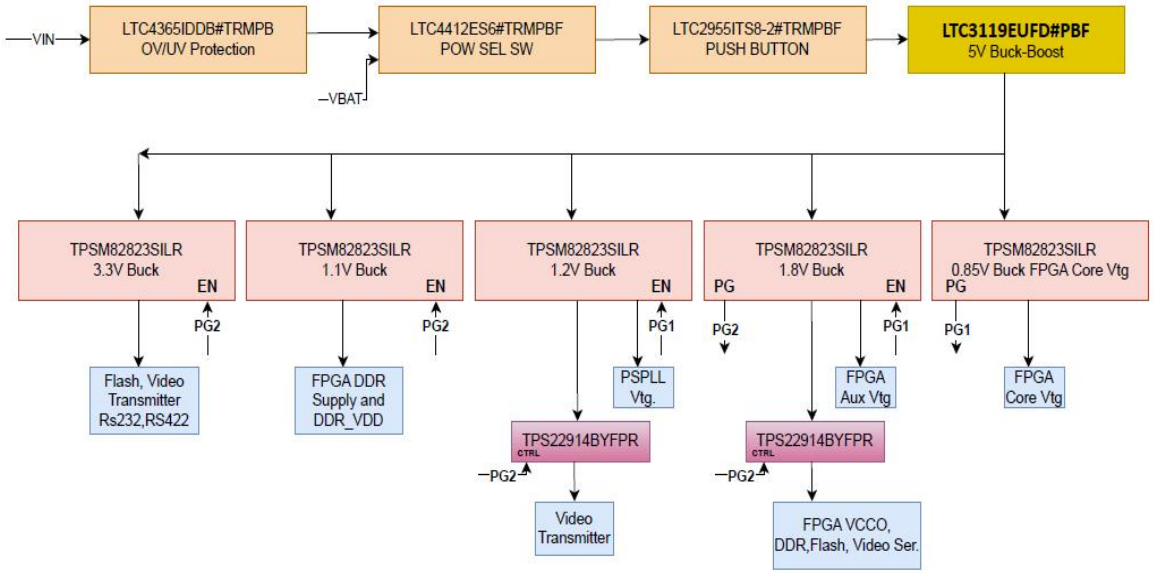
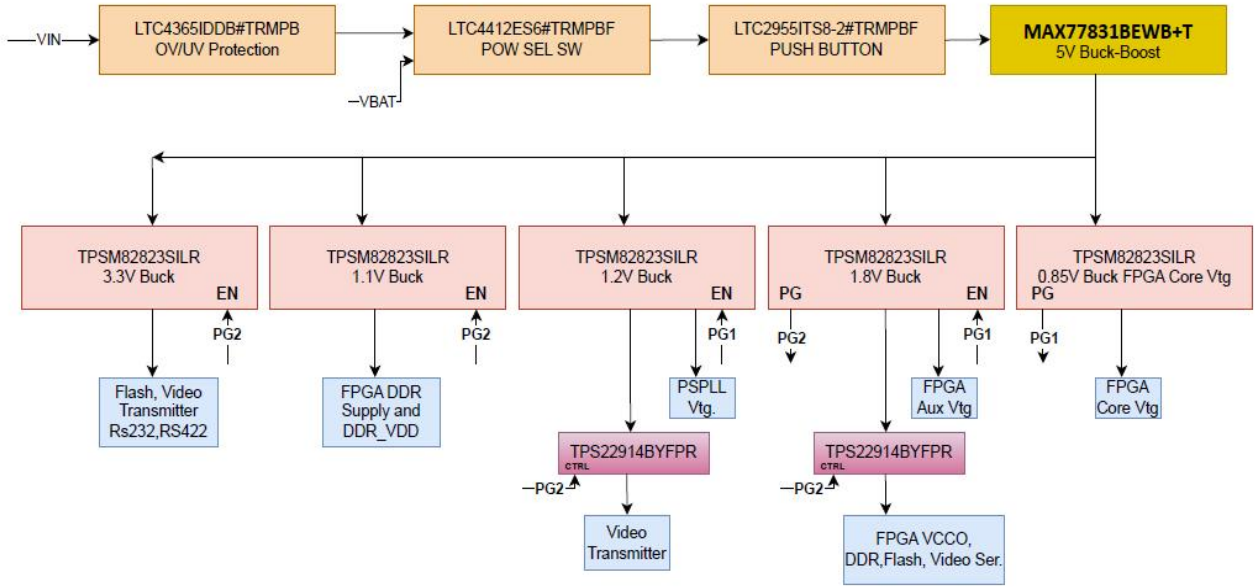
Power Scheme Review

Actual Power Supply Architecture with XCZU1CG-L1UBVA494I



Proposed Power Supply Architecture with XCZU3CG-L1UBVA530I



- From the above block diagrams we would like to replace LTC3119EUFD#PBF with MAX77831BEWB+T, Technical Spec are as follows:

Parameter	LTC3119EUFD#PBF	MAX77831BEWB+T
Description	Buck-Boost Switching Regulator IC Positive Adjustable 0.8V 1 Output 5A 28-WFQFN Exposed Pad	Buck-Boost Switching Regulator IC Positive Adjustable 3V 1 Output 7A
Supply Voltage	2.5V to 18V	2.5V to 16V
Output Voltage	0.8V to 18V	3V to 15V (Default 5V)
Output Current	5A in Buck Mode 3A in Boost Mode for Vin=3.6V	6A in Buck Mode 4A in Boost mode 7A Typical Switching Current
Switching Frequency	400KHz to 2MHz(Programmable)	1.8MHz(Default) I2C programmable from 1.2MHz to 15MHz

Suggestion required from your side:

- As per the above information we are planning to replace LTC3119EUFD#PBF with MAX77831BEWB+T technical specifications were attached.
- In Buck-Mode LTC3119 gives only 3A whereas MAX77831 will gives 4A.