

Xilinx Zynq FPGA, TI DSP, MCU Programming 및 Circuit Design Expert 과정

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Wi-Fi Device Driver Setting on AM5728 Heterogeneous Architecture (Linux Kernel 4.4.32)

```
    vmmc-supply = <&vmmcwl_fixed>;
    bus-width = <4>;
    pinctrl-names = "default";
    cap-power-off-card;
    keep-power-in-suspend;
    ti,non-removable;
    pinctrl-names = "default", "hs", "sdr12", "sdr25", "sdr50";
    pinctrl-0 = <&mmc3_pins_default>;
    pinctrl-1 = <&mmc3_pins_hs>;
    pinctrl-2 = <&mmc3_pins_sdr12>;
    pinctrl-3 = <&mmc3_pins_sdr25>;
    pinctrl-4 = <&mmc3_pins_sdr50 &mmc3_iodelay_manual1_conf>;

    #address-cells = <1>;
    #size-cells = <0>;
    wlcore: wlcore@0 {
        compatible = "ti,wl1835";
        reg = <2>;
        interrupt-parent = <&gpio5>;
        interrupts = <7 IRQ_TYPE_LEVEL_HIGH>;
    };
};

"arch/arm/boot/dts/am57xx-evm-common.dtsi" 226 줄 --100%--
```

```
pinctrl-names = "default", "hs", "sdr12", "sdr25", "sdr50";
pinctrl-0 = <&mmc3_pins_default>;
pinctrl-1 = <&mmc3_pins_hs>;
pinctrl-2 = <&mmc3_pins_sdr12>;
pinctrl-3 = <&mmc3_pins_sdr25>;
pinctrl-4 = <&mmc3_pins_sdr50 &mmc3_iodelay_manual1_conf>;

#address-cells = <1>;
#size-cells = <0>;
wlcore: wlcore@0 {
    compatible = "ti,wl1837";
    reg = <2>;
    interrupt-parent = <&gpio5>;
    interrupts = <7 IRQ_TYPE_LEVEL_HIGH>;
};
```

```
mmc3_pins_default: mmc3_pins_default {
    pinctrl-single,pins = <
        0x37c (PIN_OUTPUT_PULLUP | MUX_MODE0)/* mmc3_clk.mmc3_clk */
        0x380 (PIN_INPUT_PULLUP | MUX_MODE0) /* mmc3_cmd.mmc3_cmd */
        0x384 (PIN_INPUT_PULLUP | MUX_MODE0) /* mmc3_dat0.mmc3_dat0 */
        0x388 (PIN_INPUT_PULLUP | MUX_MODE0) /* mmc3_dat1.mmc3_dat1 */
        0x38c (PIN_INPUT_PULLUP | MUX_MODE0) /* mmc3_dat2.mmc3_dat2 */
        0x390 (PIN_INPUT_PULLUP | MUX_MODE0) /* mmc3_dat3.mmc3_dat3 */
    >;
};
```

```
mmc3_pins_hs: mmc3_pins_hs {
    pinctrl-single,pins = <
        0x37c (PIN_OUTPUT_PULLUP | MUX_MODE0)/* mmc3_clk.mmc3_clk */
        0x380 (PIN_INPUT_PULLUP | MUX_MODE0) /* mmc3_cmd.mmc3_cmd */
        0x384 (PIN_INPUT_PULLUP | MUX_MODE0) /* mmc3_dat0.mmc3_dat0 */
        0x388 (PIN_INPUT_PULLUP | MUX_MODE0) /* mmc3_dat1.mmc3_dat1 */
        0x38c (PIN_INPUT_PULLUP | MUX_MODE0) /* mmc3_dat2.mmc3_dat2 */
        0x390 (PIN_INPUT_PULLUP | MUX_MODE0) /* mmc3_dat3.mmc3_dat3 */
    >;
};
```

```
mmc3_pins_default: mmc3_pins_default {
    pinctrl-single,pins = <
        0x37c (PIN_INPUT_PULLUP | MUX_MODE0)/*
        0x380 (PIN_INPUT_PULLUP | MUX_MODE0) /*
        0x384 (PIN_INPUT_PULLUP | MUX_MODE0) /*
        0x388 (PIN_INPUT_PULLUP | MUX_MODE0) /*
        0x38c (PIN_INPUT_PULLUP | MUX_MODE0) /*
        0x390 (PIN_INPUT_PULLUP | MUX_MODE0) /*
    >;
};

mmc3_pins_hs: mmc3_pins_hs {
    pinctrl-single,pins = <
        0x37c (PIN_INPUT_PULLUP | MUX_MODE0)/*
        0x380 (PIN_INPUT_PULLUP | MUX_MODE0) /*
        0x384 (PIN_INPUT_PULLUP | MUX_MODE0) /*
        0x388 (PIN_INPUT_PULLUP | MUX_MODE0) /*
        0x38c (PIN_INPUT_PULLUP | MUX_MODE0) /*
        0x390 (PIN_INPUT_PULLUP | MUX_MODE0) /*
    >;
};
```

```
mmc3_pins_sdr12: mmc3_pins_sdr12 {
    pinctrl-single,pins = <
        0x37c (PIN_OUTPUT_PULLUP | MUX_MODE0) /* mmc3_clk.mmc3_clk */
        0x380 (PIN_INPUT_PULLUP | MUX_MODE0) /* mmc3_cmd.mmc3_cmd */
        0x384 (PIN_INPUT_PULLUP | MUX_MODE0) /* mmc3_dat0.mmc3_dat0 */
        0x388 (PIN_INPUT_PULLUP | MUX_MODE0) /* mmc3_dat1.mmc3_dat1 */
        0x38c (PIN_INPUT_PULLUP | MUX_MODE0) /* mmc3_dat2.mmc3_dat2 */
        0x390 (PIN_INPUT_PULLUP | MUX_MODE0) /* mmc3_dat3.mmc3_dat3 */
    >;
};
```

```
mmc3_pins_sdr25: mmc3_pins_sdr25 {
    pinctrl-single,pins = <
        0x37c (PIN_OUTPUT_PULLUP | MUX_MODE0) /* mmc3_clk.mmc3_clk */
        0x380 (PIN_INPUT_PULLUP | MUX_MODE0) /* mmc3_cmd.mmc3_cmd */
        0x384 (PIN_INPUT_PULLUP | MUX_MODE0) /* mmc3_dat0.mmc3_dat0 */
        0x388 (PIN_INPUT_PULLUP | MUX_MODE0) /* mmc3_dat1.mmc3_dat1 */
        0x38c (PIN_INPUT_PULLUP | MUX_MODE0) /* mmc3_dat2.mmc3_dat2 */
        0x390 (PIN_INPUT_PULLUP | MUX_MODE0) /* mmc3_dat3.mmc3_dat3 */
    >;
};
```

```

mmc3_pins_sdr12: mmc3_pins_sdr12 {
    pinctrl-single,pins = <
        0x37c (PIN_INPUT_PULLUP | MUX_MODE0) /* m
        0x380 (PIN_INPUT_PULLUP | MUX_MODE0) /*
        0x384 (PIN_INPUT_PULLUP | MUX_MODE0) /*
        0x388 (PIN_INPUT_PULLUP | MUX_MODE0) /*
        0x38c (PIN_INPUT_PULLUP | MUX_MODE0) /*
        0x390 (PIN_INPUT_PULLUP | MUX_MODE0) /*
    >;
};

```

```

mmc3_pins_sdr25: mmc3_pins_sdr25 {
    pinctrl-single,pins = <
        0x37c (PIN_INPUT_PULLUP | MUX_MODE0) /* m
        0x380 (PIN_INPUT_PULLUP | MUX_MODE0) /*
        0x384 (PIN_INPUT_PULLUP | MUX_MODE0) /*
        0x388 (PIN_INPUT_PULLUP | MUX_MODE0) /*
        0x38c (PIN_INPUT_PULLUP | MUX_MODE0) /*
        0x390 (PIN_INPUT_PULLUP | MUX_MODE0) /*
    >;
};

```



```
mmc3_pins_sdr50: mmc3_pins_sdr50 {  
    pinctrl-single,pins = <  
        0x37c (PIN_OUTPUT_PULLUP | MANUAL_MODE | MUX_MODE0) /* mmc3_clk.mmc3_clk */  
        0x380 (PIN_INPUT_PULLUP | MANUAL_MODE | MUX_MODE0) /* mmc3_cmd.mmc3_cmd */  
        0x384 (PIN_INPUT_PULLUP | MANUAL_MODE | MUX_MODE0) /* mmc3_dat0.mmc3_dat0  
  
        0x388 (PIN_INPUT_PULLUP | MANUAL_MODE | MUX_MODE0) /* mmc3_dat1.mmc3_dat1  
  
        0x38c (PIN_INPUT_PULLUP | MANUAL_MODE | MUX_MODE0) /* mmc3_dat2.mmc3_dat2  
  
        0x390 (PIN_INPUT_PULLUP | MANUAL_MODE | MUX_MODE0) /* mmc3_dat3.mmc3_dat3  
  
    >;  
};
```

```

mmc3_pins_sdr50: mmc3_pins_sdr50 {
    pinctrl-single,pins = <
        0x37c (PIN_INPUT_PULLUP | MANUAL_MODE | MUX_MODE0) /*
*/
        0x380 (PIN_INPUT_PULLUP | MANUAL_MODE | MUX_MODE0) /*
*/
        0x384 (PIN_INPUT_PULLUP | MANUAL_MODE | MUX_MODE0) /*
*/
        0x388 (PIN_INPUT_PULLUP | MANUAL_MODE | MUX_MODE0) /*
*/
        0x38c (PIN_INPUT_PULLUP | MANUAL_MODE | MUX_MODE0) /*
*/
        0x390 (PIN_INPUT_PULLUP | MANUAL_MODE | MUX_MODE0) /*
*/
    >;
};

```

```
kwrg@kwrg-Samsung-DeskTop-System:~/ti-processor-sdk-linux-am57xx-evm-03.02.00.05/board-support/linux-4.4.32+gitAUTOINC+adde2ca9f8-gadde2ca9f8$ export TOOLCHAIN_PATH=~/ti-processor-sdk-linux-am57xx-evm-03.02.00.05/linux-devkit/sysroots/x86_64-arago-linux/usr/bin
kwrg@kwrg-Samsung-DeskTop-System:~/ti-processor-sdk-linux-am57xx-evm-03.02.00.05/board-support/linux-4.4.32+gitAUTOINC+adde2ca9f8-gadde2ca9f8$ export CROSS_COMPILE=arm-linux-gnueabihf-
kwrg@kwrg-Samsung-DeskTop-System:~/ti-processor-sdk-linux-am57xx-evm-03.02.00.05/board-support/linux-4.4.32+gitAUTOINC+adde2ca9f8-gadde2ca9f8$ export ARCH=arm
kwrg@kwrg-Samsung-DeskTop-System:~/ti-processor-sdk-linux-am57xx-evm-03.02.00.05/board-support/linux-4.4.32+gitAUTOINC+adde2ca9f8-gadde2ca9f8$ [ "$TOOLCHAIN_PATH" != "DEFAULT" ] && export PATH=$TOOLCHAIN_PATH:$PATH
kwrg@kwrg-Samsung-DeskTop-System:~/ti-processor-sdk-linux-am57xx-evm-03.02.00.05/board-support/linux-4.4.32+gitAUTOINC+adde2ca9f8-gadde2ca9f8$ make ARCH=arm CROSS_COMPILE=arm-linux-gnueabihf- tisd_k_am57xx-evm_defconfig
#
# configuration written to .config
#
kwrg@kwrg-Samsung-DeskTop-System:~/ti-processor-sdk-linux-am57xx-evm-03.02.00.05/board-support/linux-4.4.32+gitAUTOINC+adde2ca9f8-gadde2ca9f8$ vi .config
```

```
# CONFIG_RTL8XXXU is not set
CONFIG_WL_TI=y
# CONFIG_WL1251 is not set
# CONFIG_WL12XX is not set
CONFIG_WL18XX=m
CONFIG_WLCORE=m
CONFIG_WLCORE_SPI=m
CONFIG_WLCORE_SDIO=m
CONFIG_WILINK_PLATFORM_DATA=y
# CONFIG_ZD1211RW is not set
CONFIG_MWTFEX=m
```

```
# CONFIG_RTL8XXXU is not set
CONFIG_WL_TI=y
# CONFIG_WL1251 is not set
# CONFIG_WL12XX is not set
CONFIG_WL12XX=m
CONFIG_WL18XX=m
CONFIG_WLCORE=m
CONFIG_WLCORE_SPI=m
CONFIG_WLCORE_SDIO=m
CONFIG_WILINK_PLATFORM_DATA=y
# CONFIG_ZD1211RW is not set
```

```
# CONFIG_NF_REJECT_IPV4 is not set
CONFIG_NF_NAT_IPV4=m
CONFIG_NF_NAT_MASQUERADE_IPV4=m
# CONFIG_NF_NAT_PPTP is not set
# CONFIG_NF_NAT_H323 is not set
CONFIG_IP_NF_IPTABLES=m
# CONFIG_IP_NF_MATCH_AH is not set
# CONFIG_IP_NF_MATCH_ECN is not set
# CONFIG_IP_NF_MATCH_TTL is not set
CONFIG_IP_NF_FILTER=m
# CONFIG_IP_NF_TARGET_REJECT is not set
# CONFIG_IP_NF_TARGET_SYNPROXY is not set
CONFIG_IP_NF_NAT=m
CONFIG_IP_NF_TARGET_MASQUERADE=m
# CONFIG_IP_NF_TARGET_NETMAP is not set
```

```
# CONFIG_NF_REJECT_IPV4 is not set
CONFIG_NF_NAT_IPV4=y
CONFIG_NF_NAT_MASQUERADE_IPV4=y
# CONFIG_NF_NAT_PPTP is not set
# CONFIG_NF_NAT_H323 is not set
CONFIG_IP_NF_IPTABLES=y
# CONFIG_IP_NF_MATCH_AH is not set
# CONFIG_IP_NF_MATCH_ECN is not set
# CONFIG_IP_NF_MATCH_TTL is not set
CONFIG_IP_NF_FILTER=y
# CONFIG_IP_NF_TARGET_REJECT is not set
# CONFIG_IP_NF_TARGET_SYNPROXY is not set
CONFIG_IP_NF_NAT=y
CONFIG_IP_NF_TARGET_MASQUERADE=y
# CONFIG_IP_NF_TARGET_NETMAP is not set
```