# Automotive Cluster Wide Vin Power Supply Design - TIDA-00275

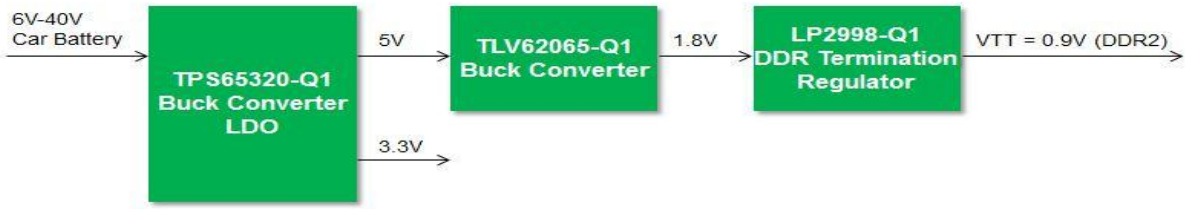
***Available***

## Designs Considerations

- The TPS65320-Q1 buck converter was selected for its capability to withstand 6.0V – 40V input voltage, >2MHz switching frequency to stay out of the AM band, and integrated LDO suitable for the power system implementation chosen. Note, that the TPS65320-Q1 is capable of operating down to <4.5V for other power system implementations.
- The TLV62065-Q1 buck converter was selected for it's small package size (2x2x0.8mm SON), minimal external components, efficiency, and >2MHz switching frequency.
- The LP2998-Q1 DDR termination regulator was selected as it meets JEDEC SSTL-2 and JEDEC SSTL-18 specifications for termination of DDR-SDRAM and DDR2 memory.
- 5V, 3.3V, 1.8V, and 0.9VTT voltage rails were selected to accommodate typical mid-end cluster power system implementations and can be tailored to meet customer needs.

## System Block Diagram

**TIDA-00275**



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