PoE Texas

Providing Safe Power and Data to Laptops

For Education BT-USBC-A-PD Q4 2021

Touch-Safe Power and Data

Summary

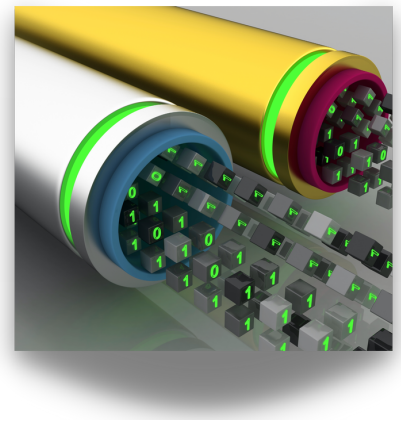
The events of 2020 have permanently changed how classroom education happens including the transition to every student having a laptop in the classroom. Students and teachers are reliant on the flexibility and power of laptops and tablets as education tools. However, classrooms are not ready for the new power and data load all these new devices have created. Fortunately, two new technology standards offer a safe, relatively inexpensive solution to this problem. Google, Apple, Microsoft, HP, Lenovo, and almost every other device manufacturer has adopted **USB-C** ports on their device which means you can use one common cable to send power and data to all of them. The only limitation with the USB-C standard, a maximum cable length of fifteen feet, is solved by the new **IEEE 802.3bt Power Over Ethernet standard** which provides safe – so safe you can touch bare wires – power as well as data over one ethernet cable, just like the one connected to your computer.

The technology designers at PoE Texas have created a converter using both standards to provide power and data to each laptop in the classroom.

Applications

Classrooms
Computer labs
Testing centers
Lecture halls
Study areas

How USB-C Works . . .



USB is the Universal Communication Standard

In 1996 computer peripheral manufacturers agreed to create the Universal Serial Bus (USB) standard to reduce the complexity of having so many connectors on computers.

USB-C is the Universal Power and Data Standard

In 2014 the USB Implementer Forum (USB-IF) approved a new 24 pin connector and USB 3.2 replacing all previous connector types with one connector for all applications, USB-C.

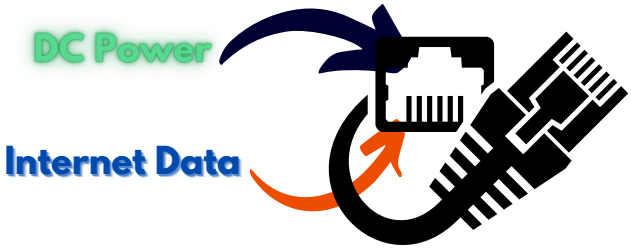
How USB-C Powers a Laptop

USB IF developed a new Power Delivery (PD) protocol where a PD hub advertises what power it has available, agrees with the end point such as a laptop, then adjusts the power level to match what the end device requires up to 100 watts. The average 15" laptop draws less than 65 watts. Unfortunately, the longest length possible for this new standard is 15 feet limiting is use for commerial use to very local devices. PoE solves that issue.

How PoE Works . . .

Power Over Ethernet (PoE) carries both power and TCP/IP data (yes, the internet kind) up to 330 feet (100 meters) over standard CAT 5e or CAT 6 cable. It's the same kind of cable likely plugged into your desktop computer right now.

Released in 2018, the new IEEE 802.3bt standard allows up to 72 watts of power on one network cable. Fortunately, most 15" laptops and smaller operate at 65 watts or less, so one cable can provide the power and data.



PoE is Safe . . .

- By design PoE is safe enough to touch without sparks or risk of electrocution.

PoE is Sustainable . . .

- Using 60% less copper and 100% less steel conduit, PoE also reduces energy losses by 40%.

PoE is Reliable . . .

- PoE has been used for phones and security cameras for more than 20 years.

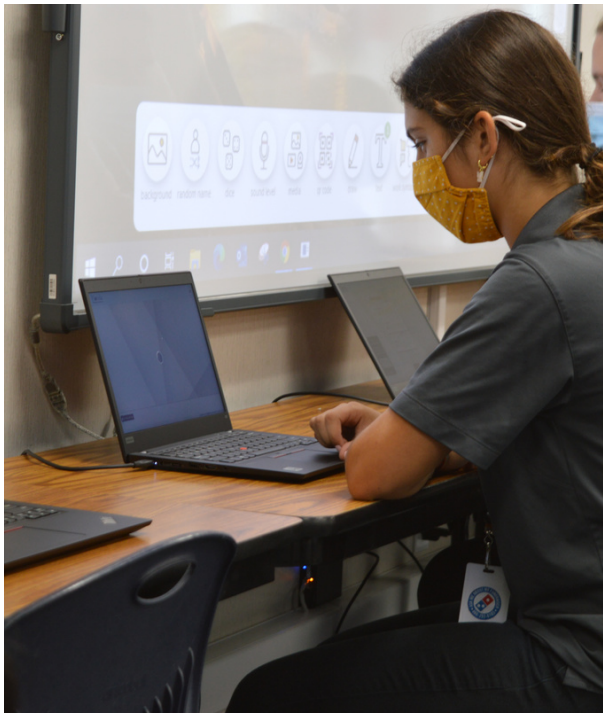
PoE Texas

Safe, Reliable Power and Data . . .

PoE Texas' patent pending technology seemlessly converts the power and data available on PoE into USB-C for laptops and tablets. The USB-C converter handles the heavy lifting of converting the internet into a cable with power that can be safely and permanently mounted to walls and desks.

Built using a sturdy metal case and with easily replaceable USB-C cables available from one foot to fifteen feet long, you can rely on safe power and data for every laptop in the classroom.

You can install this solution today . . .



No extended classroom closures

No rewiring power and upgrading electrical circuits

No additional Wifi access points and network upgrades

No licensed electricians

No mountains of expensive lost or incompatible laptop chargers

A qualified PoE Texas installer can have a classroom fitted out within a few days without requiring electrical permits or expensive remodeling. Upgrade your classrooms to have reliable, safe laptop charging and data with the PoE Texas USB-C laptop converter, the BT-USBC-A-PD.

About the Company

PoE Texas pioneered the Power Over Ethernet to USB-C in 2018 and has continued to develop the technology to connect USB-C devices to networks for commercial and enterprise deployments

PoE Texas is Based and Operates from Austin, Texas

You can always speak to one of our Austin Based PoE Experts to get answers to you questions.

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