



PD69000 is a ninety-six-port, mixed-signal, Power over Ethernet Microcontroller Unit. Used with the PD69012 and PD69008, it allows the detection of IEEE 802.3af-2003, IEEE802.3at-draft2.0 and pre-standard devices, ensuring safe power feeding and removal over Ethernet ports. It also supports 4-pairs IEEE802.3at devices consuming up to 59W. With full digital control via a serial communication interface and a minimum of external components, the MCU integrates in multi-port and highly populated Ethernet switches.

Features	Benefits
IEEE 802.3af-2003 and IEEE802.3at-draft2.0	
<ul style="list-style-type: none"> Compliant with standard and pre-standard IEEE 802.3af PD's and IEEE802.3at PD's 96-ports standalone PoE control for IEEE802.3af and IEEE802.3at PD's 2-event power classification with bypass option AC disconnect DC disconnect with DC modulation Supports RFC3621 	<ul style="list-style-type: none"> 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-draft2.0-compliant solutions with no need for additional software Reliable and simple AC disconnect implementation Supports low power devices Enables integration in Managed Switches
Architecture	
<ul style="list-style-type: none"> I²C or UART host interface 7-bit I²C address selectability Opto-coupler compatible communication lines Up to 96 ports operating autonomously Up to 768 ports operated on a single power budget 	<ul style="list-style-type: none"> Backwards compatible with all PD64008/PD64012G-based message based user interface Up to 1536 ports on a switch Can be used with PD69008 and PD69012 Without automatic power allocation to different line cards
Technology	
<ul style="list-style-type: none"> Best-in-industry integration Single operating voltage source (44 to 57V) -40°C to +85°C operating ambient temperature QFP-44 package, ROHS compliant 	<ul style="list-style-type: none"> 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	
<ul style="list-style-type: none"> 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 for up to 16 power supplies Support for 4-pairs High power architecture Maskeable Interrupt Programmable port matrix LED streaming Temperature sense/monitoring 	<ul style="list-style-type: none"> 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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