

ISL95852A

Integrated Power Management IC for IMVP8™ Platforms

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The [ISL95852A](#) is a Power Management Integrated Circuit (PMIC) for ultrabook, notebook and tablet computers powered by 2-cell Li-ion batteries. It integrates control, MOSFET drivers, power MOSFETs, fault protection and fault monitoring functions for three highly efficient synchronous buck regulators. Integrated into one package are the regulators for the core, graphics and system agent voltages. The ISL95852A is offered in a thermally efficient 4mmx4mm, 64 bump, 0.5mm pitch WLCSP package.

The PMIC regulators convert the system voltage from a battery or adapter into the three necessary processor voltages required by Intel's IMVP8 specifications. The switching regulators operate at high frequency and are based on Intersil's proprietary R3™ Technology, which provides high light-load efficiency and fast transient response with minimal external compensation.

The PMIC provides overcurrent, overvoltage and over-temperature fault protections. Also provided is a temperature alert signal indicating the PMIC is operating at an elevated temperature and an ALERT signal indicates if any other fault or warning has occurred. The PMIC also offers I²C capability compatible with Intel's SMBus specification.

Features

- Highly integrated power management IC
- Efficient high frequency integrated FET switching regulators
- Integrated regulators to produce core, graphics and system agent rails
- Extensive fault protection
 - Overcurrent, overvoltage and over-temperature protection
 - Temperature alert signal
- SVID I²C bus allows system fault monitoring, enable control
 - PS4 power domain entry/exit fully supported
- Output voltage offset programming through SVID I²C

Applications

- Ultrabook, notebook and tablet computers

Related Literature

- [TB451](#), "PCB Assembly Guidelines for Intersil Wafer Level Chip Scale Package Devices"
- [TB500](#), "Computing Power Reference Design Adaptation Guide"
- [TB501](#), "Computing Power Regulator Layout Checklist"
- [UG041](#), "ISL95852EVAL1Z Evaluation Board User Guide"

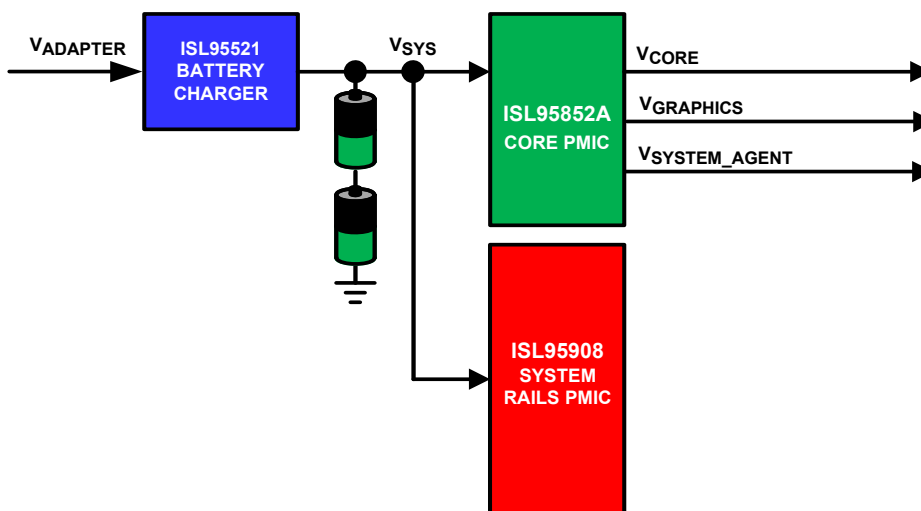


FIGURE 1. COMPUTER SYSTEM POWER MANAGEMENT SOLUTION

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