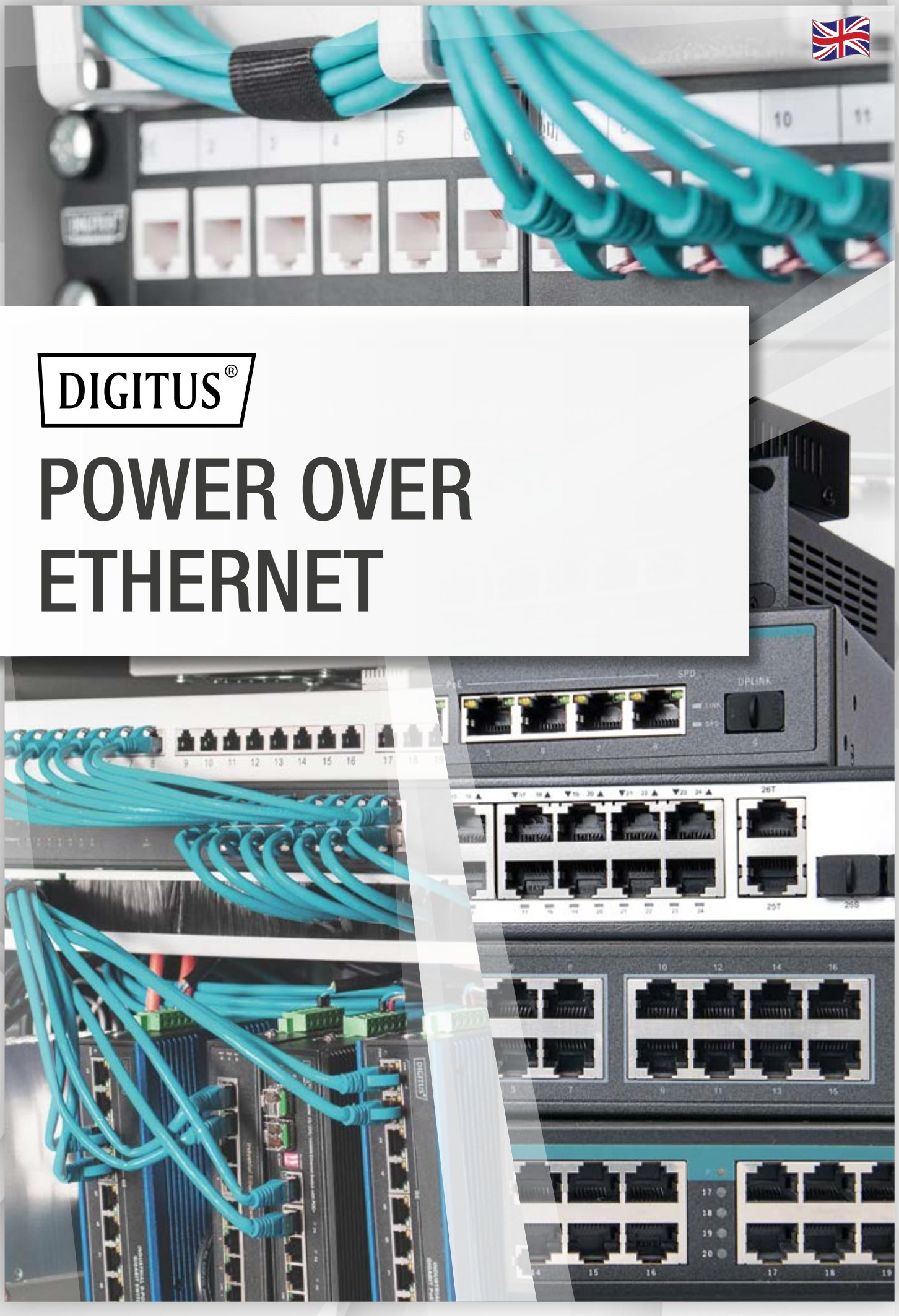


DIGITUS®

POWER OVER ETHERNET

DIGITUS®

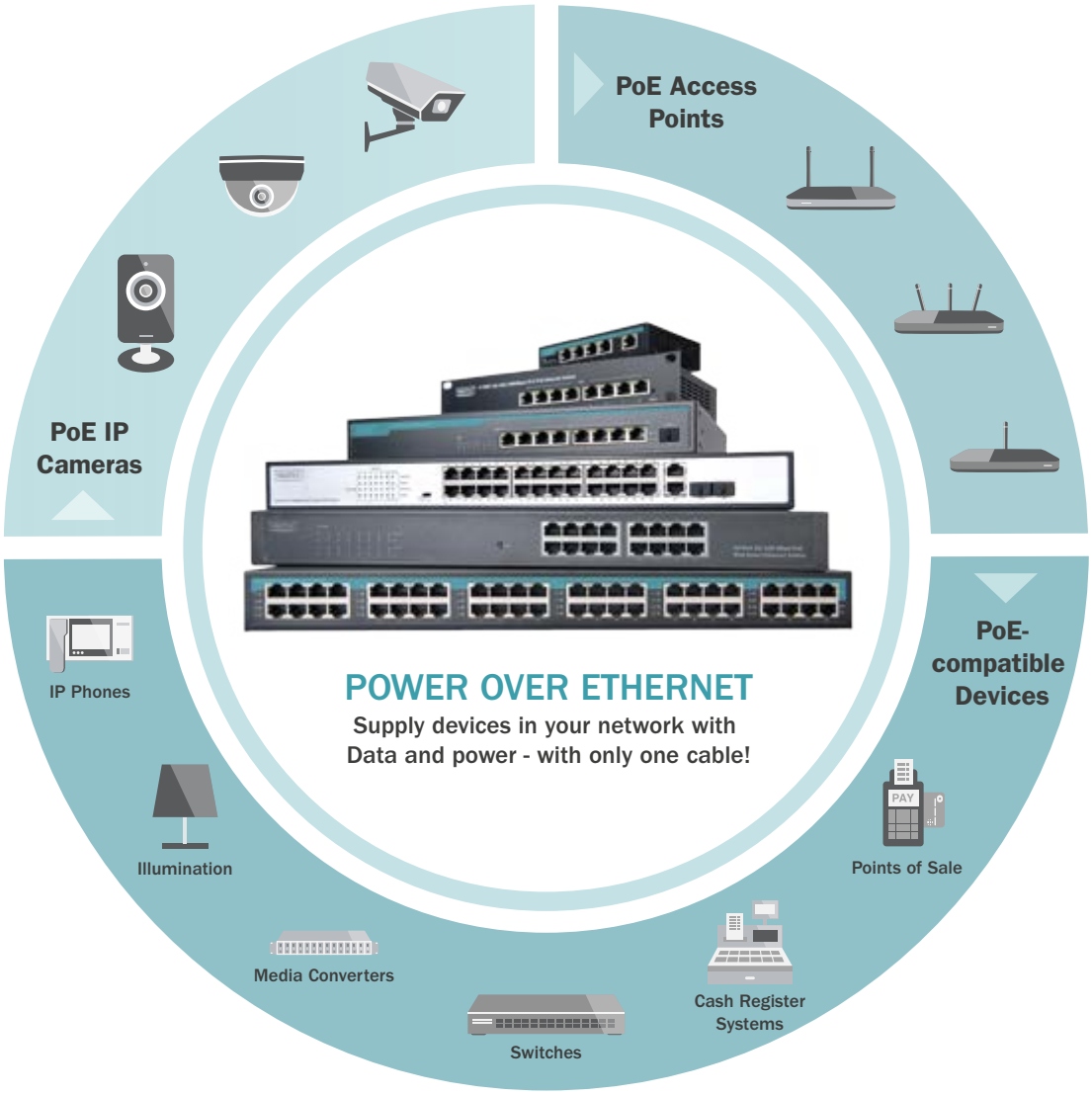
POE – THE SMART TECHNOLOGY FOR EFFICIENT NETWORKS

Power over Ethernet technology is used when network devices such as IP cameras, access points or IP phones need to be supplied with data and power at the same time using a single cable. This saves time and expenses since the installation cost is kept to a minimum.

Devices and access points can be positioned where they are required at any time without needing to be connected to an outlet. This makes the system extremely flexible. PoE supply is also intelligent: the system protects devices against overload, undervoltage or improper installation.

After the introduction of PoE technology in the early 21st century, the use of CAT5/RJ45 technology for simultaneous transmission of power and data over the network has become increasingly more widespread.

Save additional installation costs for standard power supply!



POE – ALL THE ADVANTAGES AT A GLANCE

FUTURE-PROOF
The system grows with your requirements

SCALABLE
Can be adapted to the environment using switches and converters

CENTRALLY ACCESSIBLE
Central management of the PoE end devices

COST-EFFECTIVE
No additional power supply required.

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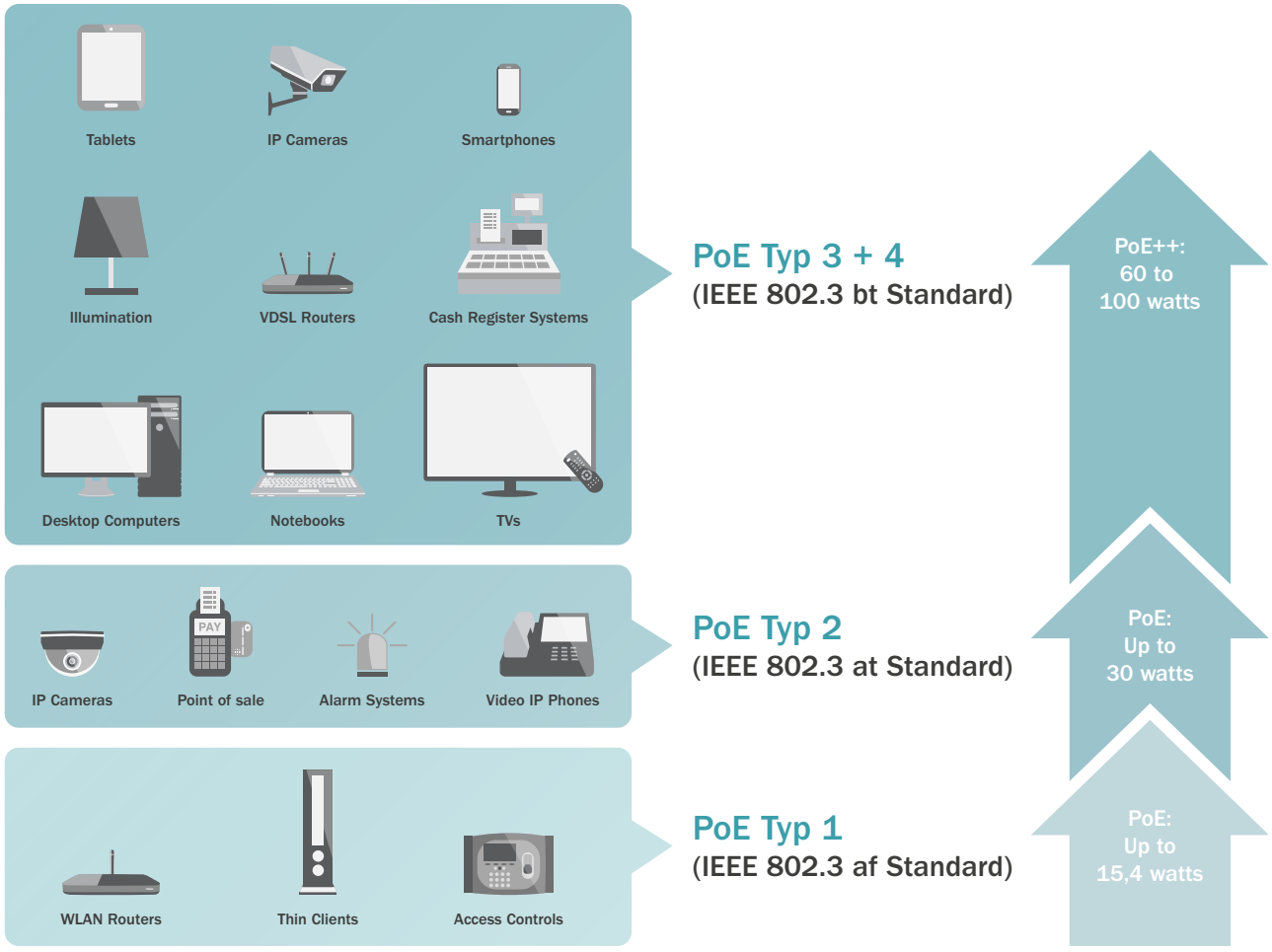
POE – STANDARD

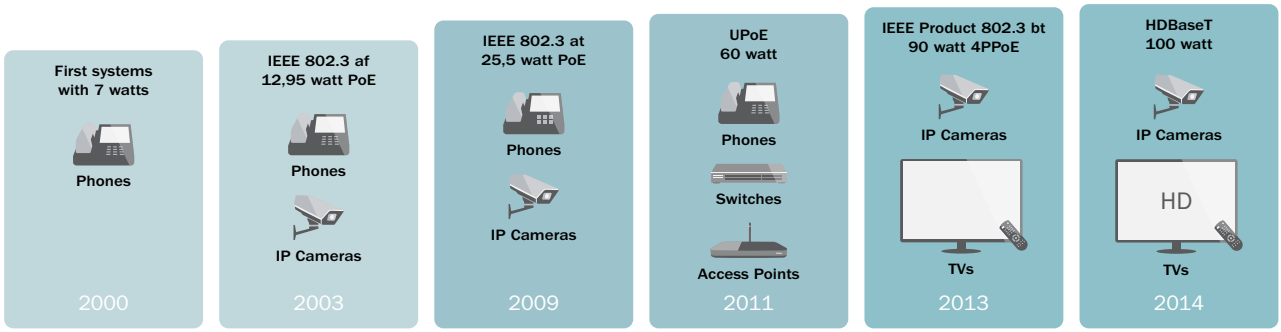
The first standard for power supply over data cables (PoE Type 1) is ideally suited for operating end devices with low power consumption such as IP phones or WLAN access points. Two strand pairs are used for power supply, whereby the stand pairs engaged for data transmission are optionally available for power supply.

The ongoing development of the standard with Type 2 achieved an increase in bandwidth to 1000Base-T along with an increase in the power transmission capacity. All four strand pairs are used for data transmission, and power supply is provided through two of the pairs.

With four-pair feed-in (4PPoE), all four strand pairs are available to power the end devices for the first time. This standard is subdivided into two classes: Type 3 has an end device



HISTORY OF POE TECHNOLOGY



DIGITUS®

POE-INJECTORS

In order to operate PoE devices without a PoE-compatible switch, one alternative is to use PoE injectors, also known as mid-span or PoE adapters. This means the devices are supplied with power and data through a single Ethernet cable in the appropriate category (5E, 6, 6A etc.).

The use of PoE injectors is particularly recommended if devices with low power consumption need to be set up in locations where no outlet is available. This makes the entire system flexible, and devices can also be installed in difficult to access areas with a minor impact on existing structures.

Installation:

Either connect an active PoE injector (PoE switch) to the PoE endpoint or connect a passive PoE injector (as midspan/adapter) to the cable section of an Ethernet switch in order to supply data and power.

Network expansion:

The range of the PoE power supply can thus be expanded up to 300 m. Passive PoE injectors can also be installed away from the Ethernet switch in the proximity of the PoE device.

DIGITUS®

GIGABIT ETHERNET POE++ INJECTOR

PRODUCT	
Product Number	

The 802.3bt injector from DIGITUS® offers an 85 watt PoE port as a mi-dspan solution. Compact, cost-effective and fully IEEE802.3bt-compliant. The simple solution for remote power supply of wireless access points, IP security camera, IP phones, thin clients and other installations with PoE functionality. PoE+/PoE++ compatible devices can be supplied with power and data using the network cable, a secure and reliable solution for expanding the existing network infrastructure. The injector detects various PoE modes (A/B) - Plug & Play.

DIGITUS®

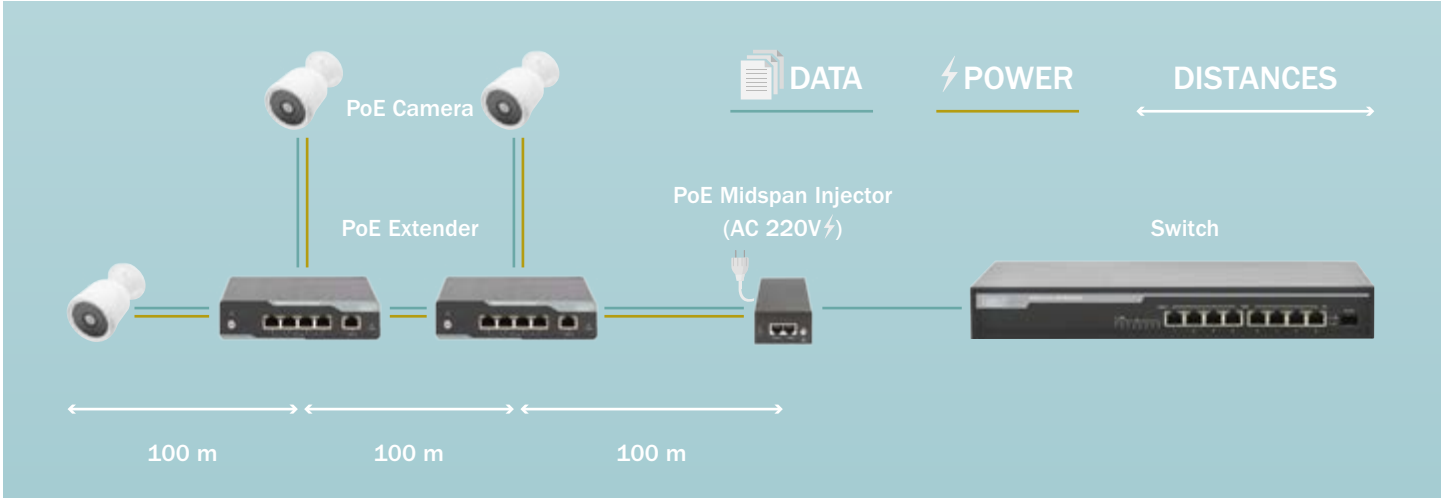
16 PORT GIGABIT POE+ INJECTOR

PRODUCT	
Product Number	**DN-95116**

The DIGITUS® DN-95116 is a 16-Port Gigabit PoE+ Mid-Span Hub (PoE Injector). It features 16 input ports for data and 16 output ports that supply data and PoE. Each PoE port supports connected devices according to the PoE standards IEEE802.3af and IEEE802.3at with 15.4 watts or 30 watts respectively, such as PoE access points, PoE IP phones or PoE IP cameras. The switch supplies a maximum budget of 250 watts for all ports and a maximum budget of 30 watts per port.

DIGITUS®

POE - EXTENDER



You can also bridge large distances

Connect to ports that are far away or difficult to access or bridge large distances using a PoE extender that relies on the latest network technology to extend the PoE Ethernet signal by up to 100 meters per unit. PoE extenders make it possible to maintain the required output all the way to endpoints at a distance.

Easy installation:

Connect the PoE extender to the PoE cable section to strengthen the PoE signal and forward it via an additional copper cable to the PoE end device or next PoE extender.

Network expansion:

By connecting the PoE extenders in series, a total range of 300 m can be achieved.

DIGITUS®

FAST ETHERNET POE+ REPEATER

PRODUCT	
Product Number	**DN-95122**

The DIGITUS® Fast Ethernet Repeater supports the latest network cable and network technology to extend your 100 m Ethernet signal up to 300 meters by cascading the repeaters. The repeater is supplied with power via PoE (Power over Ethernet), which means you don't need an additional power adapter and can use the device even when there are no power cables or outlets available in order to significantly increase your range. This is a perfect, cost-effective and time-saving solution for security monitoring and for network projects.

DIGITUS®

GIGABIT POE+ EXTENDER

PRODUCT	
Product Number	**DN-95123**

The DIGITUS® Gigabit PoE+ extender, supports the latest network cable and network technology to extend your Ethernet signal up to 100 m per unit (up to 300 m total range). The extender is powered via PoE (Power over Ethernet), so you don't need an additional power supply and can use the unit even where there are no power lines or sockets to significantly increase your range. For example, it is a perfect, cost-effective and time-saving solution for security monitoring.

DIGITUS®

POE-SPLITTER

A PoE splitter is used to supply power over a data cable to a device that is not PoE-compatible. The network and PoE signals received over the LAN cable are separated by the splitter and the PoE signal is emitted, separately from the network signal, in 5, 9 or 12 volts over the DC jack. Thus the Ethernet signal is now only present at the RJ45 jack.

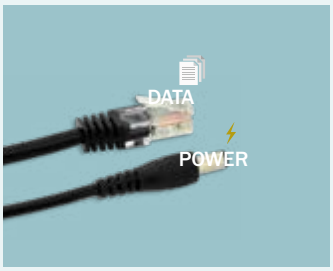
PoE Splitter – here's how it works!

1.

Power and data are transported to the PoE splitter over the network cable.

2.

The PoE splitter separates the power that is transported over the network cable and emits it from a separate output on the back side of the device.



3.

At the same time, the data is forwarded via an additional RJ45 connection point.

4.

Other peripheral devices can also be operated with the discharged electricity.

DIGITUS®

GIGABIT POE AT SPLITTER

PRODUCT	
Product Number	**DN-95205**

The DIGITUS® Gigabit PoE Splitter delivers data and power over a single network cable to devices that do not support Power over Ethernet. Simply connect the input side of the splitter to a PoE switch or PoE injector and connect the output side to a non PoE-compatible network device such as an access point, an IP phone or an IP camera in order to transmit power and data. The splitter is supplied with power via PoE (Power over Ethernet), which means you don't need an additional power adapter and can use the device even when there are no power cables or outlets available. The output voltage can be set to 5V, 9V or 12V using a DIP switch. The splitter does not require configuration, thus enabling fast and smooth integration into your network.

DIGITUS®

PASSIVE POE CABLE SET

PRODUCT	
Product Number	**DN-95001**

The passive PoE cable set from DIGITUS® combines power and data transmission through a single cable to simplify the installation of network devices. The cable set features an output for the Ethernet signal through an RJ45 plug, a DC or RJ45 jack. One cable takes on the function of a PoE splitter here, separating the power that was fed into the cable. The other cable acts as a PoE injector and makes it possible to feed power into the cable at any point along the network path. Both offer a 5.5 mm DC jack for the power adapter of the PSE device.

DIGITUS®

INDUSTRIAL SOLUTIONS

DIGITUS®

GIGABIT POE+++ SPLITTERS

PRODUCT	
Product Number	**DN-651111**

DIGITUS®

GIGABIT POE+ INJECTORS

PRODUCT	
Product Number	**DN-651112**

DIGITUS®

POE GIGABIT MEDIA CONVERTERS

PRODUCT	
Product Number	**DN-652104**

DIGITUS®

GIGABIT ETHERNET POE TESTER

PRODUCT	
Product Number	**DN-95210**

DIGITUS®

GIGABIT POE MODE CONVERTERS

PRODUCT	
Product Number	**DN-95130**

DIGITUS®

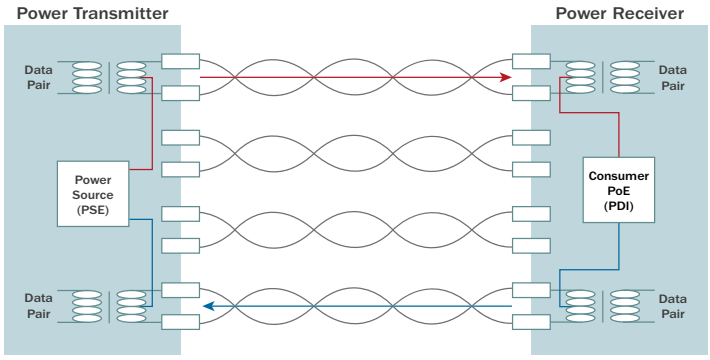
OUTDOOR 1- TO 2-PORT UPOE EXTENDER

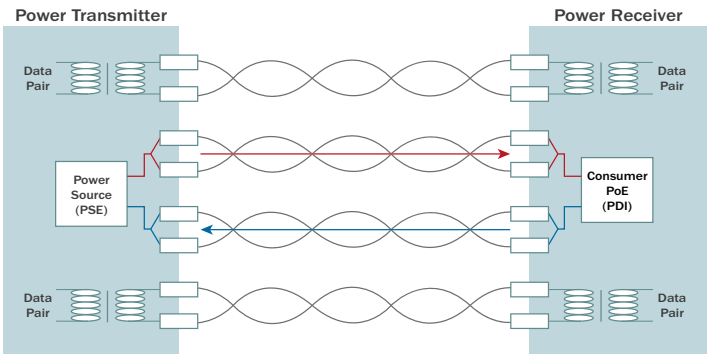
PRODUCT	
Product Number	**DN-95126**

DIGITUS®

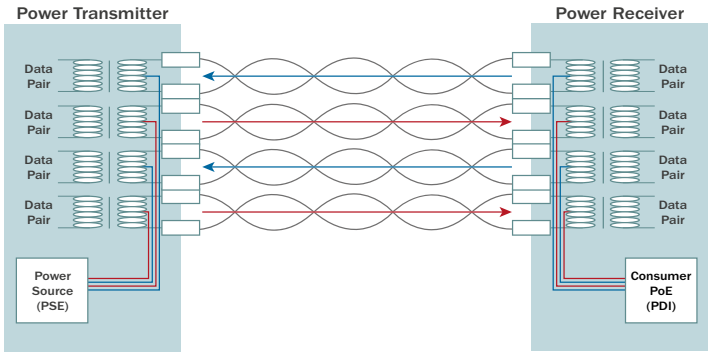
POE – STRAND PAIRS AND TYPES

PoE 802.3 af and at





PoE 802.3 bt



PoE technology was first introduced in 2003 with the standard IEEE 802.3 af. Six years later the standard IEEE 802.3 at was established, which is also known as PoE plus (PoE+) and increases the maximum power output from 15.4 W to 25.5 W. The standard 802.3 bt was adopted in 2018, which provides up to 100 watts depending on the type (3 or 4). Since then, the broad distribution of PoE-compatible devices has led to the development of new PoE applications that place even greater demands on the infrastructure. PoE technology is already in use in 10 Gbit Ethernet applications as well.

IEE-STANDARD	POE (802.3 AF - 2003)	POE (802.3 AT - 2009)	POE TYP 3 + 4 (802.3 BT - 2018)
Output voltage in V (DC)	36 - 57 V	42,5 - 57 V	37 - 57 V
Output power operation in mA (DC)	350 mA	600 mA	350 mA
Output power start mode in mA (DC)	400 mA	400 mA	400 mA
Power of (PSE) supply in W	Max. 15,4 W	Max. 30 W	Max. 15,4 W
Power of end devices (PD) in W	Max. 12,95 W	Max. 25,5 W	Max. 12,95 W
PSE Class	1, 2, 3	4	1, 2, 3
Supported end devices (PD type)	1	1 and 2	1
Strand pairs used	2	2	2/4

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