



Dual 8A or single 16A DC/DC regulators

1 Main features:

- ◆ Complete independent dual power supply
- ◆ Single 16A or dual 8A output
- ◆ Wide input voltage range: 4.5V~30V
- ◆ Output voltage range: 0.6V~5.5V
- ◆ $\pm 1.5\%$ total DC output error
- ◆ Differential remote sensing amplifier
- ◆ Current mode control, fast transient reaction
- ◆ Adjustable switching frequency
- ◆ Overcurrent feedback protection
- ◆ Multi-HL4628 multi-phase parallel output
- ◆ Frequency synchronization
- ◆ Internal temperature sensor diode output
- ◆ Soft start, output voltage tracking
- ◆ Output overvoltage protection
- ◆ Package: LGA and BGA

2 Typical application

- ◆ Telecommunications and network equipment
- ◆ Memory card and ATCA card
- ◆ Industrial equipment

3 Product description

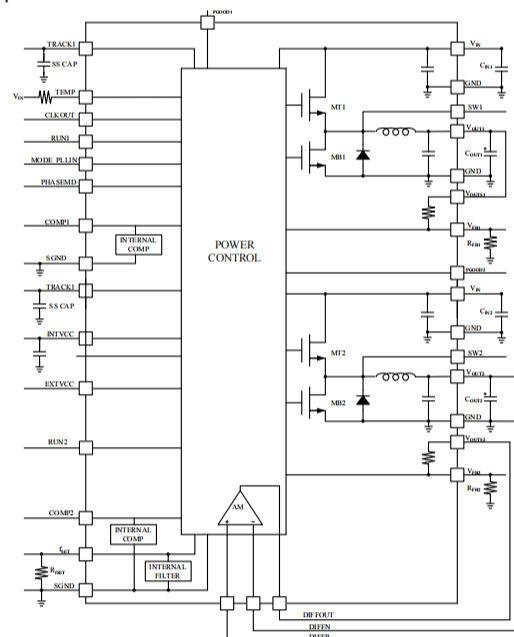
This product is a complete dual 8A output switching power supply and can be easily configured for a two-phase single 16A output. The switch controller, power FETs, inductors and support components are built into the package. This product can operate in the input voltage range of 4.5V to 30V and supports two 0.6V to 5.5V (each set by a single external resistor) output voltage range. The device's high-efficiency design enables each channel to deliver 8A continuous output current. A small number of input and output capacitors are required.

5 Compared with similar foreign products

	Input voltage range (V)	Clock frequency range (KHz)	Linear adjustment rate (%/V)	Load adjustment rate (%)	Encapsulation form
LTM4628(ADI)	4.5~26.5	400~780	≤ 0.04	≤ 0.3	LGA/BGA
HS4628	4.5~30	250~770	≤ 0.04	≤ 0.2	LGA/BGA

Each supply sequence of the device supports frequency synchronization, multi-phase, burst mode, and output voltage tracking. The device has a built-in temperature diode to monitor the device temperature. The high switching frequency and current mode architecture guarantees fast transient responses when input voltage and load change, without sacrificing stability. The fault protection function includes overvoltage and overcurrent protection. The power module is available in a space-saving and heat-enhancing LGA package (15mm x 15mm x 4.32mm) or a BGA package (15mm x 15mm x 4.92mm). Available in SnPb (BGA package) or RoHS compliant terminal coating.

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.