



Dual 13A or single 26A DC/DC regulators

1 Main features:

- ◆ Complete independent dual channel output power supply
- ◆ Single channel 26A or dual channel 13A output
- ◆ Wide input voltage range: 4.5V to 20V
- ◆ Output voltage range: 0.6V to 2.5V
- ◆ Maximum total DC output error $\pm 2.5\%$
- ◆ Differential remote sampling amplifier
- ◆ Current mode control/fast transient response
- ◆ Adjustable switching frequency
- ◆ Overcurrent reentry protection
- ◆ Use multiple devices to achieve multi-phase current sharing
- ◆ Internal temperature detection diode output
- ◆ Optional burst mode
- ◆ Soft start and voltage tracking
- ◆ Output overvoltage protection

2 Typical Applications

- ◆ Storage and ATCA card
- ◆ Telecommunication and network equipment
- ◆ Distributed DC power supply system for industrial and medical equipment

3 Product description

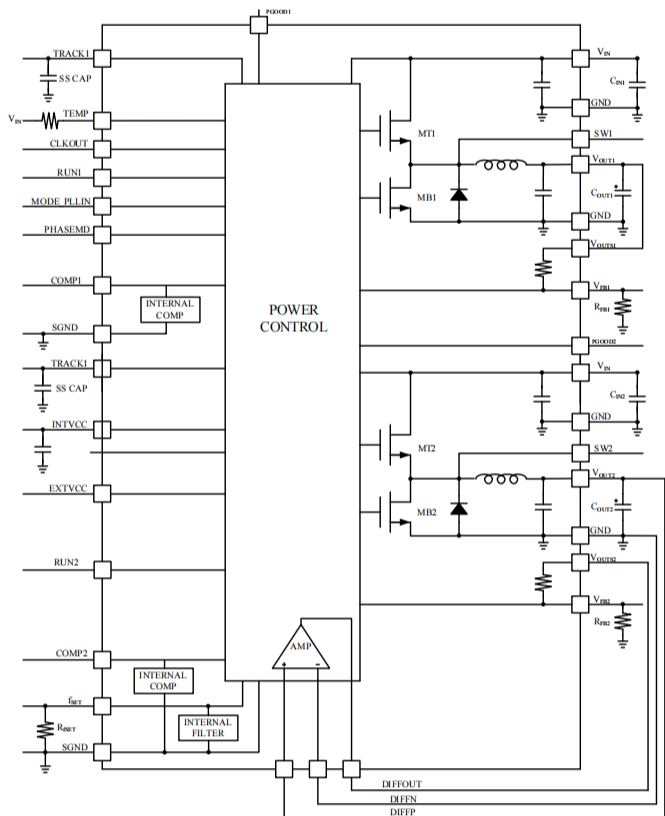
The HS4620 is a complete dual-channel 13A output switching mode DC/DC power supply that can be easily configured as a single-channel two-phase 26A output. The switch controller, power FETs, inductors and all supporting components are built into the package. The input voltage range is 4.5V to 16V, and two output voltage ranges of 0.6V to 2.5V are supported (set by a single external resistor). The high-efficiency design of the device is capable of providing 13A continuous current for each output. Only a small number of input and output capacitors are required.

The device supports frequency synchronization,

multi-phase operation, burst mode operation, and output voltage tracking for power rail sequencing, and has a built-in temperature diode that monitors the device temperature. The use of high switching frequency and current mode architectures enables fast transient responses to voltage and load changes without sacrificing stability.

The fault protection function includes overvoltage and overcurrent protection. The power module is available in dedicated space saving and heat resistant enhanced 15mm x 15mm x 4.41mmLGA and 15mm x 15mm x 5.01mmBGA packages.

The internal structure block diagram of the chip is as follows:



4 Product highlights

- ◆ Wide input voltage range, high conversion efficiency, fast transient response.
- ◆ Adjustable switching frequency, external frequency synchronization.
- ◆ It can realize multi-chip parallel output and multi-phase operation at the same time.

5 Compared with similar foreign products

	Input voltage range (V)	Clock frequency range (KHz)	Linear adjustment rate (%/V)	Load adjustment rate (%)	Encapsulation form
LTM4620(ADI)	4.5~16	400~780	≤ 0.04	≤ 0.3	LGA/BGA
HS4620	4.5~20	250~770	≤ 0.04	≤ 0.2	LGA/BGA