

## ON Semiconductor Supports Increasing Power Demands of IoT Endpoints with New Power over Ethernet (PoE) Solutions

*Compliance with IEEE 802.3bt delivers 90 Watts of power to applications including smart sensors, building automation and connected lighting*

**PHOENIX, Arizona – 4, September, 2019** – ON Semiconductor (Nasdaq: ON), driving energy efficient innovations, is leading the industry with its support for the IEEE 802.3bt standard, thanks to a growing portfolio of compliant products and technologies. Using the new IEEE 802.3bt standard, Power over Ethernet (PoE) can be used to deliver high-speed connectivity up to 90 W of power over Local Area Network (LAN) connections. ON Semiconductor's solutions not only support the new standard power limit, but extends it further to 100 W for systems including telecommunications and digital signage.



The new IEEE 802.3bt standard for PoE has the potential to transform every vertical market touched by the IoT, by enabling more sophisticated endpoints operating across larger networks. The IEEE 802.3bt standard optimizes energy management through the new “Autoclass” feature, which enables Powered Devices (PDs) to communicate their specific power needs to the Power Sourcing Equipment (PSE). This in turn allows each PSE to allocate just the right amount of power to each PD, maximizing both the available energy and bandwidth.

With up to 90 W of power available, compared to the 30 W provided by the IEEE 802.3at standard (PoE+), IEEE 802.3bt can provide both power and connectivity to new applications that would otherwise require a dedicated and typically off-line power source. PoE will simplify network topologies and provide a more robust ‘plug and play’ user experience.

“Power over Ethernet is one of the fastest-growing markets for power semiconductors today, with a compound average unit growth rate of 14% expected from 2017 through 2022,” said Kevin Anderson, senior analyst, power semiconductors at business information provider IHS Markit. “The additional power-delivery capability defined in IEEE 802.3bt enables new applications, such as higher-powered connected lighting, networked high-resolution surveillance cameras and high-performance wireless access points.”

Forming the foundation of ON Semiconductor's PoE-PD solutions, the [NCP1095](#) and [NCP1096](#) Interface Controllers incorporate all of the features needed to implement a PoE interface, including detection, auto-classification and current limiting. The controllers employ either an external (NCP1095) or internal (NCP1096) hot-swap FET. The integrated hot-swap FET in the NCP1096 features the lowest on-resistance available in a Type 3 or Type 4 PoE controller. The controllers are complemented by the [NCP1566 DC-DC Controller](#), the [FDMC8622 Single MOSFET](#) and the [FDMQ8203](#) and [FDMQ8205A](#) GreenBridge™ Quad MOSFETs, which have been developed to provide a more efficient alternative to a diode bridge in PoE applications. Together, these devices enable highly efficient PoE interfaces with up to the standard limit of 90 Watts of power or to a proprietary 100 W solution if more power is needed.

“As a company focused on energy efficiency, we are really excited to help PoE achieve its full potential,” commented Ryan Cameron, Vice President of Industrial and Off-Line Power Solutions at ON Semiconductor. “By providing a complete family of IEEE 802.3bt compliant solutions, we have made the technology more accessible for all development engineers which will help enable many more connected devices with guaranteed interoperability.”