

```

// SPDX-License-Identifier: (GPL-2.0+ OR MIT)
/*
 * Copyright (c) 2024 Rockchip Electronics Co., Ltd.
 */

/dts-v1/;

#include "rk3506-luckfox-lyra-ultra.dtsi"

/ {
    model = "Luckfox Lyra Ultra W";
    compatible = "rockchip,rk3506g-demo-display-control",
"rockchip,rk3506";

    chosen {
        bootargs = "earlycon=uart8250,mmio32,0xff0a0000 console=tty1
console=ttyFIQ0 root=/dev/mmcblk0p3 rootfstype=ext4 rootwait
snd_aloop.index=7 snd_aloop.use_raw_jiffies=1";
    };

    /* CARD 0: Amplificatore / Uscita audio integrata */
    dsm_sound: dsm-sound {
        status = "okay";
        compatible = "simple-audio-card";
        simple-audio-card,format = "i2s";
        simple-audio-card,mclk-fs = <256>;
        simple-audio-card,name = "rockchip-dsm-sound";
        simple-audio-card,bitclock-master = <&dsm_master>;
        simple-audio-card,frame-master = <&dsm_master>;
        simple-audio-card,cpu {
            sound-dai = <&sai3>;
        };
        dsm_master: simple-audio-card,codec {
            sound-dai = <&acdcdig_dsm>;
        };
    };

    /* CARD 1: Ripristinata la struttura stabile dmic-codec
riconosciuta dal kernel */
    custom_mic_sound: custom-mic-sound {
        status = "okay";
        compatible = "simple-audio-card";
        simple-audio-card,name = "rk3506-sai1-mic";

        simple-audio-card,format = "i2s";
        simple-audio-card,mclk-fs = <256>;
        simple-audio-card,capture-only;

        simple-audio-card,bitclock-master = <&master_cpu>;
        simple-audio-card,frame-master = <&master_cpu>;

        master_cpu: simple-audio-card,cpu {
            sound-dai = <&sai1>;
        };

        simple-audio-card,codec {
            sound-dai = <&inmp441_codec_stub>;
        };
    };
};

```

```

/* Driver dummy per garantire il corretto caricamento di Card 1 in
arecord -l */
inmp441_codec_stub: inmp441-codec-stub {
    compatible = "dmic-codec";
    #sound-dai-cells = <0>;
    num-channels = <2>;
    status = "okay";
};

wireless_bluetooth: wireless-bluetooth {
    compatible = "bluetooth-platdata";
    BT,power_gpio = <&gpio1 RK_PC5 GPIO_ACTIVE_HIGH>;
    status = "okay";
};

vcc3v3_lcd: vcc3v3-lcd {
    compatible = "regulator-fixed";
    regulator-name = "vcc3v3_lcd";
    gpio = <&gpio1 RK_PC4 GPIO_ACTIVE_HIGH>;
    enable-active-high;
    regulator-min-microvolt = <3300000>;
    regulator-max-microvolt = <3300000>;
    regulator-always-on;
    regulator-boot-on;
    status = "okay";
};

/*****media*****/
&mmc{
    max-frequency = <52000000>;
    mmc-ddr-1_8v;
    bus-width = <4>;
    supports-emmc;
    cap-mmc-highspeed;
    disable-wp;
    non-removable;
    pinctrl-names = "default";
    pinctrl-0 = <&sdmmc_clk_pins &sdmmc_cmd_pins &sdmmc_bus4_pins>;
    status = "okay";
};

&fspi {
    status = "okay";

    flash@0 {
        compatible = "spi-nand";
        reg = <0>;
        spi-max-frequency = <80000000>;
        spi-rx-bus-width = <4>;
        spi-tx-bus-width = <1>;
    };
};

/*****display*****/
&cma {
    size = <0x2000000>;
};

&dsi {

```

```

        status = "okay";
};

&dsi_dphy {
    status = "okay";
};

&dsi_in_vop {
    status = "okay";
};

&route_dsi {
    status = "okay";
};

&dsi_panel {
    power-supply = <&vcc3v3_lcd>;
};

/*****ethernet*****/
&gmac1 {
    phy-mode = "rmii";
    clock_in_out = "output";
    snps,reset-gpio = <&gpio1 RK_PD0 GPIO_ACTIVE_LOW>;
    snps,reset-active-low;
    snps,reset-delays-us = <0 20000 100000>;
    pinctrl-names = "default";
    pinctrl-0 = <&eth_rmii1_miim_pins &eth_rmii1_tx_bus2_pins
&eth_rmii1_rx_bus2_pins &eth_rmii1_clk_pins>;
    phy-handle = <&rmii_phy1>;
    status = "okay";
};

&mdio1 {
    rmii_phy1: phy@1 {
        compatible = "ethernet-phy-ieee802.3-c22";
        reg = <0x1>;
    };
};

/*****usb*****/
&usb20_otg0 {
    dr_mode = "peripheral";
    status = "okay";
};

&usb20_otg1 {
    dr_mode = "host";
    status = "okay";
};

/*****audio*****/
&sai4 {
    status = "okay";
};

&audio_codec {
    status = "okay";
};

```

```

&sai1 {
    status = "okay";
    #sound-dai-cells = <0>;
    pinctrl-names = "default";

    /* Tripletta nativa ufficiale dei siti: rm_io5 riceve il dato SDI
nativo */
    pinctrl-0 = <&rm_io7_sai1_sclk &rm_io6_sai1_lrck &rm_io5_sai1_sdi>;

    /* Configurato a 0 per mappare lo slot dati SDIO logico su RM_IO5
*/
    rockchip,source-sdio-num = <0>;

    rockchip,capture-channels = <2>;
    rockchip,playback-channels = <2>;

    /* Orologi Tx/Rx indipendenti per sbloccare la cattura standalone
*/
    rockchip,clk-trcm = <0>;

    /* Mappa la rotta d'ingresso logica direttamente sulla linea SDIO
hardware */
    rockchip,i2s-rx-route = <0 0 0 0>;

    rockchip,tdm-slot-width = <32>;
    rockchip,bclk-invert = <1>;
    rockchip,lrck-invert = <0>;
};

&sai3 {
    status = "okay";
    pinctrl-names = "default";
    pinctrl-0 = <&sai3_mclk_pins>;
    rockchip,clk-trcm = <0>;
};

&acdcdig_dsm {
    rockchip,dsm-audm-en = <0x2>;
    pa-ctl-gpios = <&gpio1 RK_PC6 GPIO_ACTIVE_HIGH>;
    status = "okay";
};

/*****rtc*****/
&i2c2 {
    tcs8563: tcs8563@51 {
        status = "okay";
        compatible = "nxp,pcf8563";
        reg = <0x51>;
        #clock-cells = <0>;
    };
};

/*****pinctrl*****/
&pinctrl {
    lcd {
        lcd_pwren_h: lcd-pwren-h {
            rockchip,pins = <1 RK_PC4 RK_FUNC_GPIO &pcfg_pull_up>;
        };
    };
};

```

```

acodec-dsm {
    /omit-if-no-ref/
    dsm_spk_ctrl: dsm-spk-ctrl {
        rockchip,pins = <1 RK_PC6 RK_FUNC_GPIO &pcfg_pull_none>;
    };
};

dsm_aud {
    /omit-if-no-ref/
    dsm_audm1_pins: dsm-audm1-pins {
        rockchip,pins =
            <2 RK_PB4 2 &pcfg_pull_none>,
            <2 RK_PB5 2 &pcfg_pull_none>;
    };

    /omit-if-no-ref/
    dsm_audm1_iodown_pins: dsm-audm1-iodown-pins {
        rockchip,pins =
            <2 RK_PB4 RK_FUNC_GPIO &pcfg_pull_down>,
            <2 RK_PB5 RK_FUNC_GPIO &pcfg_pull_down>;
    };
};

/* Configurazione elettrica di RM_IO5: buffer d'ingresso aperto e privo
di pull parassiti */
&rm_io5_sail_sdi {
    rockchip,pins = <0 5 2 &pcfg_pull_none>;
};

/* La tua UART3 stabile e protetta sui pin 29/30 */
&uart3 {
    pinctrl-names = "default";
    pinctrl-0 = <&uart3_custom_pins>;
    status = "okay";

    uart3_custom_pins: uart3-custom-pins {
        rockchip,pins =
            <0 29 3 &pcfg_pull_none>,
            <0 30 3 &pcfg_pull_up>;
    };
};

```