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Quick Start Kernel 5.10

LVDS

Для включения LVDS дисплея в DTS выставляется define LVDS. Он включает pwm, backlight и описание panel.

Для настройки конкретного дисплея необходимо правильно описать узел panel, выставив тайминги и указав compatible. Также необходимо включить соответствующий драйвер в Kernel Menuconfig.

Пример описания для дисплея [sgd,gktw70sdae4se](#)

```
panel {
    compatible = "sgd,gktw70sdae4se", "panel-lvds";

    width-mm = <153>;
    height-mm = <86>;

    data-mapping = "jeida-18";

    panel-timing {
        clock-frequency = <32000000>;
        hactive = <800>;
        vactive = <480>;
        hback-porch = <39>;
        hfront-porch = <39>;
        vback-porch = <29>;
        vfront-porch = <13>;
        hsync-len = <47>;
        vsync-len = <2>;
    };

    port {
        panel_in_lvds: endpoint {
            remote-endpoint = <&lvds_out_panel>;
        };
    };
};
```




Если panel описана корректно, появляется drm/card0 устройство , с которым может работать weston:

```
# ls -la /sys/class/drm/
total 0
drwxr-xr-x  2 root root    0 Aug  4  2017 .
drwxr-xr-x 76 root root    0 Aug  4  2017 ..
lrwxrwxrwx  1 root root    0 Aug  4  2017 card0 -> ../../devices/platform/display-subsystem/drm/card0
lrwxrwxrwx  1 root root    0 Aug  4  2017 card0-HDMI-A-1 -> ../../devices/platform/display-subsystem/drm/card0/card0-HDMI-A-1
lrwxrwxrwx  1 root root    0 Aug  4  2017 card0-LVDS-1 -> ../../devices/platform/display-subsystem/drm/card0/card0-LVDS-1
lrwxrwxrwx  1 root root    0 Aug  4  2017 card0-Writeback-1 -> ../../devices/platform/display-subsystem/drm/card0/card0-Writeback-1
lrwxrwxrwx  1 root root    0 Aug  4  2017 card0-eDP-1 -> ../../devices/platform/display-subsystem/drm/card0/card0-eDP-1
lrwxrwxrwx  1 root root    0 Aug  4  2017 renderD128 -> ../../devices/platform/display-subsystem/drm/renderD128
-r--r--r--  1 root root 4096 Aug  4  2017 version
#
```

```
[12:00:16.951] DRM: head 'LVDS-1' updated, connector 172 is connected, EDID make 'unknown', model 'unknown', serial 'unknown'
Supported EOTF modes: SDR
[12:00:16.951] DRM: head 'LVDS-1' found, connector 172 is connected, EDID make 'unknown', model 'unknown', serial 'unknown'
Supported EOTF modes: SDR
[ 17.914742] rockchip-dp fe0c0000.edp: failed to get hpd plug in status
[12:00:16.964] DRM: head 'eDP-1' updated, connector 174 is disconnected.
[12:00:16.965] DRM: head 'eDP-1' found, connector 174 is disconnected.
[12:00:17.006] DRM: head 'HDMI-A-1' updated, connector 176 is connected, EDID make 'CHO', model 'MNT', serial '1'
Supported EOTF modes: SDR
[12:00:17.007] DRM: head 'HDMI-A-1' found, connector 176 is connected, EDID make 'CHO', model 'MNT', serial '1'
Supported EOTF modes: SDR
[12:00:17.007] Registered plugin API 'weston_drm_output_api_v1' of size 32
[12:00:17.008] Color manager: no-op
[12:00:17.008] Output 'LVDS-1' attempts EOTF mode: SDR
[12:00:17.008] Output 'LVDS-1' using color profile: built-in default sRGB SDR profile
[12:00:17.016] DRM: output LVDS-1 uses shadow framebuffer.
[12:00:17.016] Initialized backlight for head 'LVDS-1', device /sys/class/backlight/backlight
[12:00:17.016] Output LVDS-1 (crtc 115) video modes:
800x480@66.0, preferred, current, 32.0 MHz
[12:00:17.017] associating input device event0 with output LVDS-1 (none by udev)
[12:00:17.017] associating input device event1 with output LVDS-1 (none by udev)
[12:00:17.017] Output 'LVDS-1' enabled with head(s) LVDS-1
[12:00:17.017] Output 'HDMI-A-1' attempts EOTF mode: SDR
[12:00:17.017] Output 'HDMI-A-1' using color profile: built-in default sRGB SDR profile
[12:00:17.044] DRM: output HDMI-A-1 uses shadow framebuffer.
[12:00:17.044] Initialized backlight for head 'HDMI-A-1', device /sys/class/backlight/backlight
```

Управление подсветкой в диапазоне от 0 до 255:

```
# cat /sys/class/backlight/backlight/brightness #default
200
# echo 1 > /sys/class/backlight/backlight/brightness # min
# echo 255 > /sys/class/backlight/backlight/brightness # max
```