

TAA6065AT: Automotive digital LLC controller

Digital configurable high-efficiency LLC controller for automotive micro-DC/DC converter applications and standby power supplies

The [TAA6065AT](#) is an AEC-Q100 automotive-qualified, digital configurable LLC controller for high-efficiency resonant micro-DC/DC converters and local BMS high-voltage supplies. It helps reduce EV battery vampire drain in parking mode by enabling efficient standby power conversion for vital loads such as monitoring, battery temperature management, theft protection and app connectivity.

Key benefits

- **Lower power consumption:** High efficiency across the full load range helps minimize standby energy losses.
- **Reduced EV battery vampire drain:** Advanced low-power operation supports very high efficiency at light loads.
- **Optimized design:** Programmable parameters, GUI-based configuration and high power density support flexible, compact designs.

Target applications

- **Automotive:** HV-LV micro-DC/DC converters, standby power supplies up to 1 kW, BMS HV supply and contactor driver
- **Industrial:** 2- and 3-wheeler chargers and stationary energy storage systems

Key features

- NXP GreenChip Vcap control technology for high efficiency from low to high load
- Integrated gate drivers and high-voltage level shifter
- Zero voltage switching to reduce switching losses
- Configurable protections including UVP, OPP, OTP, CMR, OVP and OCP



- Ringo GUI configuration during evaluation
- SO16 package; -40 °C to 150 °C junction temperature range

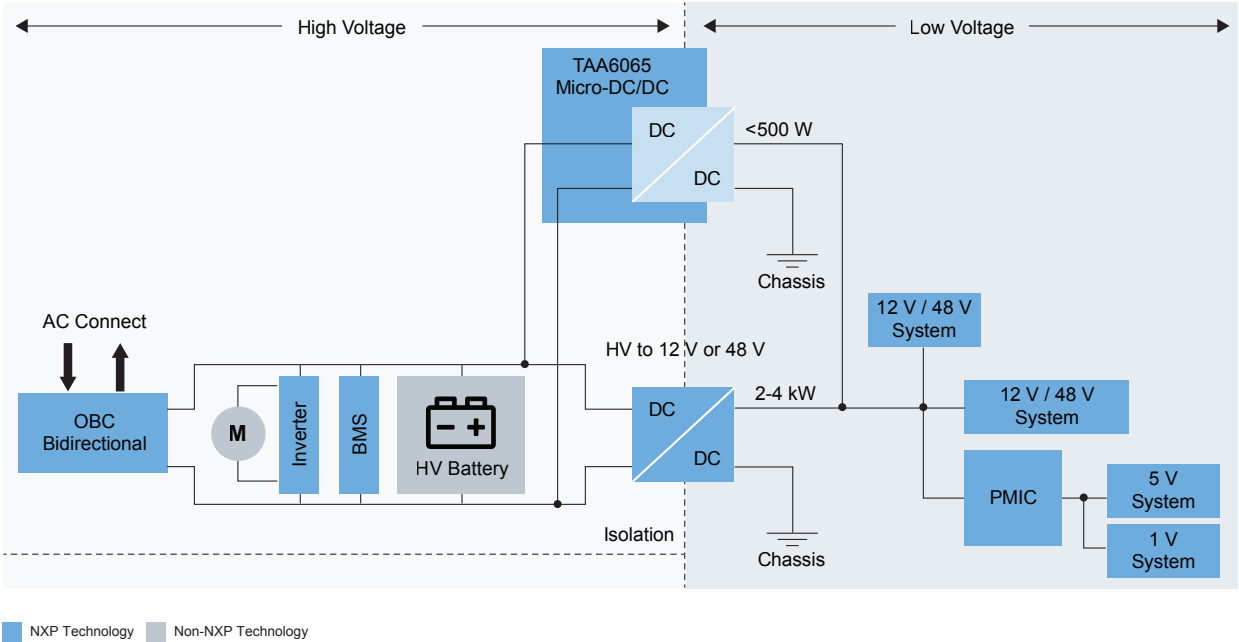
Application

The device fits within NXP's AC-DC and power supply controller portfolio as an automotive LLC-only controller for resonant power conversion above 90 W and up to 1 kW, complementing the main HV-LV DC/DC converter in EV parking-mode architectures.

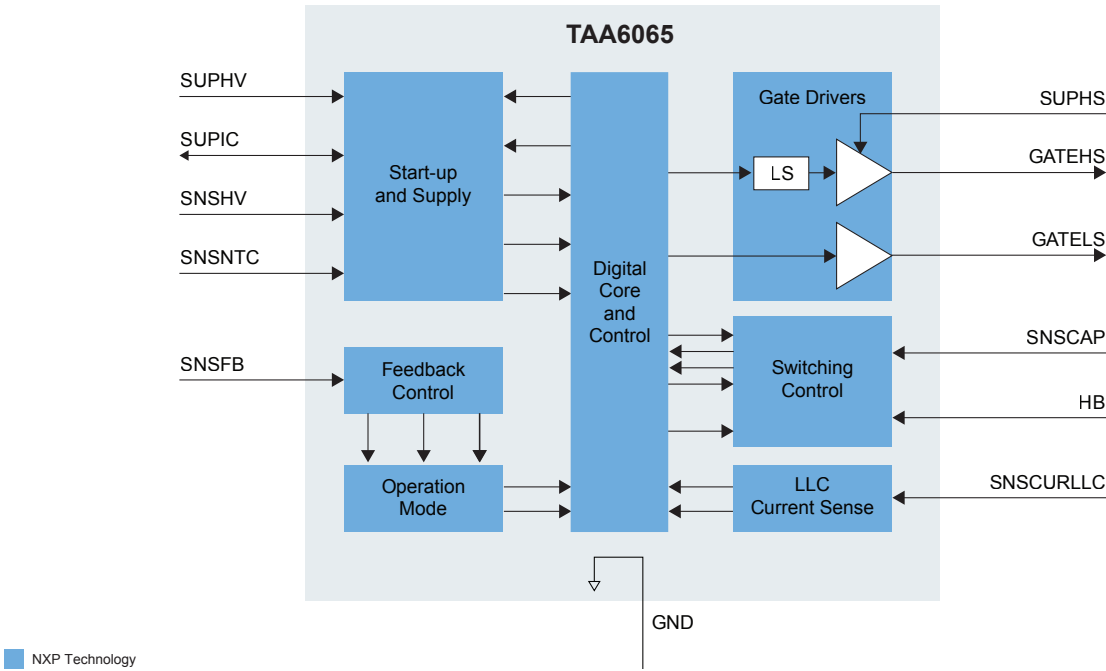


TAA6065 chipshot

TAA6065 application diagram



TAA6065 block diagram



Enablement

Part number	TAA6065AT/1Y
Development board	TAA6065DK1012 with SO16 socket and 20 development IC samples
Documentation	TAA6065AT 100 W HV-LV DC/DC design example, user manual (UM12393)

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