

Speeding Up

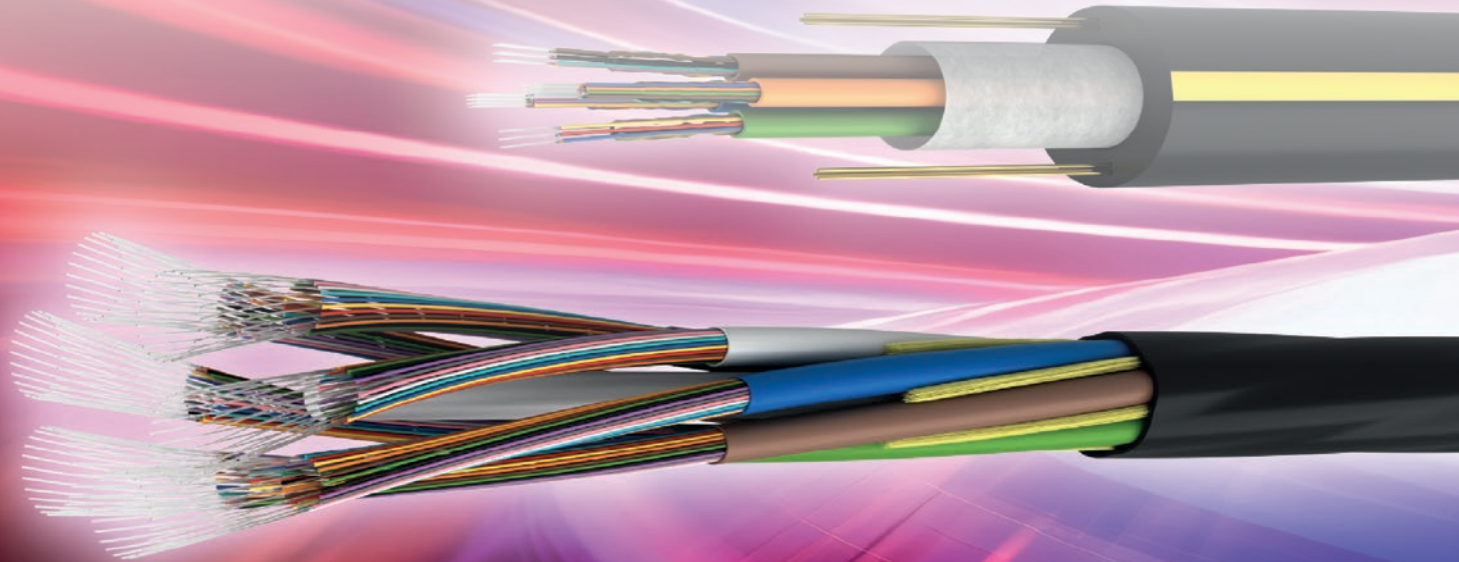
FIBRE ROLLOUTS WITH CABLE INNOVATIONS

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DIVE INTO THE FUTURE OF FIBRE OPTIC INSTALLATIONS WITH OUR GUIDE ON CUTTING-EDGE METHODS AND FIBRE INNOVATIONS. LEARN HOW TO SPEED UP NETWORK INSTALLATIONS AND LEVERAGE THE LATEST TECHNOLOGICAL ADVANCEMENTS FOR EFFICIENT, HIGH-CAPACITY CONNECTIONS. THIS FEATURE IS ESPECIALLY APT FOR NETWORK INTEGRATORS AND TELECOM BUSINESSES AIMING FOR FASTER, SMARTER CONNECTIVITY.



As we generate more data, network operators are striving to increase capacity to meet the demands of businesses and communities. The current global demand for high performance fibre coverage is applying pressure to integrators for faster installation and connection lead times. The method of fibre network installation can vary greatly depending on the environment, and care must be taken to select the correct product set for the geography, conditions, and population in any given area. Typical methods include Aerial (Pole), Blown Duct, Pulled Duct, and Direct Burial.

All of the above methods have advantages in their specific area of application, but it's the speed of install that we will concentrate on here in terms of helping to meet current market demands.

AERIAL METHODS are typically accepted as the quickest and most cost effective as existing poles can be used to add cable, and the method of installation via stationary reel or moving reel requires limited adjustment to landscapes to accommodate the install. The addition of new poles adds limited install time

as digging a post hole is quicker and easier than digging a trench. Fast, cost-effective, and causing minimal landscape disruption, aerial fibre installation methods are best suited to rural and low density areas.

BLOWN/PULLED NETWORKS: although more expensive than aerial, offer the advantage that the cables are protected with robust ducting against mechanical or stress damage. However, installation times tend to be extended due to the requirement for duct to be laid and then the cables added separately. Pre-installed fibre duct products can help to reduce installation times, but the mechanics of digging, laying duct and backfilling do increase delivery lead times. An important advantage of duct is the capacity for future expansion without a requirement for additional civil works, as multiway duct provides spare tubes that can subsequently be populated as required.

DIRECT BURIAL CABLE INSTALLATION has similar challenges to duct methods, in that digging, laying and backfilling is required for each cable length. As mentioned earlier each method has its place. Aerial installs tend to be favoured in rural or

low-density regions, whereas duct and buried networks are preferred in densely populated areas.

In most cases there is limited choice in the method applied, as it's dictated by the specific dynamic of the application area layout and the population.

The method of fibre network installation can vary greatly depending on the environment, and care must be taken to select the correct product set for the geography, conditions, and population in any given area.

FROM THE INDUSTRY

REDUCTION IN INSTALL TIMES

So, what can we do to help speed up installations across the multiple methods listed above?

There are numerous options available:

1. **PRE-TERMINATED CABLES AND CONNECTIONS** provide a very efficient method for network installation, removing the need for splicing and in-field connector termination across residential properties and commercial premises. This can be a big help in terms of speeding up installation. Key benefits include the reduced requirement for labour, fewer errors and improved installation speed.
2. **MINIATURISATION OF CABLES** can help with transport, handling and installation - for example smaller cables within blown networks, which have the capability to travel further and faster through the duct resulting in reduced installation times. Density is the overriding benefit here though, as miniaturised cable means more fibres in the same diameter of duct.
3. **SPLICE TIMES** within network installation can vary, depending upon the chosen cable format and number of fibres. The higher the fibre count, the longer the splice schedule. In recent years a significant development has been made that's enabled splice times to be improved dramatically, and that's the introduction of ribbon cables. These are up to a maximum of 3456F available for use across duct, direct bury and aerial applications. Each ribbon consists of 12F that can be fusion spliced to a connecting ribbon up to 12 times faster than conventional loose tube cables. Without question, with the more effective use of duct space, faster deployment, optimised manpower efficiencies and reduced cost of ownership, this major time saver is a game changer.

IN SUMMARY

Technological advancements play a critical role in meeting the growing demands of installing fibre networks. Choosing the right installation method and product technology are key.

Reducing installation time to increase passed/connected regions globally is largely dependent upon application areas. However, as mentioned above the correct choice of product can help to support a reduced connection time regardless of application. One point to stress is that all methods require splicing at some point in the network. Ribbon fibres as an example can help reduce splice time of e.g. 432F, from in excess of 40 hours to just 8 hours. That's a huge saving from 5 working days to 1.

Hence, the significance of ribbon fibre cable can't be overstated in the fast-evolving fibre optics sector. At the forefront of technological development, it delivers an innovative solution that enhances installations, drives efficiency, and increases speed. From FTTH connections and data centres to rail and mass transit communications, ribbon fibres are a cornerstone asset in project environments that prioritise fibre management and the optimum use of space.

As technology advances and our world becomes increasingly interconnected, fibre ribbon cable solutions will continue to boost efficiency, reliability, and innovation across the modern communications infrastructure.

Talk to our dedicated Webro Team for expert advice at sales@webro.com or 0115 972 4483.

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