

PD64012GH

12-PORT HPoE PSE MANAGER

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.

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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 	 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
 AC disconnect DC disconnect with DC modulation Supports RFC3621 	
 ARCHITECTURE I²C or UART host interface 7-bit I²C 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

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