

UPOE - "Universal" Power over Ethernet

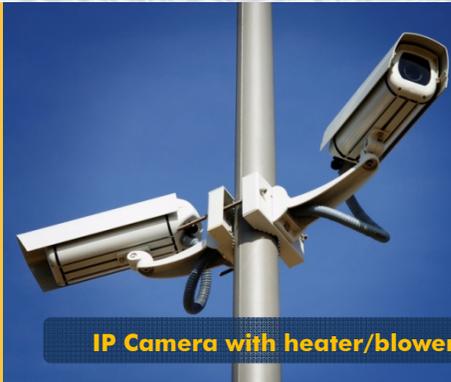
- Proprietary PoE+ variant offering by Cisco
- Provides 60W of power, 2X the current IEEE 802.3at PoE+ standard
- Designed to support devices that require power above 30W
- Berk-Tek's LANmark™ enhanced CAT6 and CAT6A UTP cables are ideally suited to support UPOE deployment

Today's enterprise networks are quickly evolving to include new connected - devices that are deployed with the goal of providing complete operational efficiency. Additionally, IP networks are not only connecting new devices, but they are also powering these devices. Connecting and powering such diverse services as HVAC, access control, video surveillance, lighting and lighting control, and even wireless access points (WAPs) to a single network has enabled efficiencies, increased safety, and reduced energy usage over previously disparate systems thanks to newly realizable functional integration.

Power over Ethernet (PoE) technology allows DC power to be supplied over category cabling. Utilizing PoE equipment has the advantage of eliminating separate power cabling, centralizing UPS systems, and simplifying the deployment of the devices. As the popularity of PoE has increased, the number and types of equipment that are likely to be connected has increased. And in some instances the power required by the IP connected device has risen above 30W, the current maximum specified by the IEEE 802.3at standard.

To answer the need for more power, Cisco created a proprietary variant of PoE that they call Universal PoE, or UPOE. This system is capable of delivering up to 60W of power over twisted-pair cabling. Through partnerships with other industry leaders and in-house development, a variety of end devices that are compatible with UPOE have been brought to market. Where standard PoE and PoE+ deliver electrical power over two of the four twisted pairs of Class D (Category 5e) or better cabling as specified in ISO/IEC 11801:1995, UPOE provides the capability to source up to 60W of power by using all four pairs of standard Ethernet cabling.

The Berk-Tek LANmark series of UTP cables significantly exceeds the industry standards for Class D or better referenced by Cisco, and therefore is guaranteed to support UPOE deployment. Additionally, Berk-Tek's LANmark-1000, LANmark-2000, LANmark-10G2, and LANmark-XTP cables incorporate unique designs, and proprietary materials that enable them to better handle the heat and noise generated by the power transmission while simultaneously maintaining the highest quality voice and/or data signal. These characteristics result in cables ideally suited to support UPOE as well as the next generation PoE standard currently under development by the IEEE.



IP Camera with heater/blower & PTZ

Application:

Deployment of IP devices that draw more than 30W of PoE power

Problem to solve:

The economic benefit associated with connecting various new devices to the enterprise network has resulted in the development of PoE powered devices that require more than 30 Watts of power. In the absence of an industry standard, several manufacturers have created proprietary PoE equipment capable of delivering and/or taking advantage of the delivery of 60 Watts of power. The twisted-pair cabling used to connect these devices must be capable of supporting these increased power levels within the enterprise network environment.

Solution:

Only Berk-Tek has developed proprietary technology to address and optimize the simultaneous transmission of PoE, Voice, Data, and Video network traffic. The Berk-Tek enhanced CAT 6 and CAT 6A LANmark™ UTP cables are ideally suited to support network-powered devices, including CISCO's UPOE system. These cables will also support the next generation PoE standard under development by the IEEE.