

## NCP1096

# Integrated PoE-PD Interface Controller with integrated hot swap FET, IEEE 802.3bt, 90W



## Product Overview

For complete documentation, see the data sheet.

Part of ON Semiconductor's family of IEEE802.3bt, IEEE 802.3af, and/or IEEE 802.3at compliant solutions Power over Ethernet Powered Devices (PoE-PD), the NCP1096 supports the development of high power applications including connected lighting and USB Type C. The NCP1096 incorporates all necessary functions within a PoE system such as detection, classification and current limiting during the inrush phase.

Using an internal hot-swap FET, the NCP1096 provides an output power of up to 90 Watts. For improved energy efficiency, the NCP1096 offers Autoclass support which optimizes power allocation based on the PD type and classification.

## Features

- IEEE 802.3bt, IEEE 802.3at, IEEE 802.3af compliant - Allows for up to 90 W of power - Guaranteed interoperability between PoE devices
- Part of ON Semiconductor's family of high efficiency solutions for PoE-PD
- Features an internal 71 mΩ pass transistor to support high-power applications
- 5-Event Physical Layer Classification
- Smart power budgeting using Autoclass support which allows the PSE to assign power to each PD efficiently
- Active bridge and hot-swap FET disable when Auxillary supply connected, increases power efficiency where auxiliary supply powers a PD
- Also available with external hot-swap FET for operation >71 W (NCP1095)

## Applications

- Power over Ethernet Powered Devices (PoE-PD)
- Internet of Things (IoT)
- IEEE 802.3bt (up to class 8 / 90W)
- IEEE 802.3at (up to class 4 / 30W)
- IEEE 802.3af (up to class 3 / 15W)

## End Products

- Digital Signage
- Satellite Data Networks
- Connected Lighting
- Video and VOIP Telephones
- Security Cameras

## Part Electrical Specifications

Product	Pricing (\$/Unit)	Compliance	Status	Topology	Phases	Control Mode	V <sub>CC</sub> Min (V)	V <sub>CC</sub> Max (V)	f <sub>sw</sub> Typ (kHz)	Package Type
NCP1096PAG	0.9653	<span style="color: orange;">Pb</span> <span style="color: green;">H</span>	Active				34.2	57		TSSOP-16 EP
NCP1096PAR2G	0.9653	<span style="color: orange;">Pb</span> <span style="color: green;">H</span>	Active				34.2	57		TSSOP-16 EP