

## Power over Ethernet (PoE++) in robust switches for harsh environments

With Power over Ethernet, it is possible to transmit data as well as power via an eight-wire network cable. The table below shows which outputs are possible with the different standards.

	2003	2009	2018	2018
<b>PoE</b>		<b>PoE+</b>	<b>PoE++</b>	<b>PoE++</b>
Type 1	Type 1	Type 2	Type 3	Type 4
IEEE 802.3af	IEEE 802.3af	IEEE 802.3at	IEEE 802.3bt	IEEE 802.3bt
Output power at PSE	<b>15,4W</b>	<b>30W</b>	<b>60W</b>	<b>90W</b>
Input power at PD	12,95W	25,50W	51W	71W
Used pairs	2	2	4	4

There are plenty environments where PoE, PoE+ or PoE++ technologies are used to power connected devices: public facilities and cities, highways and tunnels, airports and railways, campuses and many others.

Typical applications are wireless LAN access points, IP cameras and Voice over IP phones. For Building Internet of Things (BIoT) the number of possible applications grows continuously.

Nexans iGigaSwitch 10xx family can power end devices with the latest PoE++ standard. The switch has up to 10 x 1 Gigabit Ethernet copper and fibre-optic ports in different combinations.

To power different network devices, iGigaSwitch 10xx family has up to 8x PoE+ or 6x PoE++ ports (different options are available) in accordance with the latest IEEE 802.3at and 802.3bt Type 4 standards.

Additionally, the preinstalled I/O module of iGigaSwitch 10xx family has two potential-free function inputs and two programmable alarm contacts for fast, simple and low-cost integration of additional non-Ethernet devices.

