CONNECTIVITY & CABLING SYSTEM

Long Reach connectivity beyond 100 metres

New Q-ExD Cat. 6 U/UTP Cable, 22 AWG, PE



CONNECTIVITY & CABLING SYSTEM

Beyond the 100-metre limit



Modern networks increasingly incorporate field-installed devices such as security cameras, access control systems, and access points which, due to structural or design requirements, need to be positioned beyond the distance limitations imposed by structured cabling standards. These installations require high transmission reliability, full support for Power over Ethernet (PoE) protocols and their specified power levels, as well as transmission speeds ranging from 10 Mbps to 1 Gbps.

APPLICATION	DISTANCE TRANSMISSION
WI-FI ACCESS POINT - Outdoor wireless coverage (logistic facilities, car parks, parks, etc.)	UP TO **140 m** AT **1 Gbps**
SECURITY CAMERAS - High-definition IP video surveillance systems in outdoor areas, ANPR	UP TO **200 m** AT **100 Mbps**
BUILDING AUTOMATION - VoIP intercom systems and low-resolution perimeter video surveillance	UP TO **220 m** AT **10 Mbps**
IOT DEVICES - Sensors and other low-bandwidth devices in photovoltaic plants, wind farms, etc.	UP TO **220 m** AT **10 Mbps**
ACCESS CONTROL - Outdoor access control systems	UP TO **220 m** AT **10 Mbps**
SMART PARKING - Smart Pole, EV Charging Control and low-resolution video surveillance	UP TO **220m** AT **10 Mbps**



— How can devices be connected beyond standard limits?

TRADITIONAL APPROACH	CCS Q-ExD SOLUTION
ADDITIONAL RACK More expensive and complex solution.	**NO INTERMEDIATE ACTIVE EQUIPMENT** Plug&play installation on the existing infrastructure
PoE EXTENDER Devices extending the distance, but introducing limitations in terms of available power and overall reliability.	**OPTIMIZED PoE** Lower voltage drop and more power available to devices, with the signal travelling uninterrupted over the entire distance.
FIBRE OPTIC CABLING This removes distance limitations, but involves higher costs, greater installation complexity and the need for local power at the devices.	**22 AWG CONDUCTORS** The larger cross-section significantly reduces signal attenuation and electrical resistance.

Why should you choose the CCS solution?

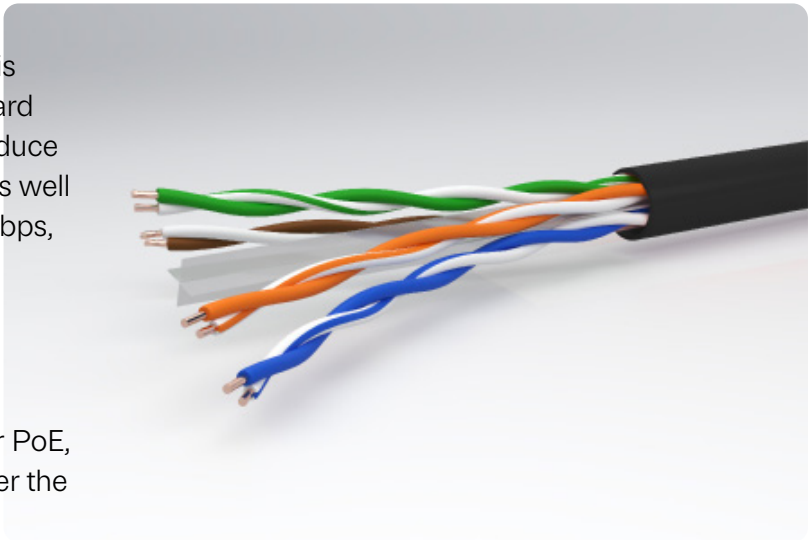
LONG-REACH CONNECTIONS
22 AWG conductors provide lower signal attenuation, enabling stable and high-performance connections well beyond the standard 100-metre limit.

PoE+ + COMPLIANT
Full compliance with IEEE 802.3af/at/bt standards, supporting power delivery of up to 90 W and extended distances of up to 220 meters.

LOWER COSTS
Fewer operations activities and no need for intermediate equipment.

NEW PRODUCT

Cat. 6 Q-ExD UTP 22 AWG, PE long-distance cable

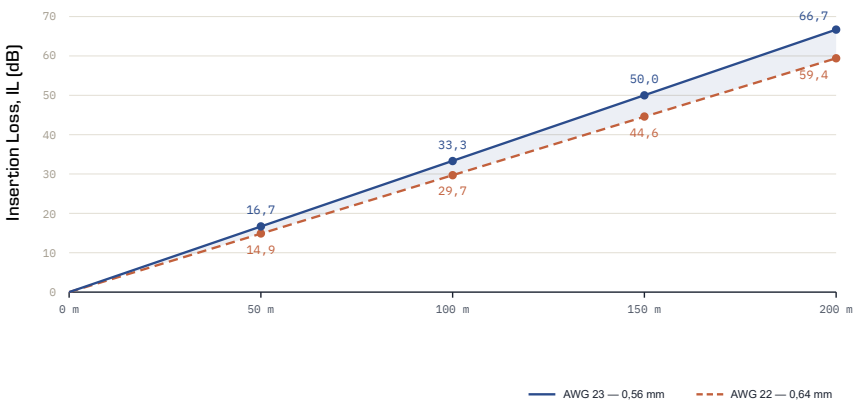


The **Qubix Extended Distance** (Q-ExD) cable is designed to overcome the limitations of standard copper links. Its larger 22 AWG conductors reduce signal attenuation, ensuring stable connections well beyond standard distances: up to 140 m at 1 Gbps, 200 m at 100 Mbps and 220 m at 10 Mbps.

The **larger conductor** cross-section reduces electrical resistance, limiting overheating and voltage drop along the cable run. These characteristics make the cable fully suitable for PoE, PoE+, and PoE++ applications (up to 90 W) over the specified distances.

The **polyethylene (PE) outer jacket** is resistant to moisture and UV radiation, making the cable ideal for **outdoor installations** and underground deployment in suitable conduits.

ADVANTAGES of the larger conductor size 22 AWG



Cable category 6 UTP
Reference frequency: 250 MHz
Temperature: 20°C

LARGER 22 AWG CONDUCTOR

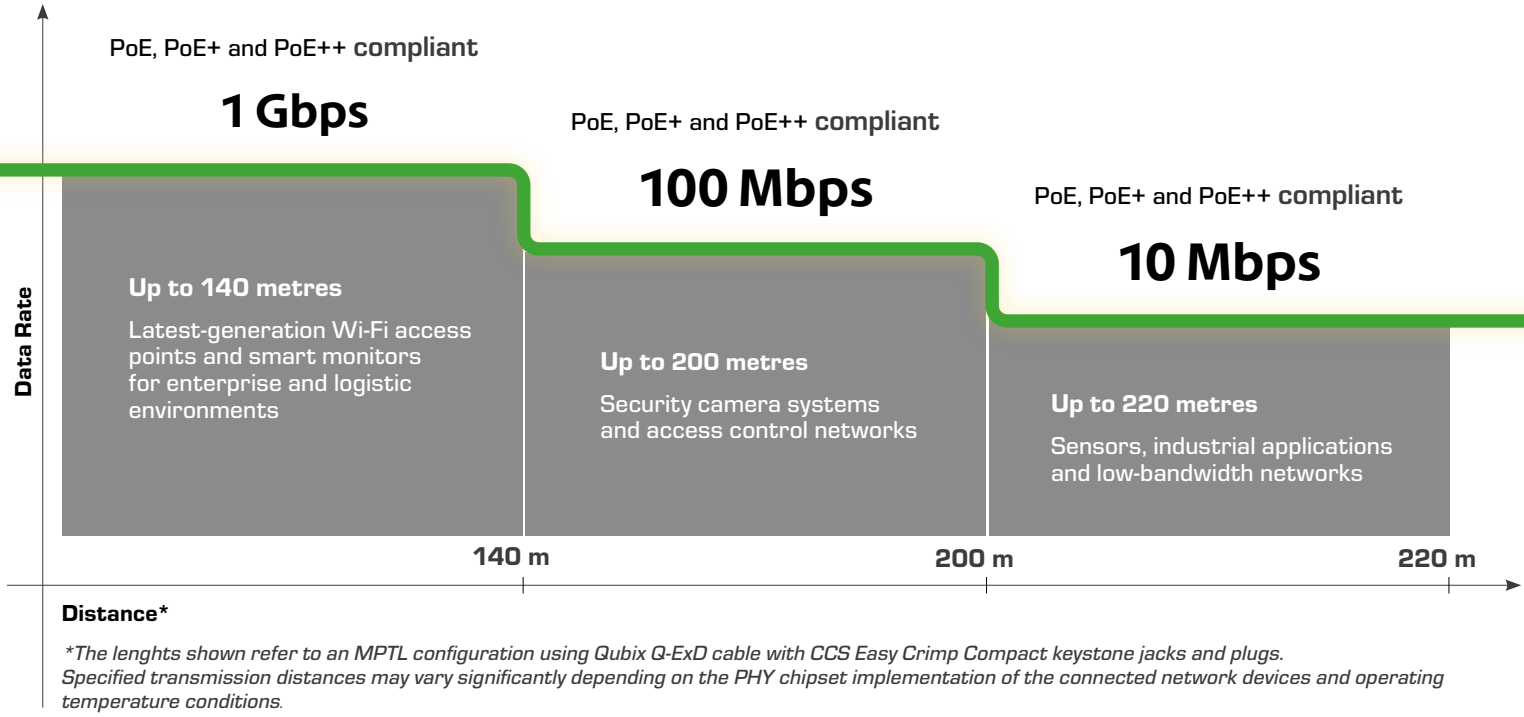
The larger diameter limits voltage drop and overheating by reducing heat dissipation. It delivers more usable power to the end device.

The signal travels farther while maintaining consistent data performance.

STANDARD 24/23 AWG CONDUCTOR

As length increases, signal attenuation, also increases. Beyond 100 m, standard copper conductors cannot ensure signal integrity and reliable data transmission.

PERFORMANCE by data rate and distance*



**The lenghts shown refer to an MPTL configuration using Qubix Q-ExD cable with CCS Easy Crimp Compact keystone jacks and plugs. Specified transmission distances may vary significantly depending on the PHY chipset implementation of the connected network devices and operating temperature conditions.*

BENEFITS of the Q-ExD solutions

OPTIMISED ELECTRICAL PERFORMANCE

- Larger 22 AWG conductor
- Significant reduction in DC resistance
- Lower voltage drop along the link

OPERATIONAL RELIABILITY

- Consistent data and PoE performance
- PoE / PoE+ / PoE++ compliant
- Ideal for critical outdoor environments and underground installation in suitable conduits

ENERGY SAVINGS AND SUSTAINABILITY

- Lower heat dissipation
- Reduced energy consumption
- More available power for connected devices

COST REDUCTION

- Lower overall operational costs by avoiding intermediate active equipment.

DESCRIPTION







CODE	DESCRIPTION	PACKAGING
M0502202-001	R6UT4PE22 Q-EXD Cat 6 U/UTP 22 AWG outdoor PE - Fca	500mt reel



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is a trademark of

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