VoyagerInc

Caswell EZIO SOP

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1. 테스트 환경

System	COS-D304
BIOS	CASwell, Inc. CAPB-6000NR-5100-002 BIOS Rev.R2.01 (05232018)
OS	Ubuntu 16.04
EZIO API	caswell_util_ezio-V1.11.1.zip

2. EZIO API 컴파일

STEP1: EZIO API 압축을 풀다.

```
root@ubuntu160403:/home/caswell_driver# ls
caswell_util_ezio-V1.6.0.zip
root@ubuntu160403:/home/caswell_driver# mkdir ezio160
io160/buntu160403:/home/caswell_driver# unzip caswell_util_ezio-V1.6.0.zip -d ez
Archive:  caswell_util_ezio-V1.6.0.zip
4acd34b4604397891923659afad765a2d34669b6
  inflating: ezio160/Makefile
  inflating: ezio160/README
   creating: ezio160/include/
  inflating: ezio160/include/ezio_300.h
  inflating: ezio160/include/ezio_340.h
  inflating: ezio160/include/ezio_g500.h
  inflating: ezio160/include/lcd_ctrl.h
   creating: ezio160/src/
  inflating: ezio160/src/ezio_300.c
  inflating: ezio160/src/ezio_340.c
  inflating: ezio160/src/ezio_g500.c
  inflating: ezio160/src/lcd_ctrl.c
   creating: ezio160/src/sample/
   creating: ezio160/src/sample/lcdd/
  inflating: ezio160/src/sample/lcdd/Makefile
  inflating: ezio160/src/sample/lcdd/Makefile.in
  inflating: ezio160/src/sample/lcdd/configure
  inflating: ezio160/src/sample/lcdd/configure.ac
   creating: ezio160/src/sample/lcdd/main/
  inflating: ezio160/src/sample/lcdd/main/lcdd.c
  inflating: ezio160/CHANGELOG
```

STEP2: EZIO API 컴파일.

```
root@ubuntu160403:/home/caswell_driver/ezio160# ls
CHANGELOG  include  Makefile  README  src
root@ubuntu160403:/home/caswell_driver/ezio160# make
gcc -DEZIO_300_CONFIG -Os -s -I ./ -L ./ /home/caswell_driver/ezio160/src/ezio_300.c  /home/caswell_driver/ezi
o160/src/lcd_ctrl.c  -o /home/caswell_driver/ezio160/bin/ezio_300_api
```

3. EZIO API 사용

컴파일 후 생성된 API가 ../bin/폴더에 있습니다.

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```
root@ubuntu160403:/home/caswell_driver/ezio160/bin# ls
ezio_300_api  ezio_320_api  ezio_340_api  ezio_360_api   ezio_g400_api
ezio_310_api  ezio_330_api  ezio_350_api  ezio_g300_api  ezio_g500_api
root@ubuntu160403:/home/caswell_driver/ezio160/bin#
```

아래 기준 Caswell 장비에 쓴 EZIO API list 첨고.

System	EZIO모델명	EZIO API	Source Code
VAR-1916L	EZIO-300	../bin/ezio_300_api	../src/ezio_300.c
CAR-2070	EZIO-310	../bin/ezio_310_api	../src/ezio_300.c
COS-3402	EZIO-310	../bin/ezio_310_api	../src/ezio_300.c
COS-D304	EZIO-360	../bin/ezio_360_api	../src/ezio_300.c
COS-D305	EZIO-360	../bin/ezio_360_api	../src/ezio_300.c
CAR-5040	EZIO-350	../bin/ezio_350_api	../src/ezio_300.c

아래 EZIO 모델들이 쓴 API명령어 똑같습니다.

- EZIO-300 / EZIO-310 / EZIO-350 / EZIO-360

3.1 EZIO-300 / EZIO-310 / EZIO-350 / EZIO-360 API 사용

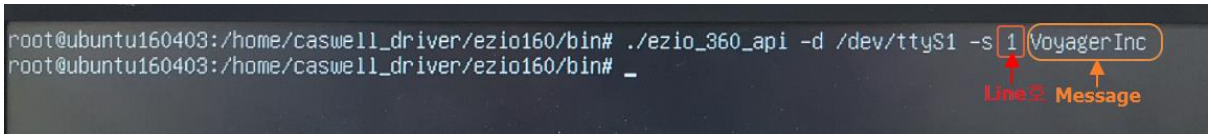
a. API HELP message

```
root@ubuntu160403:/home/caswell_driver/ezio160/bin# ./ezio_360_api

./ezio_360_api - The Caswell EZIO sample API
Usage: ./ezio_360_api -d [device] -[command]
[device]
        example: /dev/ttyS0
[command]
         -g                     Read key
         -s [Line] [Message]    Display message
         -C [Char] [Row] [Col] Display a character in specific position
         -c                     Clear screen
         -o                     Home cursor
         -L                     Move cursor 1 character left
         -R                     Move cursor 1 character right
         -l                     Scroll 1 character left
         -r                     Scroll 1 character right
         -i                     Hide cursor & display blanked characters
         -t                     Turn on (blinking block cursor)
         -S                     Show underline cursor
         -n                     Send noise message
         -h                     Show help message

         -p [Information]       Create customized pattern
         -P [Addr] [Row] [Col] Display customized pattern in specific position
         [Line]:     (1|2) Display in the (1|2) lines
         [Row]:      (1|2)
         [Col]:      (1|16)
         [Message]: display string, string length limit of 16
         [Information]: get save address and row types,
                        need 18 characters, more in README
```

b. 한 라인으로 문자 표시

- 명령어 : ./ezio_360_api –d /dev/ttyS1 –s [Line] [Message]

예시_#1)



실제 화면:

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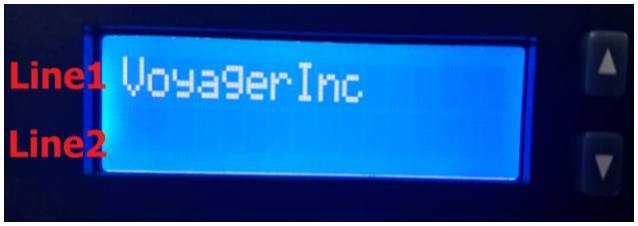
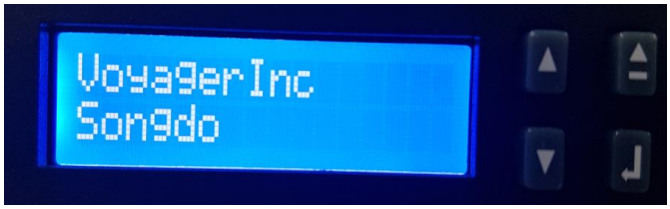


예시_#2)

```
root@ubuntu160403:/home/caswell_driver/ezio160/bin# ./ezio_360_api -d /dev/ttyS1 -s 1 VoyagerInc
root@ubuntu160403:/home/caswell_driver/ezio160/bin# ./ezio_360_api -d /dev/ttyS1 -s 2 Songdo
root@ubuntu160403:/home/caswell_driver/ezio160/bin# _
```

실제 화면:



c. 지정된 위치에서 문자 표시

- 명령어 : ./ezio_360_api –d /dev/ttyS1 –C [문자] [Row] [Col]

예시)

```
                                                    출력한 문자   Row(행)   Col(열)
root@ubuntu160403:/home/caswell_driver/ezio160/bin# ./ezio_360_api -d /dev/ttyS1 -C A 1 2
root@ubuntu160403:/home/caswell_driver/ezio160/bin# ./ezio_360_api -d /dev/ttyS1 -C b 2 1
root@ubuntu160403:/home/caswell_driver/ezio160/bin#
```

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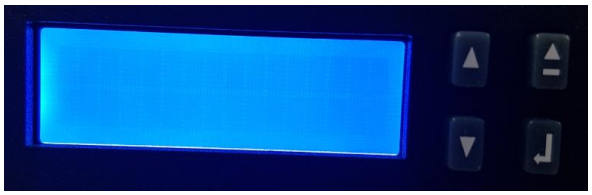
d. 화면 지우기

- 명령어 : ./ezio_360_api –d /dev/ttyS1 –c

예시)

```
root@ubuntu160403:/home/caswell_driver/ezio160/bin# ./ezio_360_api -d /dev/ttyS1 -c
root@ubuntu160403:/home/caswell_driver/ezio160/bin# _
```

실제 화면: