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/dts-v1/; #include <nordic/nrf52840_qiaa.dtsi>

#include <dt-bindings/led/led.h> #include <dt-bindings/zmk/matrix_transform.h>

/ { model = "BT75"; compatible = "polarityworks,bt75";
chosen {
    zephyr,code-partition = &code_partition;
    zephyr,sram = &sram0;
    zephyr,flash = &flash0;
    zmk,kscan = &kscan0;
    zmk,underglow = &led_strip;
    zmk,backlight = &backlight;
    zmk,matrix_transform = &default_transform;
    zmk,battery = &vbatt;
};

sensors {
    compatible = "zmk,keymap-sensors";
    sensors = <&encoder_1 &encoder_2 &encoder_3>;
};

default_transform: keymap_transform_0 {
    compatible = "zmk,matrix-transform";
    columns = <16>;
    rows = <6>;
    map = <
RC(0,0) RC(0,1) RC(0,2) RC(0,3) RC(0,4) RC(0,5) RC(0,6) RC(0,7) RC(0,8) RC(0,9) RC(0,10)
RC(1,0) RC(1,1) RC(1,2) RC(1,3) RC(1,4) RC(1,5) RC(1,6) RC(1,7) RC(1,8) RC(1,9) RC(1,10)
RC(2,0) RC(2,1) RC(2,2) RC(2,3) RC(2,4) RC(2,5) RC(2,6) RC(2,7) RC(2,8) RC(2,9) RC(2,10)
RC(3,0) RC(3,1) RC(3,2) RC(3,3) RC(3,4) RC(3,5) RC(3,6) RC(3,7) RC(3,8) RC(3,9) RC(3,10)
RC(4,0) RC(4,1) RC(4,2) RC(4,3) RC(4,4) RC(4,5) RC(4,6) RC(4,7) RC(4,8) RC(4,9) RC(4,10)
RC(5,0) RC(5,1) RC(5,2)                                RC(5,6)                                RC(5,10)
>;
};

kscan0: kscan_0 {
    compatible = "zmk,kscan-gpio-matrix";
    label = "KSCAN";
    diode-direction = "col2row";

    col-gpios
        = <&gpio1 11 GPIO_ACTIVE_HIGH>
        , <&gpio1 10 GPIO_ACTIVE_HIGH>
        , <&gpio1 13 GPIO_ACTIVE_HIGH>

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        , <&gpio1 15 GPIO_ACTIVE_HIGH>
        , <&gpio0 3 GPIO_ACTIVE_HIGH>
        , <&gpio0 2 GPIO_ACTIVE_HIGH>
        , <&gpio0 28 GPIO_ACTIVE_HIGH>
        , <&gpio0 29 GPIO_ACTIVE_HIGH>
        , <&gpio0 30 GPIO_ACTIVE_HIGH>
        , <&gpio0 31 GPIO_ACTIVE_HIGH>
        , <&gpio0 5 GPIO_ACTIVE_HIGH>
        , <&gpio0 7 GPIO_ACTIVE_HIGH>
        , <&gpio1 9 GPIO_ACTIVE_HIGH>
        , <&gpio0 12 GPIO_ACTIVE_HIGH>
        , <&gpio0 23 GPIO_ACTIVE_HIGH>
        , <&gpio1 6 GPIO_ACTIVE_HIGH>
        ;

row-gpios
= <&gpio0 22 (GPIO_ACTIVE_HIGH | GPIO_PULL_DOWN)>
, <&gpio1 0 (GPIO_ACTIVE_HIGH | GPIO_PULL_DOWN)>
, <&gpio1 3 (GPIO_ACTIVE_HIGH | GPIO_PULL_DOWN)>
, <&gpio1 1 (GPIO_ACTIVE_HIGH | GPIO_PULL_DOWN)>
, <&gpio1 2 (GPIO_ACTIVE_HIGH | GPIO_PULL_DOWN)>
, <&gpio1 4 (GPIO_ACTIVE_HIGH | GPIO_PULL_DOWN)>
;

};

ext-power {
    compatible = "zmk,ext-power-generic";
    label = "EXT_POWER";
    control-gpios = <&gpio0 13 GPIO_ACTIVE_HIGH>;
};

encoder_1: encoder_1 {
    compatible = "alps,ec11";
    label = "ENCODER_ONE";
    a-gpios = <&gpio0 21 (GPIO_ACTIVE_HIGH | GPIO_PULL_UP)>;
    b-gpios = <&gpio0 19 (GPIO_ACTIVE_HIGH | GPIO_PULL_UP)>;
    resolution = <4>;
    status = "okay";
};

encoder_2: encoder_2 {
    compatible = "alps,ec11";
    label = "ENCODER_TWO";
    a-gpios = <&gpio0 26 (GPIO_ACTIVE_HIGH | GPIO_PULL_UP)>;
    b-gpios = <&gpio0 6 (GPIO_ACTIVE_HIGH | GPIO_PULL_UP)>;
    resolution = <4>;
    status = "okay";
};

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};
encoder_3: encoder_3 {
    compatible = "alps,ec11";
    label = "encoder_3";
    a-gpios = <&gpio0 9 (GPIO_ACTIVE_HIGH | GPIO_PULL_UP)>;
    b-gpios = <&gpio0 10 (GPIO_ACTIVE_HIGH | GPIO_PULL_UP)>;
    resolution = <4>;
    status = "okay";
};

backlight: pwmleds {
    compatible = "pwm-leds";
    label = "Backlight LEDs";
    pwm_led_0 {
        pwms = <&pwm0 17>;
        label = "Backlight LED 0";
    };
};

leds {
    compatible = "gpio-leds";
    blue_led: led_0 {
        gpios = <&gpio0 15 GPIO_ACTIVE_HIGH>;
        label = "Blue LED";
    };
};

vbatt: vbatt {
    compatible = "zmk,battery-voltage-divider";
    label = "VBATT";
    io-channels = <&adc 2>;
    output-ohms = <100000>;
    full-ohms = <(100000 + 100000)>;
};

};

&adc { status = "okay"; };
&pwm0 { status = "okay"; ch0-pin = <17>; };
&gpiote { status = "okay"; };
&gpio0 { status = "okay"; };
&gpio1 { status = "okay"; };
&i2c0 { compatible = "nordic,nrf-twi"; sda-pin = <25>; scl-pin = <20>; };
&uart0 { compatible = "nordic,nrf-uarte"; tx-pin = <6>; rx-pin = <8>; };

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&usbd { status = "okay"; };

&flash0 { / For more information, see: * http://docs.zephyrproject.org/latest/devices/dts/flash\_partitions.htm
*/ partitions { compatible = "fixed-partitions"; #address-cells = <1>; #size-
cells = <1>;

    sd_partition: partition@0 {
        label = "softdevice";
        reg = <0x00000000 0x00026000>;
    };
    code_partition: partition@26000 {
        label = "code_partition";
        reg = <0x00026000 0x000c6000>;
    };

    /*
     * The flash starting at 0x000ec000 and ending at
     * 0x000f3fff is reserved for use by the application.
     */

    /*
     * Storage partition will be used by FCB/LittleFS/NVS
     * if enabled.
     */
    storage_partition: partition@ec000 {
        label = "storage";
        reg = <0x000ec000 0x00008000>;
    };

    boot_partition: partition@f4000 {
        label = "adafruit_boot";
        reg = <0x000f4000 0x0000c000>;
    };
};

};

&spil { compatible = "nordic,nrf-spim"; status = "okay"; mosi-pin = <20>; //
Unused pins, needed for SPI definition, but not used by the ws2812 driver itself.
sck-pin = <27>; miso-pin = <11>;

led_strip: ws2812@0 {
    compatible = "worldsemi,ws2812-spi";
    label = "WS2812";

    /* SPI */
    reg = <0>;
    spi-max-frequency = <4000000>;

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/* WS2812 */
chain-length = <12>; /* number of LEDs */
spi-one-frame = <0x70>;
spi-zero-frame = <0x40>;
color-mapping = <LED_COLOR_ID_GREEN
                  LED_COLOR_ID_RED
                  LED_COLOR_ID_BLUE>;
};
};
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