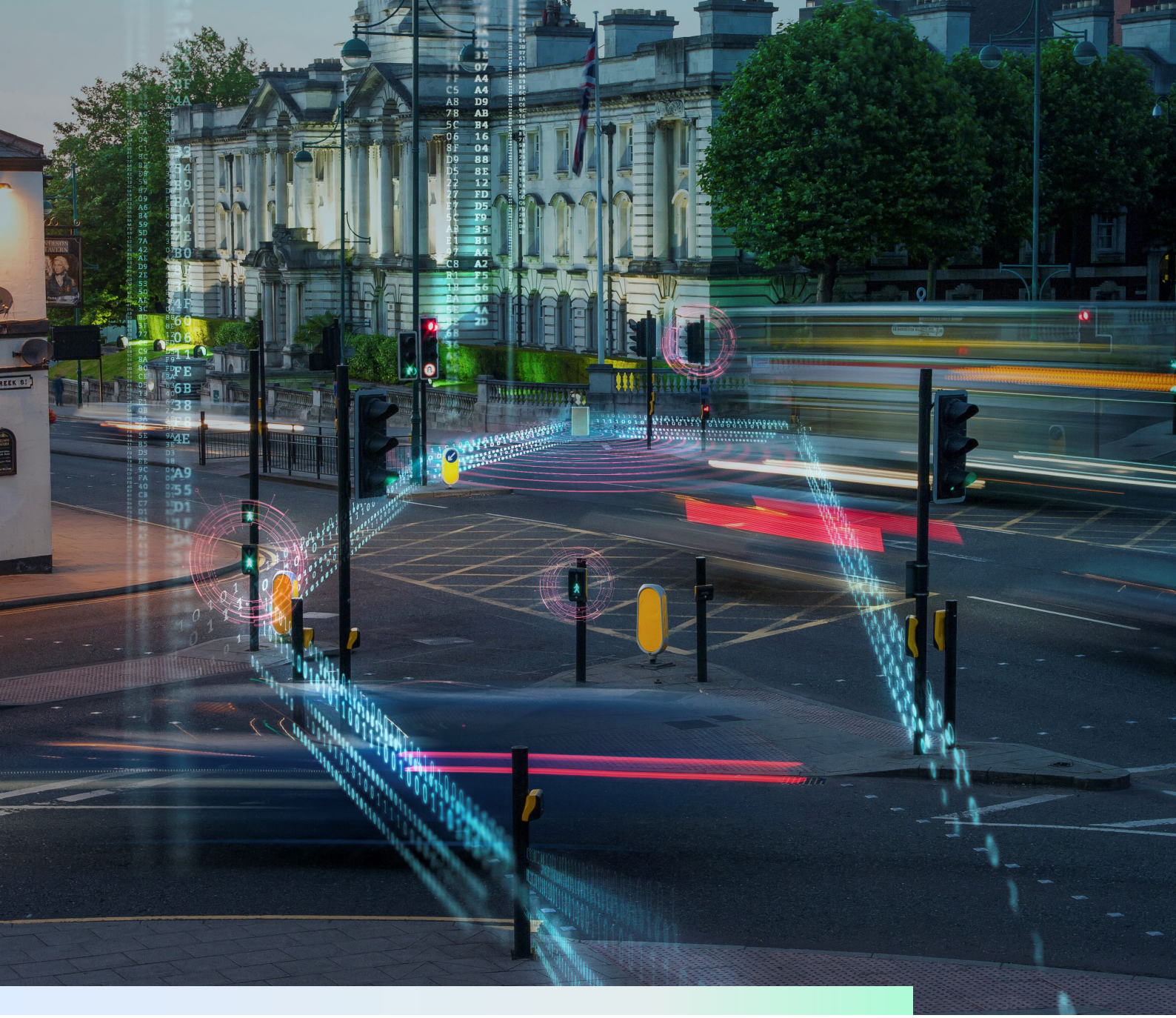


Plus+ Traffic Control System

Product Datasheet

uk.yunextraffic.com

YUNEX TRAFFIC

Overview

The ST950 Plus⁺ system is an advanced traffic control system using distributed intelligence with simple power and data cabling to increase intersection availability and reduce overall installation costs.

As a part of the successful ST950 family, the Plus⁺ system builds on more than 40 years of microprocessor-based traffic controller design and offers both familiarity and many exciting new user and maintenance features. The system uses ELV (48VDC) supply voltages on-street, with inbuilt secure data communications, to provide the highest levels of safety and availability, whilst maintaining compatibility with many ST950 family components.

How we help?

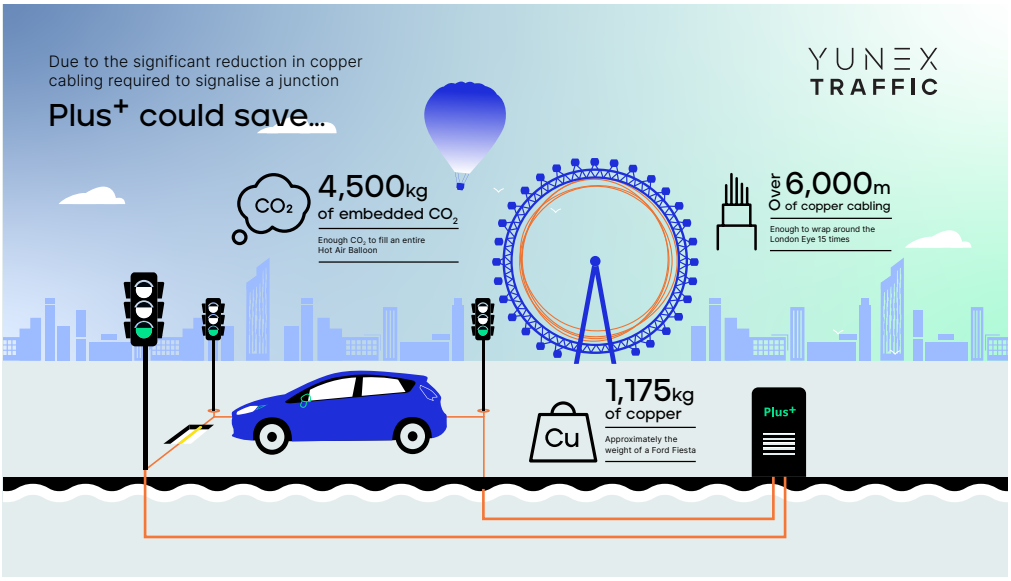
To help realise the benefits of Plus⁺ and implement schemes, the Plus⁺ Design Tool is available to ensure that cabling and electrical designs are configured and are compliant in accordance with the requirements of the system. The Plus⁺ Design Tool is available to download from the Yunex Traffic website and training is offered free for local highway authorities and traffic signal consultants.

How it works?

The Plus+ system distributes intelligence, particularly related to signal switching, monitoring and input/output, around the intersection using intelligent nodes connected to the central controller via simple two pair cables meaning that the number of individual cables and cable cores required to service any given intersection is greatly reduced.

To offer the maximum flexibility and further minimise the number of cables required, the ST950 Plus⁺ controller supports several cable topologies, including rings, arms and spurs which can be used together depending on the physical layout of the intersection.

When the ring topology is used, the system is highly tolerant of cable breaks; even those caused for example, by the cable being cut during street-working accidents and typically will continue to function fully even after the cable cutting event.



Solution benefits

- **Reduced** cabling and requirement for copper
- **Reduced** install time with fewer vehicle trips
- **Reduced** traffic disruption from quicker installation leading to reduced congestion
- **Reduced** ducting leading to fewer raw materials and quicker install
- **Reduced** maintenance visits during operation leading to fewer vehicle trips to sites
- **Reduced** overall scheme implementation costs



Solution features

- Plus⁺ works with the ST950 Traffic Signal Controller so all of the features of the ST950 are available when used with Plus⁺
- Highly reliable and fault tolerant providing increased availability
- Flexible cable topologies including rings, arms and spurs
- Complete range of traffic signal equipment available with Plus⁺; Helios traffic signal heads, regulatory signs, pedestrian nearside and wait indicators, pedestrian countdown, low level cycle signals
- Plus⁺ SmartLoop – further reducing cabling requirements enabling inductive loop detection connection to the nearest traffic signal head
- Distributed input/output enabling connection of above ground detection to traffic signal heads or nearside pedestrian displays
- Fault tolerant and secure communications using well proven RS485 standard protocols and SHA-256 authentication ensuring the highest possible data integrity is maintained
- Fail safe nodes including dual-processor safety systems
- Hot swappable system elements without the need to turn off signals
- System tolerance to cut or broken cables using the Plus⁺ ring cabling topology
- Redundant power supplies as standard with power supply failure reporting and hot swappable functionality
- Advanced fault diagnostics providing more information to signal maintenance engineers
- Support applications available including Plus⁺ Design Tool, Plus⁺ SmartLoop Application and Plus⁺ Installation Application
- Traffic signal controller configuration completed using the standard IC4 software package

Yunex Limited
Registered Office
Sopers Lane
Poole
Dorset, BH17 7ER