

## 4-Port PSE Controller for PoE Systems

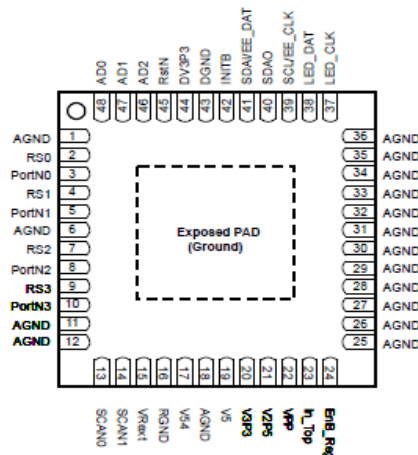
### Features

- IEEE 802.3AF-2003 and 802.3AT-2009 compliant
- Single DC power supply voltage input (45~57V)
- Wide temperature range: -40°C~+85°C
- Supplies 4 independent power ports
- Built-in power FETs
- I<sup>2</sup>C Bus to access up to 8 x IP804A devices
- Continuous system monitoring for every port
- Independent system parameters setting for every port
- Thermal monitoring and protection
- Built-in 3.3V regulators for external devices
- Built-in Power on Reset
- Configurations: (1) 30W x 4 ports
- Total Current Limit
- Built-in LEDs control
- Built-in EEPROM interface for dumb application
- Package and operation temperature 48 Pin(7mmx7mm) MQFN, -40~85°C

### Application

- 4 port PSE Switch
- 8 port PSE Switch

### Pin diagram



### General Description

IP804A is an 4-port PSE (Power Sourcing Equipment) controller IC for PoE (Power over Ethernet) systems. It integrates power, analog and logic circuits into a single chip, and can be used for Midcap and Endpoint PSE applications.

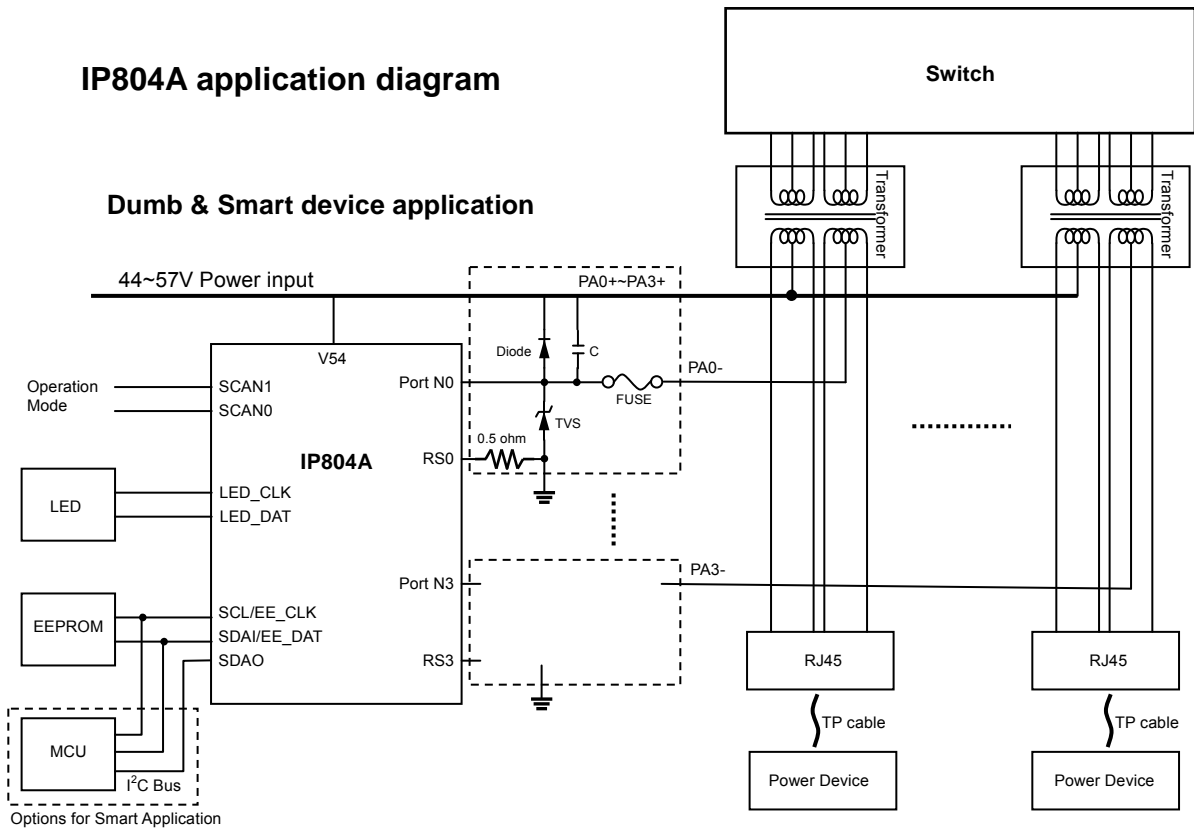
IP804A meets all IEEE 802.3AF-2003 requirements, such as multi-point resistor detection, PD classification, DC Disconnect, and Back-off for Midcap. It also meets all IEEE 802.3AT-2009 requirements, such as two-event classification and supply maximum 36W per port.

IP804A comprises internal temperature monitoring and thermal protection to protect against junction overheating. The 3.3V regulator is built-in to support external devices. Multiple IP804As can integrate to build an 4 x N ports PSE system, and I<sup>2</sup>C bus uses to collect PD power status from each IP804A to support global power managements.

Multiple IP804As can build a cost effective PHY level PSE system to support PD classification and power management without a host. With a management host, a networked LLDP (Link Layer Discovery Protocol) based multiple IP804As PSE system can be built. Based on LLDP (part of IEEE Std 802.3AT-2009), dynamic power management between PSE and PD can be maintained in real time for power efficiency.

Management switch host has options to communicate IP804As via I<sup>2</sup>C bus for PSE management activities. Opt couplers can be implemented to provide electrical isolations between the host and IP804As for signal communication.

**IP804A application diagram**



**Block diagram**

