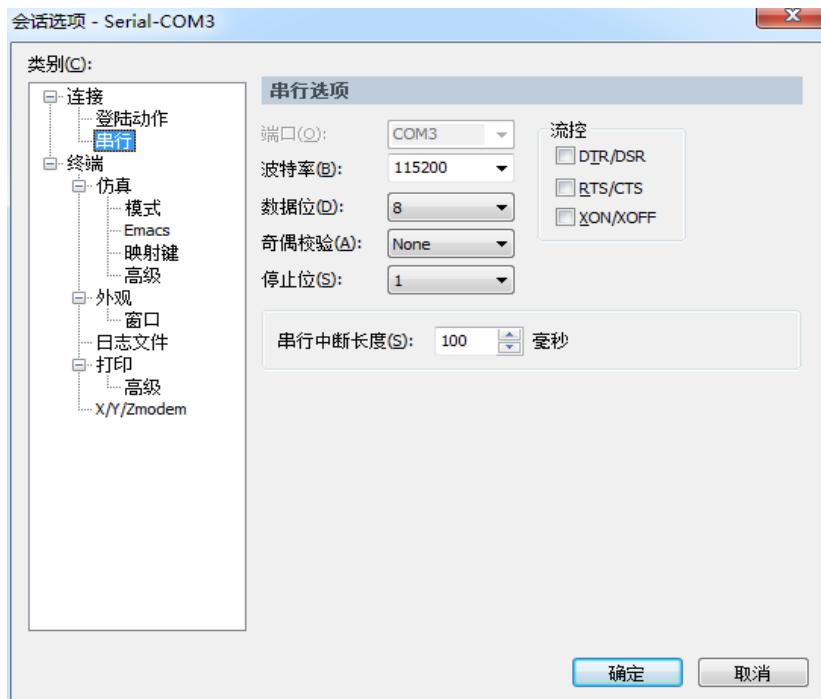


IMX6Q U-boot Setting Hdmi Output For Android

1. Setting serial and connect.



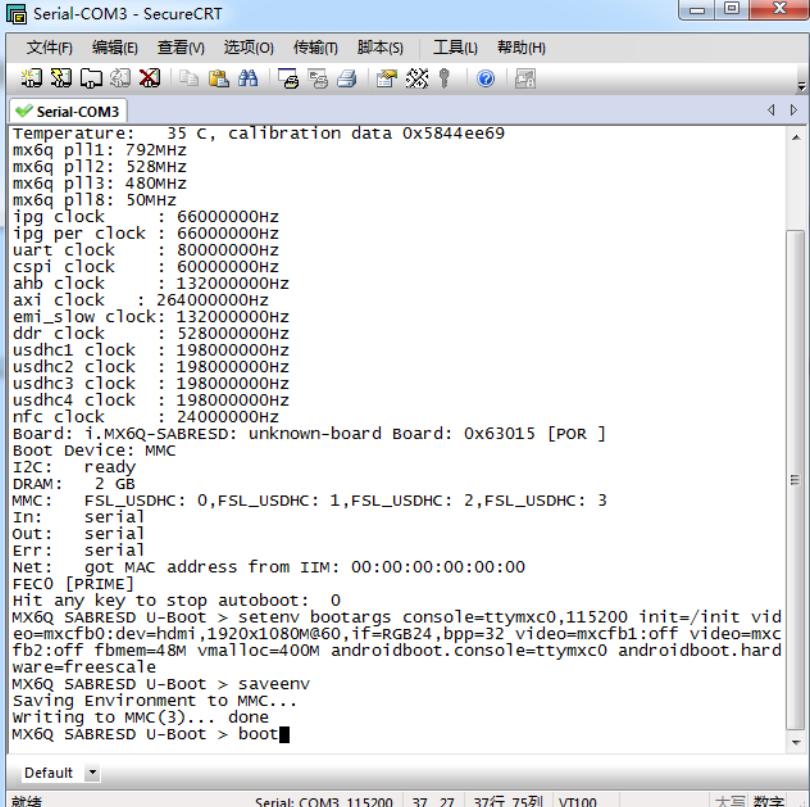
2. Power on, hit any key to u-boot command mode.

The screenshot shows the 'Serial-COM3 - SecureCRT' window. The title bar says 'Serial-COM3'. The main pane displays the U-Boot boot log:

```
U-Boot 2009.08-dirty (Apr 17 2016 - 09:34:29)
CPU: Freescale i.MX6 family r01.5 at 792 MHz
Thermal sensor with ratio = 183
Temperature: 33 C, calibration data 0x5844ee69
mx6q pll1: 792MHz
mx6q pll2: 528MHz
mx6q pll3: 480MHz
mx6q pll8: 50MHz
ipg clock : 66000000Hz
ipg per clock : 66000000Hz
uart clock : 80000000Hz
cspi clock : 60000000Hz
ahb clock : 132000000Hz
axi clock : 264000000Hz
emi_slow_clock: 132000000Hz
ddr clock : 528000000Hz
usdhc1 clock : 198000000Hz
usdhc2 clock : 198000000Hz
usdhc3 clock : 198000000Hz
usdhc4 clock : 198000000Hz
nfc clock : 24000000Hz
Board: i.MX6Q-SABRESD: unknown-board Board: 0x63015 [POR ]
Boot Device: MMC
I2C: ready
DRAM: 2 GB
MMC: FSL_USDHC: 0,FSL_USDHC: 1,FSL_USDHC: 2,FSL_USDHC: 3
In: serial
Out: serial
Err: serial
Net: got MAC address from IIM: 00:00:00:00:00:00
FEC0 [PRIME]
Hit any key to stop autoboot: 0
MX6Q SABRESD U-Boot >
```

At the bottom, the status bar shows 'Default' and '就绪' (Ready), along with connection details: 'Serial: COM3, 115200 | 37, 24 | 37行, 75列 | VT100 | 大写 数字'.

3. Set u-boot bootargs for hdmi single out only.



The screenshot shows the Serial-COM3 - SecureCRT window. The terminal output displays the MX6Q SABRESD U-Boot boot process. It includes clock information for various components like ipg, uart, csp, ahb, axi, emi, ddr, usdhc1-4, and nfc. It also shows the boot device as MMC, DRAM size as 2 GB, and MAC address from IIM. The user then enters commands to set the boot arguments for HDMI output at 1080P resolution, save the environment to MMC, and finally boots the system.

```
Temperature: 35 C, calibration data 0x5844ee69
mx6q p111: 792MHz
mx6q p112: 528MHz
mx6q p113: 480MHz
mx6q p118: 50MHz
ipg clock : 66000000Hz
ipg per clock : 66000000Hz
uart clock : 80000000Hz
csp clock : 60000000Hz
ahb clock : 132000000Hz
axi clock : 264000000Hz
emi slow clock: 132000000Hz
ddr clock : 528000000Hz
usdhc1 clock : 198000000Hz
usdhc2 clock : 198000000Hz
usdhc3 clock : 198000000Hz
usdhc4 clock : 198000000Hz
nfc clock : 24000000Hz
Board: i.MX6Q-SABRESD: unknown-board Board: 0x63015 [POR ]
Boot Device: MMC
I2C: ready
DRAM: 2 GB
MMC: FSL_USDHC: 0,FSL_USDHC: 1,FSL_USDHC: 2,FSL_USDHC: 3
In: serial
Out: serial
Err: serial
Net: got MAC address from IIM: 00:00:00:00:00:00
FEC0 [PRIME]
Hit any key to stop autoboot: 0
MX6Q SABRESD U-Boot > setenv bootargs console=ttyMxc0,115200 init=/init
video=mxcfb0:dev=hdmi,1920x1080M@60,if=RGB24,bpp=32 video=mxcfb1:off video=mxcfb2:off
fbmem=48M vmalloc=400M androidboot.console=ttyMxc0 androidboot.hardware=freescale
MX6Q SABRESD U-Boot > saveenv
Saving Environment to MMC...
Writing to MMC(3)... done
MX6Q SABRESD U-Boot > boot
```

For 1080P:

```
MX6Q SABRESD U-Boot > setenv bootargs console=ttyMxc0,115200 init=/init
video=mxcfb0:dev=hdmi,1920x1080M@60,if=RGB24,bpp=32 video=mxcfb1:off video=mxcfb2:off
fbmem=48M vmalloc=400M androidboot.console=ttyMxc0 androidboot.hardware=freescale
MX6Q SABRESD U-Boot > saveenv
MX6Q SABRESD U-Boot > boot
```

For 720P:

```
MX6Q SABRESD U-Boot > setenv bootargs console=ttyMxc0,115200 init=/init
video=mxcfb0:dev=hdmi,1280x720M@60,if=RGB24,bpp=32 video=mxcfb1:off video=mxcfb2:off
fbmem=48M vmalloc=400M androidboot.console=ttyMxc0 androidboot.hardware=freescale
MX6Q SABRESD U-Boot > saveenv
MX6Q SABRESD U-Boot > boot
```

For 480P:

```
MX6Q SABRESD U-Boot > setenv bootargs console=ttyMxc0,115200 init=/init
video=mxcfb0:dev=hdmi,800x480M@60,if=RGB24,bpp=32 video=mxcfb1:off video=mxcfb2:off
fbmem=48M vmalloc=400M androidboot.console=ttyMxc0 androidboot.hardware=freescale
MX6Q SABRESD U-Boot > saveenv
MX6Q SABRESD U-Boot > boot
```

4. Set u-boot bootargs for hdmi and lvds/lcd out at the same time.

first, you should find the uboot default command line, you can find it when the kernel starting, power off the board and find it in serial debug console, like follow:

```
U-Boot 2009.08-dirty (Jun 13 2016 - 23:16:13)
CPU: Freescale i.MX6 family rev1.5 at 792 MHz
Thermal sensor with ratio = 176
Temperature: 38 C, calibration data 0x5584d269
mx6q pll1: 792MHz
mx6q pll2: 528MHz
mx6q pll3: 480MHz
mx6q pll8: 50MHz
ipg_clock : 66000000Hz
ipg_per_clock : 66000000Hz
uart_clock : 80000000Hz
cspi_clock : 60000000Hz
ahb_clock : 132000000Hz
axi_clock : 264000000Hz
emi_slow_clock: 132000000Hz
ddr_clock : 528000000Hz
usdhc1_clock : 198000000Hz
usdhc2_clock : 198000000Hz
usdhc3_clock : 198000000Hz
usdhc4_clock : 198000000Hz
nfc_clock : 24000000Hz
Board: i.MX6Q-SABRESD: unknown-board Board: 0x63015 [POR ]
Boot Device: MMC
I2C: ready
DRAM: 2 GB
MMC: FSL_USDHC: 0,FSL_USDHC: 1,FSL_USDHC: 2,FSL_USDHC: 3
In: serial
Out: serial
Err: serial
Net: got MAC address from IIM: 00:00:00:00:00:00
FEC0 [PRIME]
Hit any key to stop autoboot: 0
kernel @ 10808000 (4729792)
ramdisk @ 11800000 (234063)
kernel cmdline:
    use boot.img command line:
    console=ttyMxc0,115200 init=/init video=mxctb0:dev=ldb,LDB-WXGA,TT=RGB24,
    opp=32 ldb=sin0 video=mxcfb1:off video=mxcfb2:off fbmem=48M fb0base=0x27b00000 vm
    alloc=400M androidboot.console=ttyMxc0 androidboot.hardware=freescale
Starting kernel ...
Uncompressing Linux... done, booting the kernel.
Initializing cgroup subsys cpu
Linux version 3.0.35-06448-g3b4e3c6-dirty (snowby@snowby-build) (gcc version 4.6.
```

example:

ok, let us copy it in notepad, and modify the "video=mxcfb1:off" and "fbmem=48M" to let the hdmi and lvds/lcd output at the same time:

```
console=ttyMxc0,115200 init=/init video=mxcfb0:dev=ldb,LDB-WXGA,1T=RGB24,  
bpp=32 ldb=sin0 video=mxcfb1:off video=mxcfb2:off fbmem=48M fb0base=0x27b00000 vm  
alloc=400M androidboot.console=ttyMxc0 androidboot.hardware=freescale
```

there is a example, like follow:

```
U-Boot 2009.08-dirty (Jun 13 2016 - 23:16:13)  
CPU: Freescale i.MX6 family rev1.5 at 792 MHz  
Thermal sensor with ratio = 176  
Temperature: 33 C, calibration data 0x5584d269  
mx6q pll1: 792MHz  
mx6q pll2: 528MHz  
mx6q pll3: 480MHz  
mx6q pll8: 50MHz  
ipg clock : 66000000Hz  
ipg per clock : 66000000Hz  
uart clock : 80000000Hz  
cspi clock : 60000000Hz  
ahb clock : 132000000Hz  
axi clock : 264000000Hz  
emi_slow_clock: 132000000Hz  
ddr_clock : 528000000Hz  
usdhc1_clock : 198000000Hz  
usdhc2_clock : 198000000Hz  
usdhc3_clock : 198000000Hz  
usdhc4_clock : 198000000Hz  
nfc_clock : 24000000Hz  
Board: i.MX6Q-SABRESD: unknown-board Board: 0x63015 [POR ]  
Boot Device: MMC  
I2C: ready  
DRAM: 2 GB  
MMC: FSL_USDHC: 0,FSL_USDHC: 1,FSL_USDHC: 2,FSL_USDHC: 3  
In: serial  
Out: serial  
Err: serial  
Net: got MAC address from IIM: 00:00:00:00:00:00  
FEC0 [PRIME]  
Hit any key to stop autoboot: 0  
MX6Q SABRESD U-Boot > setenv bootargs console=ttyMxc0,115200 init=/init video=mx  
cfb0:dev=ldb,LDB-WXGA,if=RGB24,bpp=32 ldb=sin0 video=mxcfb1:dev=hdm  
i,1920x1080M@60,if=RGB24,bpp=32 video=mxcfb2:off fbmem=48M,48M fb0base=0x27b00000 v  
malloc=400M androidboot.console=ttyMxc0 androidboot.hardware=freescale  
MX6Q SABRESD U-Boot > saveenv  
Saving Environment to MMC...  
Writing to MMC(3)... done  
MX6Q SABRESD U-Boot > ■
```

For 1080P:

```
MX6Q SABRESD U-Boot > setenv bootargs console=ttyMxc0,115200 init=/init  
video=mxcfb0:dev=ldb,LDB-WXGA,if=RGB24,bpp=32 ldb=sin0  
video=mxcfb1:dev=hdm,i,1920x1080M@60,if=RGB24,bpp=32 video=mxcfb2:off  
fbmem=48M,48M fb0base=0x27b00000 vmalloc=400M androidboot.console=ttyMxc0  
androidboot.hardware=freescale  
MX6Q SABRESD U-Boot > saveenv  
MX6Q SABRESD U-Boot > boot
```

For 720P:

```
MX6Q SABRESD U-Boot > setenv bootargs console=ttyMxc0,115200 init=/init  
video=mxcfb0:dev=ldb,LDB-WXGA,if=RGB24,bpp=32 ldb=sin0  
video=mxcfb1:dev=hdm,i,1280x720M@60,if=RGB24,bpp=32 video=mxcfb2:off fbmem=48M,48M  
fb0base=0x27b00000 vmalloc=400M androidboot.console=ttyMxc0  
androidboot.hardware=freescale
```

```
MX6Q SABRESD U-Boot > saveenv
```

```
MX6Q SABRESD U-Boot > boot
```

For 480P:

```
MX6Q SABRESD U-Boot > setenv bootargs console=ttyMxc0,115200 init=/init  
video=mxcfb0:dev=ldb,LDB-WXGA,if=RGB24,bpp=32 ldb=sin0  
video=mxcfb1:dev=hDMI,800x480M@60,if=RGB24,bpp=32 video=mxcfb2:off fbmem=48M,48M  
fb0base=0x27b00000 vmalloc=400M androidboot.console=ttyMxc0  
androidboot.hardware=freescale  
MX6Q SABRESD U-Boot > saveenv  
MX6Q SABRESD U-Boot > boot
```

NOTE: The above is just a example for mxcfb1 and fbmem, for mxcfb0, you need use your own uboot command line.

If you want to set the bootargs to use the default uboot command line, just do it like follow:

```
U-Boot 2009.08-dirty (Jun 13 2016 - 23:16:13)

CPU: Freescale i.MX6 family rev1.5 at 792 MHz
Thermal sensor with ratio = 176
Temperature: 29 c, calibration data 0x5584d269
mx6q pll1: 792MHz
mx6q pll2: 528MHz
mx6q pll3: 480MHz
mx6q pll8: 50MHz
ipg clock : 66000000Hz
ipg per clock : 66000000Hz
uart clock : 80000000Hz
cspi clock : 60000000Hz
ahb clock : 132000000Hz
axi clock : 264000000Hz
emi_slow_clock: 132000000Hz
ddr clock : 528000000Hz
usdhc1 clock : 198000000Hz
usdhc2 clock : 198000000Hz
usdhc3 clock : 198000000Hz
usdhc4 clock : 198000000Hz
nfc clock : 24000000Hz
Board: i.MX6Q-SABRESD: unknown-board Board: 0x63015 [POR ]
Boot Device: MMC
I2C: ready
DRAM: 2 GB
MMC: FSL_USDHC: 0,FSL_USDHC: 1,FSL_USDHC: 2,FSL_USDHC: 3
In: serial
Out: serial
Err: serial
Net: got MAC address from IIM: 00:00:00:00:00:00
FEC0 [PRIME]
Hit any key to stop autoboot: 0
MX6Q SABRESD U-Boot > setenv bootargs
MX6Q SABRESD U-Boot > saveenv
Saving Environment to MMC...
Writing to MMC(3)... done
MX6Q SABRESD U-Boot > █
```