

## 4-port PoE PSE Manager



PD64004A is a four-port, mixed-signal, high-voltage 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. 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 PD64004A has three possible working configurations: an Automatic stand-alone mode, for basic PoE functions, the PoE+ Mode supporting legacy devices and autonomous operation with the PD33000G MCU and an Enhanced mode, for extended functions and added flexibility with the PD63000G and PD83000G MCU's.

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Features	Benefits
EEE 802.3af-2003	
Compliant with IEEE 802.3af and pre-standard PD's	<ul> <li>Freedom to power all PoE PD's including Cisco's inline power</li> </ul>
4-ports standalone PoE control Power classification with bypass option AC disconnect DC disconnect with DC modulation Supports RFC3621	<ul> <li>Highest integration on the market, enabling the lowest real-estate occupation</li> <li>Reliable and simple AC implementation</li> <li>Supports low power devices</li> <li>Enables integration in Managed Switches</li> </ul>
Architecture	
I <sup>2</sup> C or UART host interface 7-bit I <sup>2</sup> C address selectability Opto-coupler compatible communication lines Up to 88 ports operating autonomously	<ul> <li>Backwards compatible with all PD64008-based message based user interface</li> <li>Up to 1528 ports on a switch</li> <li>Can be used with PD64012G</li> </ul>
Best-in-industry integration Single operating voltage source (44 to 57V) 80V SmartMOS8 technology -40°C to +85°C operating ambient temperature QFN-48-PS package, ROHS compliant	<ul> <li>Minimum per port external components</li> <li>No need for external DC/DC converter</li> <li>Power, high-voltage analog and high-density digital logic functions</li> <li>Fit for industrial applications</li> </ul>
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 Dynamic Power Management Emergency Power Management (Enhanced Mode) Support for 4-pairs High power architecture (Enhanced Mode) Maskeable Interrupt Programmable port matrix (Enhanced mode) LED streaming (Enhanced) or driving (PoE+) Temperature sense/monitoring	<ul> <li>Minimal power supply stress and EMI noises</li> <li>Power management based on power allocation and priority map, on class value or on both, provides full flexibility and optimal power supply usage</li> <li>Prioritization of ports in case of power reduction</li> <li>Used for power supply failure conditions</li> <li>Capable of powering of up to 31W over 4-pairs</li> <li>Logical to physical port map</li> <li>User can receive interrupts on status or have automatic/direct LED driving</li> <li>Enables system monitoring</li> <li>Per port thermal protection, including PCB</li> </ul>

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