

# 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 I<sup>2</sup>C 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 I<sup>2</sup>C bus allows system fault monitoring, enable control
  - PS4 power domain entry/exit fully supported
- Output voltage offset programming through SVID I<sup>2</sup>C

## 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"

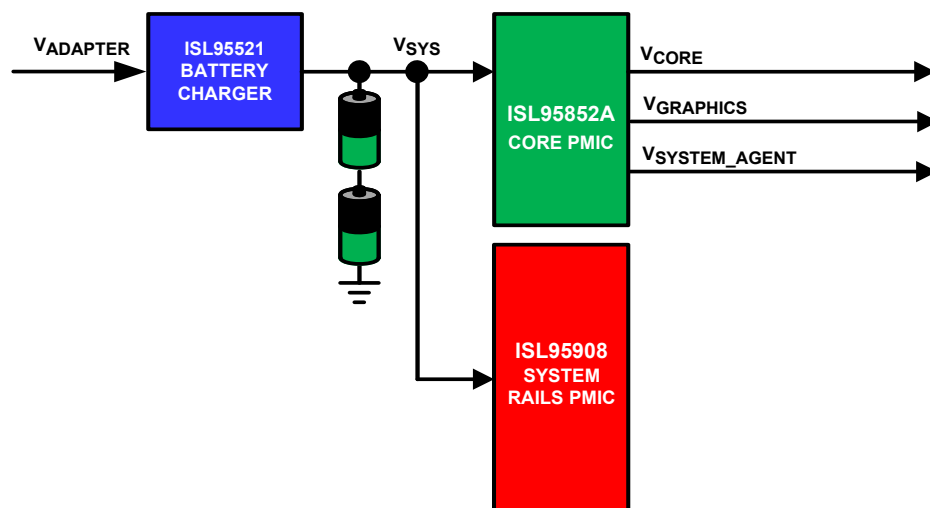


FIGURE 1. COMPUTER SYSTEM POWER MANAGEMENT SOLUTION

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**Renesas Electronics America Inc.**  
1001 Murphy Ranch Road, Milpitas, CA 95035, U.S.A.  
Tel: +1-408-432-8888, Fax: +1-408-434-5351

**Renesas Electronics Canada Limited**  
9251 Yonge Street, Suite 8309 Richmond Hill, Ontario Canada L4C 9T3  
Tel: +1-905-237-2004

**Renesas Electronics Europe Limited**  
Dukes Meadow, Millboard Road, Bourne End, Buckinghamshire, SL8 5FH, U.K  
Tel: +44-1628-651-700, Fax: +44-1628-651-804

**Renesas Electronics Europe GmbH**  
Arcadiastrasse 10, 40472 Düsseldorf, Germany  
Tel: +49-211-6503-0, Fax: +49-211-6503-1327

**Renesas Electronics (China) Co., Ltd.**  
Room 1709 Quantum Plaza, No.27 ZhichunLu, Haidian District, Beijing, 100191 P. R. China  
Tel: +86-10-8235-1155, Fax: +86-10-8235-7679

**Renesas Electronics (Shanghai) Co., Ltd.**  
Unit 301, Tower A, Central Towers, 555 Langao Road, Putuo District, Shanghai, 200333 P. R. China  
Tel: +86-21-2226-0888, Fax: +86-21-2226-0999

**Renesas Electronics Hong Kong Limited**  
Unit 1601-1611, 16/F., Tower 2, Grand Century Place, 193 Prince Edward Road West, Mongkok, Kowloon, Hong Kong  
Tel: +852-2265-6688, Fax: +852-2886-9022

**Renesas Electronics Taiwan Co., Ltd.**  
13F, No. 363, Fu Shing North Road, Taipei 10543, Taiwan  
Tel: +886-2-8175-9600, Fax: +886-2-8175-9670

**Renesas Electronics Singapore Pte. Ltd.**  
80 Bendemeer Road, Unit #06-02 Hyflux Innovation Centre, Singapore 339949  
Tel: +65-6213-0200, Fax: +65-6213-0300

**Renesas Electronics Malaysia Sdn.Bhd.**  
Unit 1207, Block B, Menara Amcorp, Amcorp Trade Centre, No. 18, Jln Persiaran Barat, 46050 Petaling Jaya, Selangor Darul Ehsan, Malaysia  
Tel: +60-3-7955-9390, Fax: +60-3-7955-9510

**Renesas Electronics India Pvt. Ltd.**  
No.777C, 100 Feet Road, HAL 2nd Stage, Indiranagar, Bangalore 560 038, India  
Tel: +91-80-67208700, Fax: +91-80-67208777

**Renesas Electronics Korea Co., Ltd.**  
17F, KAMCO Yangjae Tower, 262, Gangnam-daero, Gangnam-gu, Seoul, 06265 Korea  
Tel: +82-2-558-3737, Fax: +82-2-558-5338