![Chipsmall logo]

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

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DESCRIPTION

PD64012GH is a twelve-port, mixed-signal, high-voltage High Power over Ethernet PSE Manager. The IC allows the detection of IEEE 802.3af-2003 powered devices, ensuring safe power feeding and removal over Ethernet ports. It also supports pre-standard IEEE802.3at devices consuming up to 59.5W. With full digital control via a serial communication interface and a minimum of external components, the IC integrates in multi-port and highly populated Ethernet switches.

The PD64012GH has two possible working configurations: a low-cost implementation, supporting up to 571mA and a fully IEEE802.3at-ready one. Both maintain the PD64012G Enhanced mode features, for extended functions and added flexibility with the presence of the PD63000G MCU.

FEATURES	BENEFITS

IEEE 802.3af-2003 and IEEE802.3at-ready

- Compliant with standard and pre-standard IEEE 802.3af PD's and IEEE802.3at PD's
- 12-ports standalone PoE control for IEEE802.3af and PD's of up to 25W
- 6-ports PoE control for IEEE802.3at PD's
- Power classification with bypass option
- AC disconnect
- DC disconnect with DC modulation
- Supports RFC3621

- Freedom to power all PoE PD's including Cisco's inline power
- Highest integration on the market, enabling the lowest real-estate occupation
- Enables building IEEE802.3at-ready solutions or low-cost 25W solutions
- Reliable and simple AC implementation
- Supports low power devices
- Enables integration in Managed Switches

ARCHITECTURE

- I^2C or UART host interface
- 7-bit I^2C address selectability
- Opto-coupler compatible communication lines
- Up to 96 ports operating autonomously

- Backwards compatible with all PD64008-based message based user interface
- Up to 1536 ports on a switch
- Can be used with PD64004A

TECHNOLOGY

- Best-in-industry integration
- Single operating voltage source (44 to 57V)
- 80V SmartMOS8 technology
- -20°C to +70°C operating ambient temperature
- LQFP-64 package, ROHS compliant

- Minimum per port external components
- No need for external DC/DC converter
- Power, high-voltage analog and high-density digital logic functions
- Fit for commercial applications

SYSTEM ENHANCEMENT

- Per-IC soft start mechanism
- System-wide inrush protection
- Internal voltages monitoring and auto reset mechanism (Power-On Reset)
- Over-voltage and under-voltage protection/lock-out
- IEEE802.3at Layer 2 classification support
- Dynamic Power Management
- Emergency Power Management
- Support for 4-pairs High power architecture
- Maskeable Interrupt
- Programmable port matrix
- LED streaming
- Temperature sense/monitoring

- Minimal power supply stress and EMI noises
- Power management based on power allocation and priority map, on class value or on both, provides full flexibility and optimal power supply usage
- Prioritization of ports in case of power reduction
- Used for power supply failure conditions
- Capable of powering of up to 59W over 4-pairs
- Logical to physical port map
- User can receive interrupts on status or have automatic LED driving
- Enables system monitoring
- Per port thermal protection, including PCB protection