

# 5G HYBRID CABLE DUC 36 OF

## PRODUCT SPOTLIGHT



## ENVIRONMENT AND APPLICATION



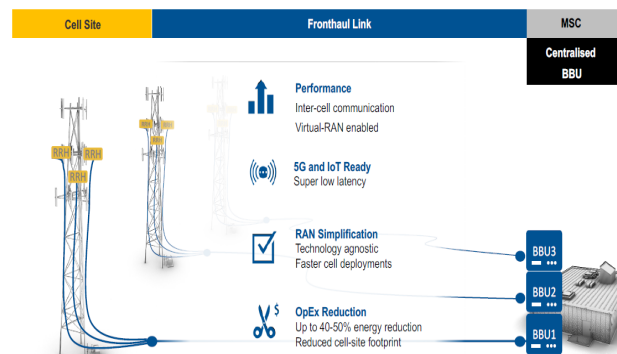
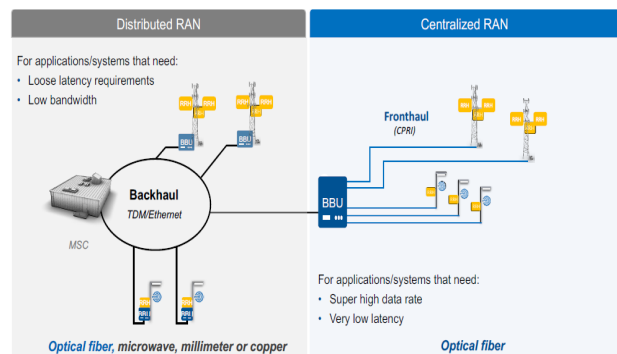
5G is not just a new step forward in the mobile network technology: it has been designed to address technical challenges while containing deployment and operation cost. Among technical challenges are data rate, latency and power consumption.

Every part of the network is re-engineered, from the fronthaul to the backhaul though the core of the network. Even OSI model layers are different between 3G/4G and 5G networks.

For the fronthaul, 2 configurations are possible either reusing existing network or optimising performance and CAPEX/OPEX.

With a Centralised Radio Access Network (C-RAN) configuration, the Base Band Unit (BBU) is installed in the Mobile Switching Center (MSC) instead of the usual radio tower bottom.

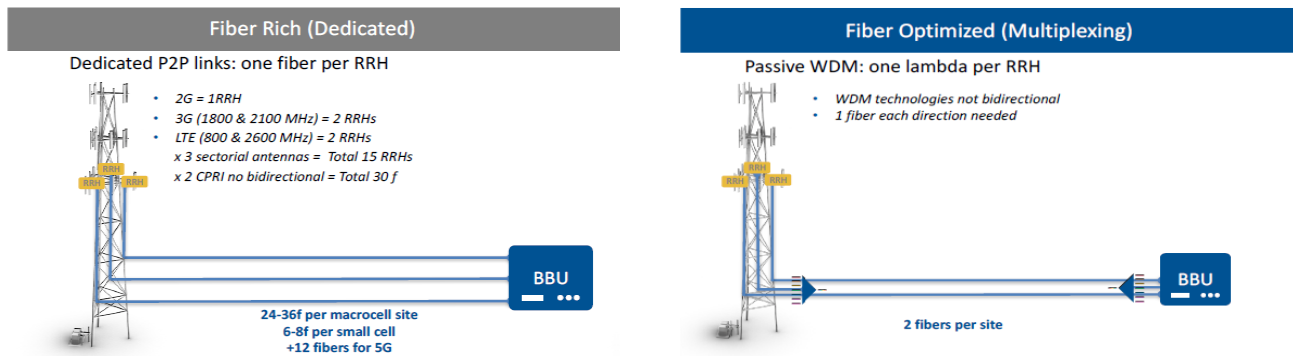
Few BBU are hosted, reducing CAPEX/OPEX and improving the network efficiency, especially the latency which is a crucial parameter in 5G networks.



Each antenna needs power and data links. For data optical fib is the best choice. The number of fibres and the size of copper conductors depend on existing infrastructure, rental expenses, electricity cost and fibre availability.

For dedicated architecture, each radio unit requires 2 fibres. For multiplexing architecture, less fibres are needed. In both configurations, power can be delivered from the BBU site.

**To save installation time and cost, hybrid cable is a perfect match.**



To answer this need Nexans developed the DUC 36 FO G657 A2 + 8x2,5mm<sup>2</sup> hybrid cable range (different options for power conductor cross sections). This innovation enables a quick and cost effective installation since optical fibres and remote powering are deployed at the same time. Hybrid DUC is designed for duct configurations. For tower or rooftop application, other designs are available.

## PRODUCT DESCRIPTION

Hybrid DUC cable is intended for Fibre/Power to the Antenna application, to be installed outdoor in ducts.



- 1 central dielectric strength member,
- 12 to 48 fibres (G657.A1 or A2) in individual loose tubes,
- 2 to 8 conductors 2.5mm<sup>2</sup> cross section,
- Longitudinal watertightness guaranteed by water blocking yarns and tape,
- Sheath made of low friction halogenfree polyethylene,
- Easy identification thanks to black sheath with 3 red stripes.

Complete range for all customer needs and configurations:

Conductors number	2	4	6	8
Cable outer diameter (mm)	14.4	15.3	17.0	17.0
Nominal weight (kg/km)	160	220	300	340

Other designs available for riser application or different conductor cross sections.

## MAIN ADVANTAGES

- CAPEX reduction (power and fibre installation at the same time)
- Color stripe on the jacket to identify power conductor presence
- Easy pulling in duct thanks to the low friction jacket, up to 2.4km (manhole every 300m)
- Tensile force permanent (max): 3400N