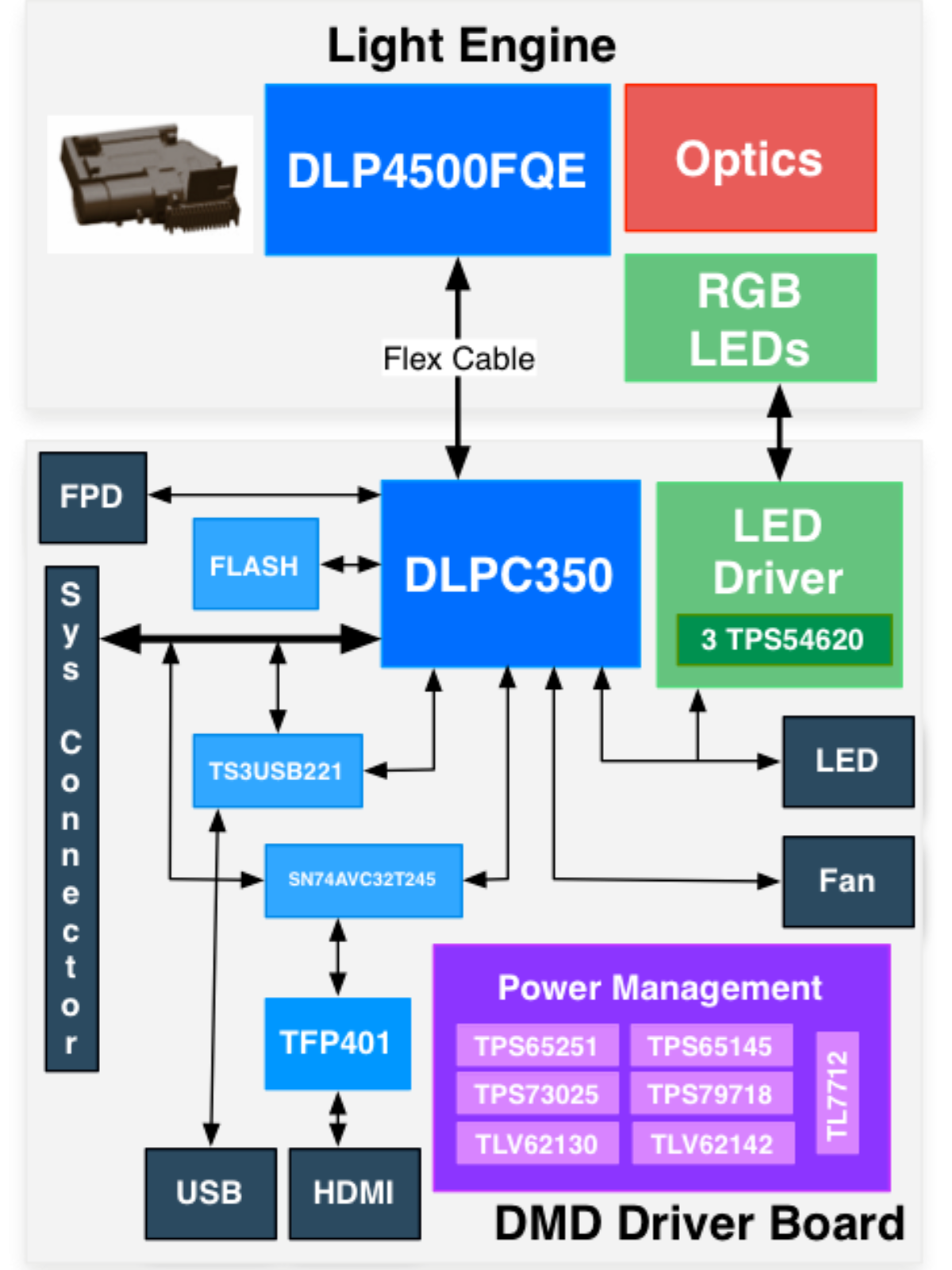
**Personal Notes**

Evaluation Kit/Module **(EVM)** (Integrated camera? -> Interactive Display, Position Tracking)



DLP LC EVM:

* Light Engine
  + RGB LEDs
  + WXGA DMD

**-> 912x1140** diamond **pixels**

* + Heat Sink, Fan, Lens/Optics
* Driver Board
  + LED Driver
  + DMD Controller
  + Power management
  + DVI to RGB conversion w/ TFP401
  + 32MB Flash mem (Firmware & 24 Bit compressed images)

0.45 WXGA chipset:

* DLP4500 – 0.45 WXGA FQE, FQD DMD
  + - DLP4500 **digital micromirror device** (DMD)
    - FQE/FQD are the two package types
* DLPC350 – DLP4500 **controller**
* Flash memory w/ config and firmware

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Parameter | Min | Typ | Max | Unit |
| Brightness |  | 150 |  | Lm |
| LED Power Consumtion |  | 15 |  | W |
| Full-on Full-off contrast |  | 1000:1 |  |  |
| Uniformity | 80 | 90 |  | % |
| F-number |  | 2.1 |  |  |
| Throw Ratio |  | 100 |  |  |
| Offset |  | 100 |  | % |
| Focus Range | 0.5 | 1 | 2 | M |
| Img. Diag | 42.4 | 83.3 | 165.1 | Cm |

Driver Board Interface

* I2C, UART/RS232 (115200bps)
* Video DVI -> Mini HDMI, and FPD-link connector (FlatPanelDisplay)
* Mini USB
* Trigger in/out
* System Board Interface
* PandaBoard 4500

To Consider:

Power Consumption (Light engine [actively cooled] thermal limit: LED currents <= 4.3 A)

-> Do not overheat system by driving all LEDs at max power

-> LED Driver up to 5A per LED (TPS54620)

Air circulation if EVM is in the case

Color (y/n)?

Power management:

TPS65251: Triple output buck (max 2.5,3.5A): DLPC350 1.2V, 1.9V supplies and 5V board supply

TPS65145: Triple output boost (typical limit 1.4A): DLP4500 8.5V, –10V, and 16V supplies

TPS73025: Step-down (max 0.2A): DLP4500 2.5V supply

TLV62130: Step-down (continuous 3A): 3.3V supply

TLV62130: Step-down (continuous 3A): 5V system board supply

TPS79718: Step-down (Continuous 0.01A, limit 0.3A): DLPC350 1.8V analog supply

TL7712: Programmable time delay for power-supply sequencing

3x TPS54620: LED Driver ‘up to 5A per LED’ (Datasheet: 6A each)

Warnings

Don’t look into the Laser (Risk Group 2)

EMV is ESD sensitive

<https://www.ti.com/licreg/docs/swlicexportcontrol.tsp?form_type=2&prod_no=qt-win-opensource-4.8.4-mingw.zip&ref_url=ref_url=http://software-dl.ti.com/analog/analog_public_sw/dlp/&form_id=92084>

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