

IEEE 802.3af PoE PD with Integrated DC-DC Controller and 13W Power FET

Features

- Compliant to IEEE® Std. 802.3af-2003
- Supports Type 1 operation for IEEE® 802.3at-2009 and IEEE® 802.3bt-2018
- Integrated DC-DC Controller with robust 150V, 0.7Ω typ. supporting both isolated and non-isolated applications
- Low R_{DS_ON} Hot-Swap FET, 0.49Ω typ.
- Adjustable switching frequency from 100kHz to 800kHz
- Programmable DC-DC Current Limit
- Integrated Surge Protection for 15kV/8kV System level ESD Compliance
- Exceptional EMI performance
- Integrated Short-Circuit Protection
- Over temperature protection
- RoHS & Pb Free 4x4 mm, 16 lead TQFN Package
- Industrial temperature range (-40°C to +85°C)

Applications

- Pan, tilt and zoom (PTZ), security and web cameras
- Voice over IP (VoIP) phones
- Wireless LAN access points, biometric authentication
- Point-of-sale (POS) terminals, RFID terminals
- Thin clients and IoT appliances
- Fiber-to-the-home (FTTH) terminals

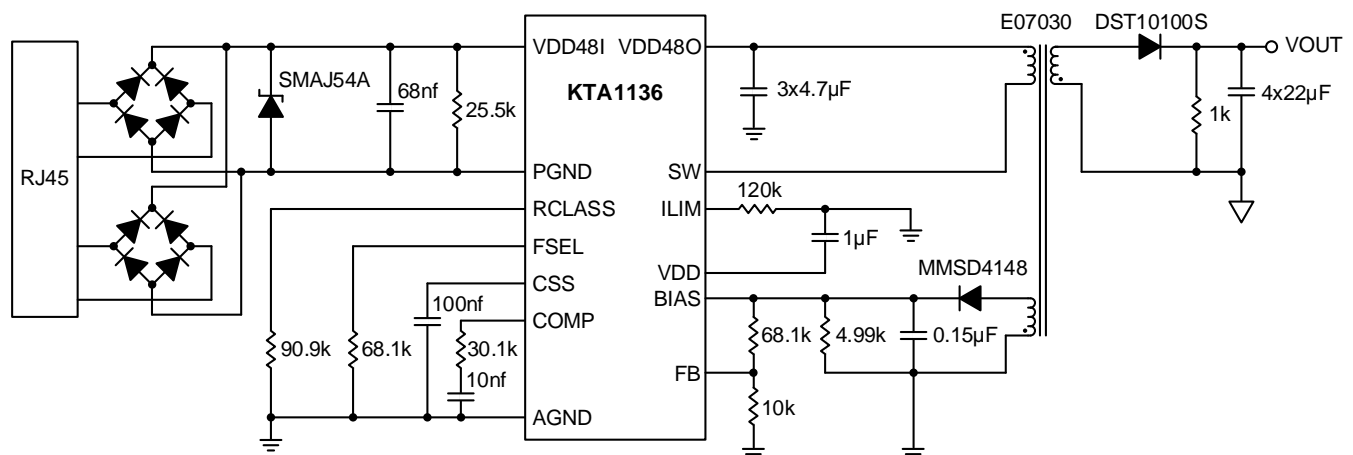
Brief Description

The KTA1136 is a single-chip, highly integrated CMOS solution for 13W Power over Ethernet (PoE) Powered Devices. Applications include Voice over IP (VoIP) Phones, Wireless LAN Access Point, Security Cameras, WiMAX Terminals, Point-of-Sales Terminals, RFID Readers, Thin Clients and Notebook computers.

The KTA1136 integrates input surge protection, a PD controller with a 100V hot-swap FET, a DC-DC controller, and a robust 150V switching power MOSFET. The KTA1136 implements all the physical layer Powered Device (PD) functionality, as required by IEEE 802.3af-2003 standards. This includes PD detection, classification, under-voltage lockout (UVLO), and Hot-Swap FET integration. The KTA1136 also supports Type 1 operation for IEEE 802.3at-2009 and IEEE 802.3bt-2018.

The KTA1136 has been architected to address both EM emission concerns and surge/over-voltage protection in PoE applications. The chip implements many design features that minimize transmission of system common-mode noise onto the Unshielded Twisted Pair (UTP). On-chip integration of surge protection provides faster response to surge events and limits stray surge current from passing through sensitive circuits, such as the Ethernet PHY. The device is designed to provide safe, low-impedance discharge paths directly to the earth ground, resulting in superior reliability and circuit protection.

Typical Applications



Ordering Information

Part Number	Marking ¹	Operating Temperature	Package
KTA1136EUAE-TR	NXYWZaabbccc	-40°C to +85°C	TQFN44-16

1. XX = Device ID Code, YWZ = Date and Assembly Code, aabbccc = Serial Number.

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