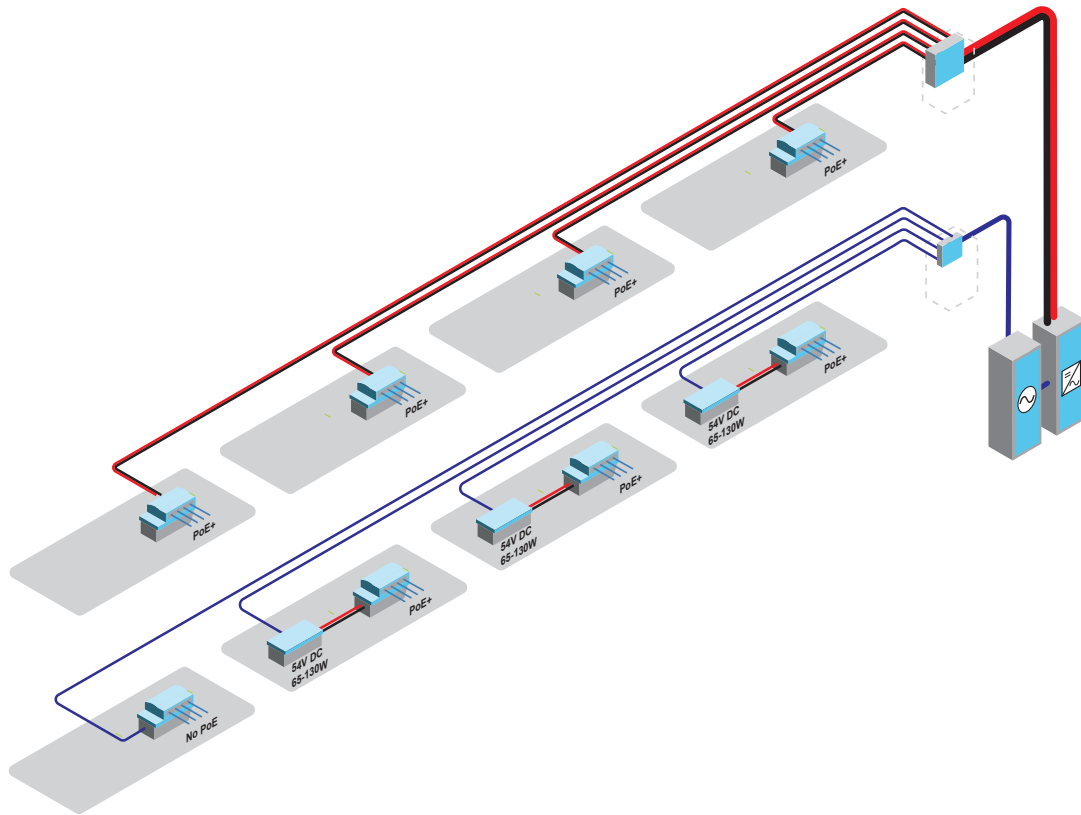


Fibre To The Office Power Supply Concepts



In Fibre To The Office (FTTO) networks, an optical fibre is installed from a central building or campus distributor to the workplace. At the workstations, so-called FTTO switches are used to connect the subscriber via twisted pair patch cables. These FTTO switches are installed like power sockets in a cable duct or a floor box and thus integrated into the building. Serving these switches with power can be realized in different ways.

Usually, FTTO switches are connected to an external power supply unit, which provides the required voltage level of 54V DC.

There are basically two possible concepts using an external power supply. The first concept is, the decentralised power supply concept, in which each FTTO switch is connected to its own power supply unit which can also be installed in the cable duct or floor box. These power supplies can offer a power budget of 70 or 130 watts. The great advantage of this concept is that no huge planning effort is required.

The second concept is based on one central power supply. Here, a large central power supply unit provides the required DC voltage level and uses a separate DC circuit to connect the FTTO switches. The advantage here is the management and easy redundancy option.

The following table rates the individual aspects of the different power supply concepts:

PSU* concept	PoE available	Planning effort	Management	Redundancy	Efficiency
Internal PSU	No	++	0	--	++
Decentralized, external PSU	Yes	+	--	+	++
Centralized, external PSU	Yes	-	++	++	-

* PSU = Power Supply Unit