

Power over Ethernet

A technology that allows network cables to simultaneously transmit data and power to a device. Rather than relying on two cables to transmit power and data separately, Power over Ethernet allows both power and network connections to run over a single cable.

Power over Ethernet offers several unique features that offer flexibility and savings to your project. These can include:

Simplicity of installation

Screens install faster and remain more organized when you have fewer cables to manage. A single ethernet cable can solve the issues of power adapters and extension cords.

Flexibility of location

Power over Ethernet is a low voltage solution that does not require an electrician to set up. Locate your PoE switch or injector as needed and run power up to 100 meters on most screens.

Safety across multiple device voltage requirements

Per IEEE standards, higher wattage PoE sources are backwards compatible with lower wattage devices. Power will be negotiated between the device and the source, and will only draw as necessary.

How does AOK Displays use Power over Ethernet?

AOK Displays's screens adhere to IEEE standards for Power over Ethernet. PoE switches and injectors come labeled with these standards, which designate how much power they can transmit to each device. The standard required is dependent on LCD size and cable length.

802.3at or PoE+

Distributes up to **30W** of power to each device
For 10.1" to 15.6" screens up to 300ft.

802.3bt or PoE++

Distributes up to **60W** of power to each device
For 18.5" to 27" screens up to 300ft, or 32" screens up to 150ft

AOK Displays's Recommendations for PoE Sources

AOK Displays is not sponsored by the following product's manufacturers. Recommendations are based on in-house testing for compatibility and performance.



TL-SG1008PE: 8 Gigaport PoE+ Desktop / Rackmount Switch

>8 10/100/1000Mbps RJ45 ports

>Equipped with 8 PoE+ supported ports to transfer data and power over a single cable

>Works with IEEE 802.3af/at compliant devices, expanding home and office networks

>Innovative energy-efficient technology reduces power output by up to 75%*

>Plug and play design, no configuration required

[Buy it on Amazon >](#)



iCreatin 48V60W PoE++ Injector

Network Cable: 10BASE-T: 2-pair UTP/STP Cat.3, 4, 5, 6, 7 cable, EIA/TIA-568 100-ohm (100m); 100BASE-TX: 2-pair UTP/STP Cat.5 cable, EIA/TIA-568 100-ohm (100m)

Short Circuit, Over Current and Over Voltage Full Protection

Input 100-240VDC, Output: 48V to 50V, 0-1.25Amps, Rated 60W PoE Power Output

[Buy it on Amazon >](#)



Ubiquiti Networks 50-60W PoE++ Injector

>Weight: 6.77 oz.

>Input Voltage: AC 120/230 V

>Output Voltage: 50 V

>US style power cord

>Power LED

>Gigabit LAN Port

>Earth grounding/ESD protection

[Buy it on Amazon >](#)

Use the chart below to determine which class of PoE output your screen requires.

**802.3at - PoE+
(30W)**

10.1" 13.3" 15.6" 19.5" 21.5" 23.8" 27.0" 32.0"

6ft Cat6 Cable	Yes	Yes	Yes	No	No	No	No	No
25ft Cat6 Cable	Yes	Yes	Yes	No	No	No	No	No
100ft Cat6 Cable	Yes	Yes	Yes	No	No	No	No	No
150ft Cat6 Cable	Yes	Yes	Yes	No	No	No	No	No
200ft Cat6 Cable	Yes	Yes	Yes	No	No	No	No	No
300ft Cat6 Cable	Yes	Yes	Yes	No	No	No	No	No

**802.3bt - PoE++
(60W)**

10.1" 13.3" 15.6" 19.5" 21.5" 23.8" 27.0" 32.0"

6ft Cat6 Cable	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
25ft Cat6 Cable	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
100ft Cat6 Cable	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
150ft Cat6 Cable	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
200ft Cat6 Cable	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
300ft Cat6 Cable	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No

Note: 802.3bt Type 4 injectors (also known as LTPoE++) which are designed to provide up to 95W of power may see mixed results.

95W injectors may be unable to provide low enough wattage to players between 10.1" to 15.6"

95W injectors are not guaranteed to improve maximum cable length support.