

Display Status

Overview

This document describes the inputs used to monitor display backlight status, how they relate to each other, and how DSM (Display Status Monitor) generates alerts from them.

Inputs

Input	Source	Single display	Dual display
bl1_enable	Controllers page	Used	Used
bl2_enable	Controllers page	Not applicable	Used
bl1 (backlight brightness)	Controllers page	Used	Used
bl2 (backlight brightness)	Controllers page	Not applicable	Used
LCD1Status	Sensors page	Used	Used
LCD2Status	Sensors page	Not applicable	Used

- **bl1_enable / bl2_enable** — on/off flags for each display's backlight, read from the Controllers page. A single-display unit only has bl1_enable; a dual-display unit has both bl1_enable and bl2_enable.
- **bl1 / bl2** — backlight brightness values for each display, also read from the Controllers page.
- **LCD1Status / LCD2Status** — Sensors page values indicating whether each display's LCD controller is enabled. A single-display unit only has LCD1Status; a dual-display unit has both LCD1Status and LCD2Status.

Alert generation

DSM generates alerts based only on the backlight brightness values, bl1 and bl2. If either bl1 or bl2 drops to 0, DSM generates an alert for that display.

The alert text names the affected screen: bl1 = 0 shows "Screen 1 is off", and bl2 = 0 shows "Screen 2 is off".

DSM does not evaluate bl1_enable, bl2_enable, or LCD1Status/LCD2Status directly when deciding whether to raise an alert — but as described below, bl1_enable and bl2_enable can force bl1/bl2 to 0, which then triggers the alert indirectly.

Backlight enable behavior

bl1_enable and bl2_enable also control the physical backlight, separately from what DSM watches for alerts:

1. bl1_enable (or bl2_enable) goes from 1 to 0.
2. The backlight for that display is turned off.
3. The corresponding brightness value, bl1 (or bl2), is also set to 0.
4. Because bl1/bl2 is now 0, DSM generates an alert for that display.

So a bl1_enable/bl2_enable transition to 0 always produces an alert, but by way of forcing bl1/bl2 to 0 — the alert itself is still keyed off bl1/bl2, not off the enable flag.

Typical causes for bl1_enable/bl2_enable going to 0: the upstream picture source (e.g. a media player) crashes, goes to sleep, or intentionally turns the display off.

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