

## Power Device Interface Controller Compatible with IEEE 802.3af/at Integrated Power MOSFET V1.1

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### Overview

XS2100S provides a complete interface for Power Devices (PD) in Ethernet Power over Ethernet (PoE) systems compliant with the IEEE802.3af/at standard. It offers detection signals, classification signals, and an integrated isolated power switch with surge current control. During surge events, XS2100S limits the current within 180 mA until the isolated power MOSFET is fully turned on, at which point it switches to a higher current limit from 720 mA to 880 mA. The device features input undervoltage lockout (UVLO) with a wide hysteresis and long-duration pulse shielding to compensate for resistive losses in twisted-pair cables, ensuring interference-free transmission during power-on and power-off. XS2100S can withstand input voltages up to 100V.

Additionally, XS2100S supports the IEEE 802.3at standard's two-event classification method and provides a signal to indicate detection by Class 2 Power Sourcing Equipment (PSE). The device detects the connection status of a wall adapter power source, enabling seamless switching from PoE power to wall adapter power.

Additionally, XS2100S provides a power good (PG) signal, two levels of current limiting, and fold-back thermal protection, along with di/dt limiting. XS2100S is housed in a SOP8 package and operates over an extended temperature range of -40 °C to +105 °C.

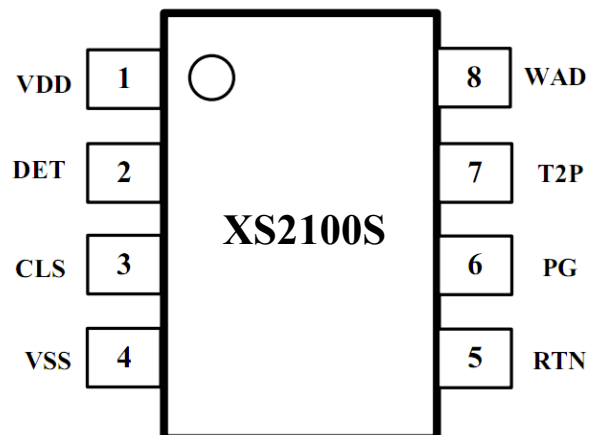
### Typical Application

- ◆ IP camera
- ◆ VoIP
- ◆ Wireless AP

### Features

- ◆ Compatible with IEEE 802.3af/at
- ◆ Two-event classification
- ◆ Easy-to-use wall adapter interface
- ◆ 0 to 4 level PoE classification
- ◆ Absolute maximum input rating of 100 V
- ◆ Maximum surge current limit of 180 mA
- ◆ Normal operating current limit between 720 mA and 880 mA
- ◆ Current limiting and fold-back protection
- ◆ Compatible with IEEE 802.3af/at and 40V UVLO
- ◆ Over temperature protection
- ◆ SOP8 packaging

### Pin Configuration



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