

P9148A

✓ Active ✓ Samples Available

Distributed Power Unit for P91E0A

Flexible output current capabilities are key to address modern multi core SoC solutions with a variety of different skews. The IDT P9148 distributed power units (DPU) operate as additional phases to the [P91E0A](#) PMIC to increase the output current of the solution. The device works as a controlled current source fully controlled by the host PMIC. Multiple P9148 devices may be used in parallel to provide additional current to the load. A high-speed proprietary interface between the [P91E0A](#) and the P9148A provides control and feedback information. The device seamlessly integrates into the PMIC eco-system and is flexible and transparent to the user. P9148A has been designed for systems with single 5V supply available and supports features such as optional thermal limit warning flag, load current monitor and automatic load-balancing among phases).

Features

- Single 4.5V to 8.4V input voltage range
- Output voltage controlled by host PMIC ([P91E0A](#))
- Up to 6A peak output current per device/phase
- 2.0MHz switching frequency, internal PWM generation
- Support automatic phase-shedding, PFM and LDO modes
- Simple 2-wire interface for device configuration, control and status exchange to the host PMIC
- Automatic detection by Host PMIC
- No analog feedback to PMIC required
- Thermal limit warning flag and load current monitor capability optional
- Automatic load-balancing and heat re-distribution among phases optional
- Digital modulation and ML-based error correction
- Industrial temperature range of -40°C to +85°C
- 3 × 4 mm 12-DFN (NRG12)

Product Options

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| Orderable Part ID | Part Status | Pkg. Code | Pkg. Type | Lead Count (#) | Carrier Type | Temp. Grade | Pb (Lead) Free | Buy Sample |
|-------------------|-------------|-------------------------|-----------|----------------|--------------|-------------|----------------|--|
| P9148ANRG18 | Active | NRG12S1 | DFN | 12 | Reel | I | Yes | Get Samples Buy / Quote |

Technical Documentation

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| Title | Other Languages | Type | Format | File Size | Date |
|---------------------|-----------------|------|--------|-----------|------|
| Datasheets & Errata | | | | | |

[P9148A Datasheet](#) Datasheet PDF 574 KB Aug 16, 2018

Application Notes & Whitepapers

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Layout Guide for [P91E0A](#) and [P9148A](#) engineers who never miss out on learning about the latest product technology from IDT. Enter your email below and click go!



Evaluation Boards

| Part Number | Title | GO |
|-----------------------------------|---|----|
| USB-BRIDGEV2-EVAL | USB to I2C Dongle | |
| P91E0A-EVAL | P91E0A and P9148A Programmable Multi-Channel PMIC Solution for Intel Apollo Lake Atom™ Evaluation Board | |

News & Additional Resources

| | Date ▼ |
|--|--------------|
| IDT Announces Innovative Power Management Solution Validated for Intel® Atom™ Processor-based Applications | Jun 24, 2013 |

[DOWNLOAD DATASHEET](#)

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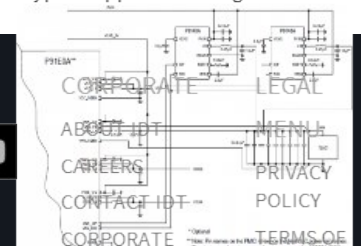
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Images

P9148A - Typical Application Diagram

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