

2-3. STM32mp157 Distibution Package - galcore

2021. 7. 13. 18:54

<Spec>

- Ubuntu version : ubuntu-18.04.5-desktop-amd64
- stm32mpu Major ecosystem releases version : v3.0.0(openstlinux-5.10-dunfell-mp1-21-03-31)
- kernel : Linux® kernel v5.10 (LTS)

이번에는 galcore.ko moduel을 넣어 보도록 한다.

-Working path

```
$ pwd
~/STM/Developer -Package/stm32mp1-openstlinux-5.10-dunfell-mp1-21-03-31/sources/
```

1. galcore version 확인

yocto source에서 다음과 같이 version 및 사용한 galcore가 무엇인지 확인할 수 있다.

해당 내용의 galcore를 올려 보도록 하자.

```
$ vi ~/STM/openstlinux-5.10-dunfell-mp1-21-03-31/layers/meta-st/meta-st-stm32mp
```

```
11 SRC_URI = "git://github.com/STMicroelectronics/gcnano-binaries;protocol=https;branch=gcnano-6.4.3-binaries"
12 SRCREV = "6b0972cc5466627372d4dcee0227c9828c6ff881"
```

먼저 ①kernel 외부에서 빌드하여 수동으로 올리는 방법과 ②kernel modules make시 포함하도록 하는 방법 두 가지를 해보도록 하겠다.

-Working path

2. 수동으로 galcore 올리기

- 압축 풀기 및 패치

```
$ git clone https://github.com/STMicroelectronics/gcnano-binaries
$ cd gcnano-binaries
$ tar -xvf gcnano-driver-6.4.3.tar.xz
$ cd gcnano-driver-6.4.3
```

- modules build

```
$ source ~/STM/Developer-Package/SDK/environment-setup-cortexa7t2hf-neon-vfpv4
$ export KERNEL_DIR=$PWD/../../..
$ make
$ make install
```

사용하는 kernel source의 경로를 잡아준다.

- output copy

```
$ sudo mkdir -p /media/whatmam/rootfs/lib/modules/5.10.10/extra
$ sudo cp -rfvp galcore.ko /media/whatmam/rootfs/lib/modules/5.10.10/extra
$ sudo vi /media/whatmam/rootfs/lib/modules/5.10.10/modules.dep
+ extra/galcore.ko:
```

SD 카드를 삽입 후 rootfs Partition에 module을 넣는다.

- target board 실행하여 depmod 실행 후 reboot

```
TARGET> depmod
TARGET> reboot
```

아래와 같이 디버그에서 확인할 수 있고 lsmod 명령어를 사용하여 확인할 수 있다.

```
Starting Login Service...
[ 13.760317] Galcore version 6.4.3.279124
[ OK ] Started TEE Suppl...
```

debug message

```
root@stm32mp1:~# lsmod
Module                Size  Used by
galcore                319488  0
cfa80211                622592  0
```

lsmod 명령 실행

3. kernel source에 driver 추가

- Source download

```
$ git clone https://github.com/STMicroelectronics/gcnano-binaries
$ cd gcnano-binaries
$ tar -xvf gcnano-driver-6.4.3.tar.xz
$ cp -rfvp gcnano-driver-6.4.3 ../drivers/gpu/gcnano
$ cd ../drivers/gpu/gcnano
```

새로운 driver를 생성한다.

- Source 수정

```
$ vi Kbuild
+AQROOT := $(srctree)/drivers/gpu/gcnano
-include $(AQROOT)/config

$ vi ../Makefile
+ obj-y                += drm/ vga/ gcnano/
```

- Kernel module build

```
$ make ARCH=arm modules
$ make ARCH=arm INSTALL_MOD_STRIP=1 INSTALL_MOD_PATH="$PWD/../build_kernel_modu
```

- output copy

```
$ cd ../build_kernel_modules/lib/modules/5.10.10/
$ # 필요없는 파일 제거
$ rm -rf build source
$ cd ..
$ sudo cp -rfvp 5.10.10 /media/whatmam/rootfs/lib/modules/
```

SD 카드를 삽입 후 rootfs Partition에 module을 넣는다.

```
Starting Login Service...
[ 13.760317] Galcore version 6.4.3.279124
[ OK ] Started TEE Supplcant.
```

debug message

```

root@stm32mp1:~# lsmod
Module                Size  Used by
galcore               319488  0
cfg80211              622592  0

```

lsmod 명령 실행



[72.795553] galcore: module verification failed: signature and/or required key missing - tainting kernel

위와 같은 에러가 나오면 kernel defconfig 수정해 준다 -> CONFIG_MODULE_SIG_ALL=n

공감

구독하기

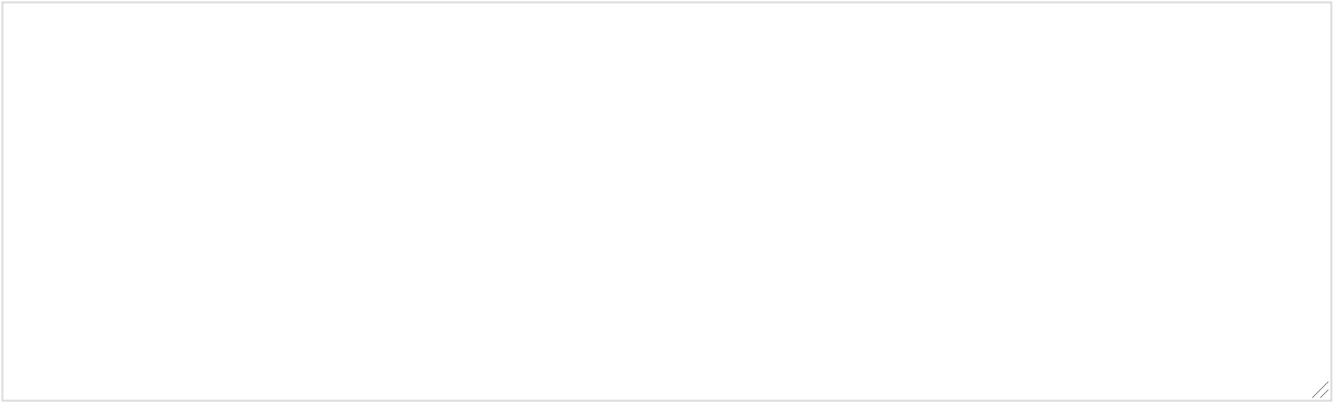
'STM32' 카테고리의 다른 글

- 4. STM32mp157 u-boot 분석 (0) 2021.07.20
- 3. STM32mp157 eMMC Booting (0) 2021.07.19
- 2-3. STM32mp157 Distibution Package - galcore (0)** 2021.07.13
- 2-2. STM32mp157 Distibution Package - Kernel (0) 2021.07.13
- 2-1. STM32mp157 Developer Package - uBoot (0) 2021.07.13
- 1. STM32mp157 Yocto build (0) 2021.07.13

NAME

PASSWORD

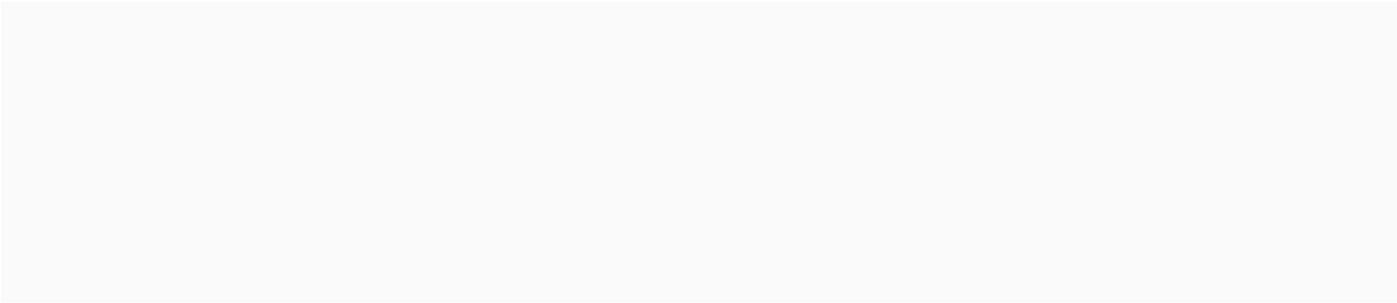
HOME PAGE



SECRET WRITE

PREV 1 ... 22 23 24 25 26 27 28 29 30 ... 83 NEXT

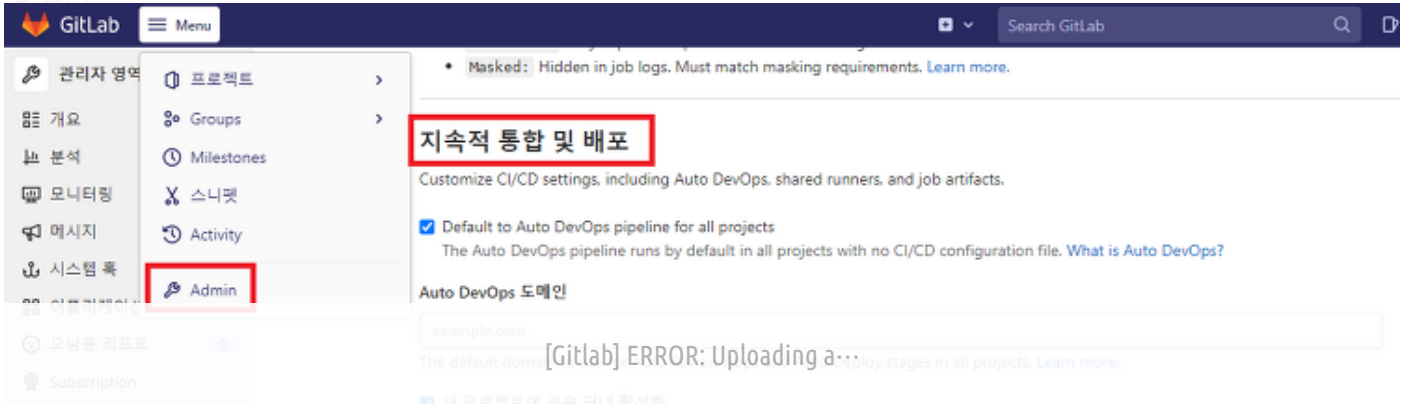
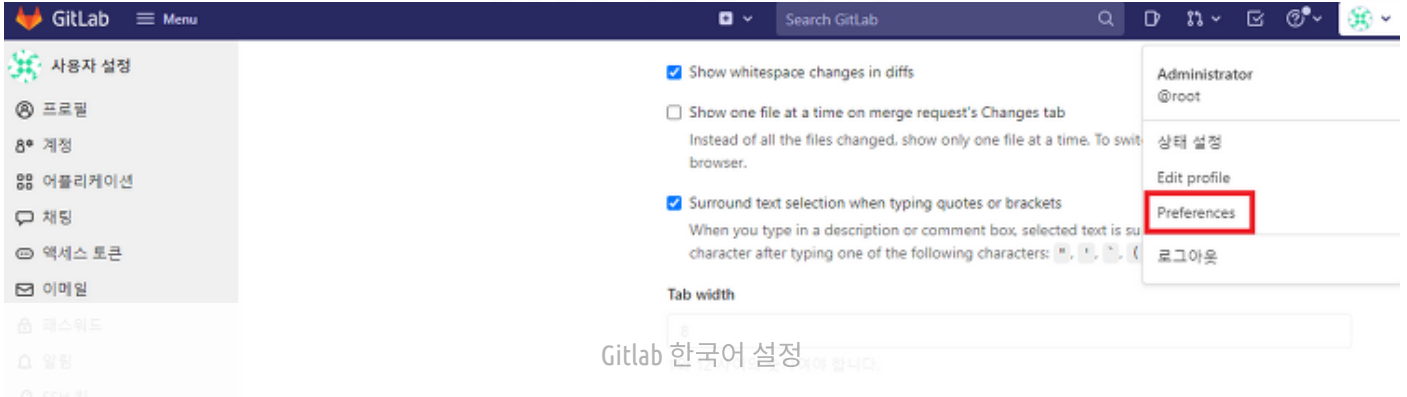
+ Recent posts



Git commit push 내용 변경



docker 설치



Powered by Tistory, Designed by wallel

Rss Feed and Twitter, Facebook, Youtube, Google+