the current watchdog timeout. Use IOCTL with WDIOC_GETTIMEOUT
- c. Check if the last boot is caused by watchdog or it is power-on-reset. Use IOCTL with WDIOC_GETBOOTSTATUS.

- d. Usage: ./f81xxx_wdt_demo [commman] [argument]
Then the program will show below select

<w> to kick through writing over device file

<i> to kick through IOCTL

<x> to exit the program