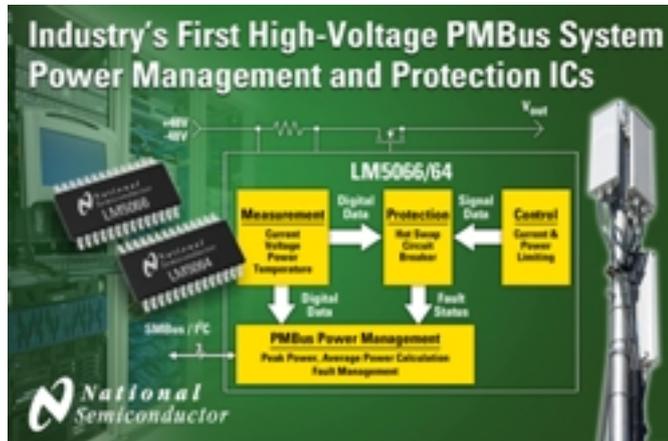


National Semiconductor Introduces Industry's First High-voltage PMBus System Power Management and Protection ICs



National Semiconductor Corp. introduced two new high-voltage system power management and protection integrated circuits (ICs) with on-chip power management bus (PMBus) support. The 48V input voltage LM5066 and -48V input voltage LM5064 integrate high-performance system protection and management blocks that precisely measure, control and manage the electrical operating conditions in systems such as routers, switches and base stations. The LM5066 and LM5064 enable comprehensive system power management for improving system reliability and reducing power consumption in wired and wireless telecom infrastructure systems that operate from high-voltage system backplanes. Watch a product overview at <http://bit.ly/LM5066-64Video> [1].

National's LM5066 and LM5064 complement National's family of intelligent system protection and power management products that include the LM25066, which provides accurate power measurement, protection and control of blade servers in data centers. The LM5066 and LM5064 extend these benefits into high-voltage systems that face stringent power management challenges associated with maintaining continuous uptime in the presence of extreme voltage and power conditions.

Ethernet routers and switches are often used alongside computing servers within data centers, driving the need for the same accurate measurement and control of power flow into each card. Additionally, new wireless base stations must control and measure the power to the remote radio heads located at the top of a tower. The LM5066 and LM5064 are highly integrated ICs that meet these demands using an industry-standard PMBus interface that is software-compatible with National's entire family of system protection and management products.

The LM5066 and LM5064 provide complete subsystem power management for high-voltage systems by precisely measuring the power to each card or block while continuously protecting against damaging inrush current surges due to hot swap or

transient events that damage downstream components. The new ICs leverage National's unique hot swap architecture that continuously monitors and limits both system current and power while accurately measuring power consumption and fault conditions. The ICs continuously supply the system management host with real-time power, voltage, current, temperature and fault data for each node in the system. The system management bus (SMBus) communications interface delivers this data via the PMBus protocol. The host's system diagnostic and optimization routines use the data to increase system reliability and minimize overall power consumption.

Technical Features of the LM5066 and LM5064 System Power Management and Protection ICs

The LM5066 features a voltage input range of 10V to 80V and the LM5064 operates over a range of -9V to -80V. Both ICs have selectable 25 mV/50 mV current limit thresholds for addressing a wide range of intermediate bus voltages and load currents. A measurement block measures both current and voltage at 1,000 times per second with 4.5 percent accuracy over the full temperature range. Additionally, simultaneous sampling of current and voltage provides true power measurement of the system's power consumption. The measurement block also captures the peak current and peak power and computes the average of subsystem operating parameters (Vin, Iin, Pin and Vout) over a user-programmable time frame, offloading the processing burden from an external microcontroller.

A temperature monitoring block interfaces with a low-cost external diode to measure temperature of the external MOSFET or other critical temperature source. The LM5066 and LM5064 report the status of all system parameters and fault conditions through the SMBus interface and offer individually programmable warning thresholds for all faults. This feature provides design flexibility and dynamic system protection.

All of National's systems protection and power management products use the same evaluation tool and Graphic User Interface (GUI). Watch a lab demonstration at <http://bit.ly/LM5064-66Demo> [2].

For more information or to order samples, visit <http://www.national.com/pf/LM/LM5066.html> [3] and <http://www.national.com/pf/LM/LM5064.html> [4].

Packaging, Pricing and Availability

The LM5066 is available now and production quantities of the LM5064 will be available in August. Both ICs are offered in a 28-pin thermally-enhanced TSSOP package and cost \$4.95 each in quantities of 1,000.

For more information on National's hot swap controller products, visit www.national.com/hotswap [5]

Source URL (retrieved on 08/31/2014 - 7:48am):

<http://www.ecnmag.com/products/2011/06/national-semiconductor-introduces-industry%E2%80%99s-first-high-voltage-pmbus-system-power-management-and->

[protection-ics](#)

Links:

- [1] <http://bit.ly/LM5066-64Video>
- [2] <http://bit.ly/LM5064-66Demo>
- [3] <http://www.national.com/pf/LM/LM5066.html>
- [4] <http://www.national.com/pf/LM/LM5064.html>
- [5] <http://www.national.com/hotswap>