

Front panel DVT ECO List

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ECO list for DVT version of Novena Front Panel breakout board.

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ECO 1: Allow for PWM control of front panel LED during suspend

The control signal for the RT9706 (peek array power switch and limiter) is swapped with the control signal for the front LED status indicator. The upshot is that EPIT1_EPITO now controls the RT9706, and GPT_CMPOUT3 controls the blinkenlight.




GPT_CMPOUT3 can be muxed in software to use PWM1, which is the same as the PWM that controls the backlight for the LCD. During suspend, software remaps the GPIO so that the backlight PWM is off, and modulated to an appropriate level for the front switch in suspend mode. During power on, it's mapped back to a GPIO LED so the front panel status indicator can be ganged to any of the internal Linux LED sources (e.g. hard drive LED, heart beat LED, etc.).

This ECO has no BOM impact.

ECO 2: Dim front panel LEDs

Currently, a 100 ohm current limiting resistor is used for the front panel LEDs. The upshot is that when the output is turned on, it's really, really bright with about 16 mA current going through four LEDs. It also burns a lot of power.

This is now changed to a 1k current limiting resistor, which should reduce brightness to about 1/8th - 1/10th the current level, and save power. At the estimated 4-6mA total current flowing through the LED, this will drain the 5000mAh battery in about 2 months -- making this probably one of the lesser culprits in terms of total drainage.

DVT 	PVT 	Notes 
R11 100, 1%	R11 1k, 1%	
R10 100, 1%	R10 1k, 1%	
R17 100, 1%	R17 1k, 1%	
R15 100, 1%	R15 1k, 1%	

ECO 3: Adjust LED locations

LED locations adjusted to better match the actual location of the light pipes on the final case design. No BOM impact.

ECO 4: Reminder to use AVL for P10

Do not use cost-down option for P10, HRS FH34RJ-30S-0.5SH is required due to top-contact connector layout strategy for the FPC.

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