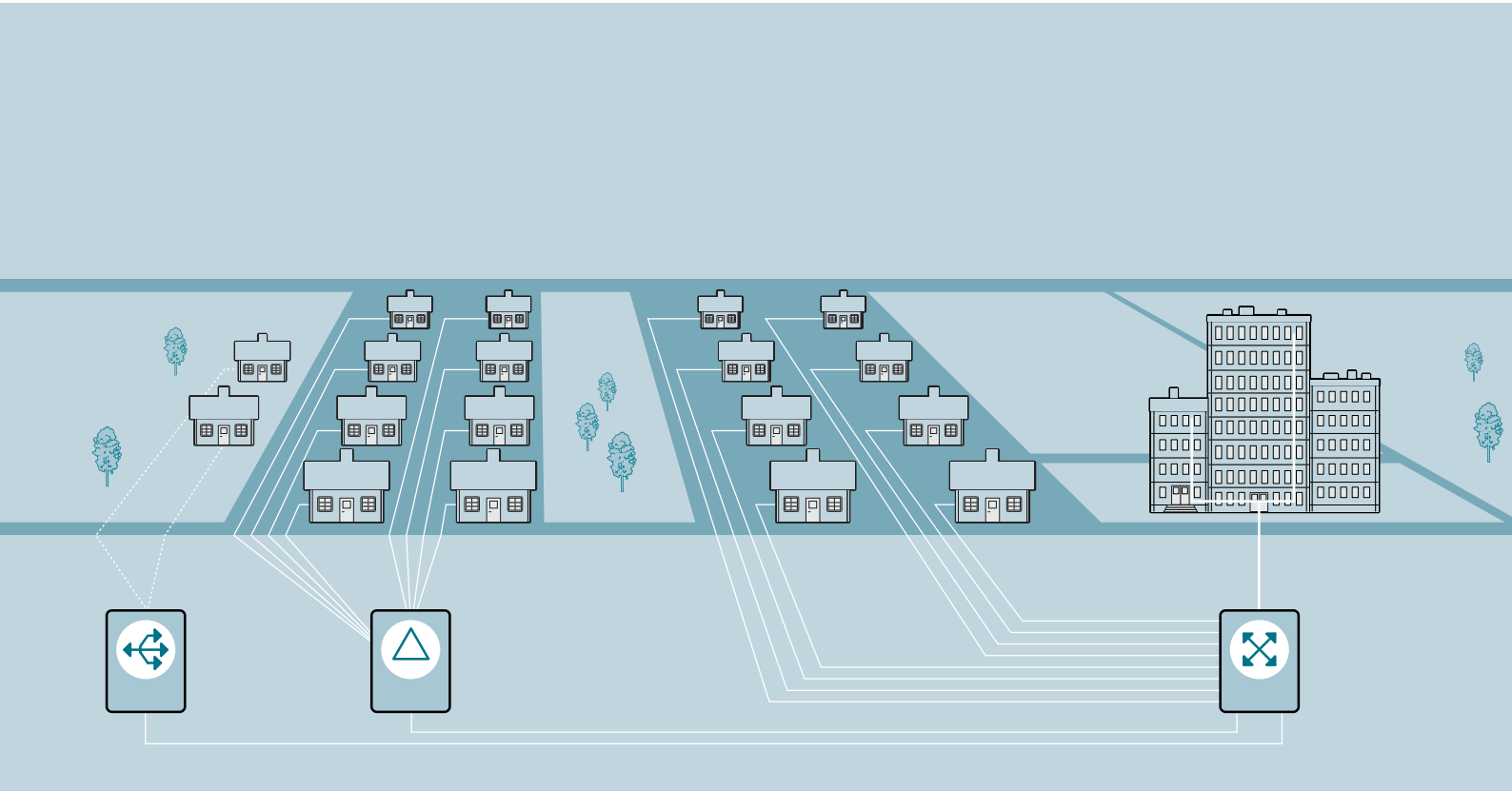


INFRASTRUCTURE FOR DEEP FIBER ACCESS

Reliability with Ericsson's Passive Network Infrastructure



The passive infrastructure in a deep fiber access network is a long-term investment. It needs to reside on a scalable and future-proof technology that is optimized in terms of capacity, quality and operational expenditure. Since Ericsson began manufacturing optical fiber in 1978, we've worked with operators to reduce the costs of civil works and outside plants. One example is our pioneering innovations in air blown fiber technologies for underground and aerial deployments. Another example is Ericsson's fiber system for Fiber-To-The-Home single-family unit deployment. It has proven 25% less expensive when compared to deployments using traditional cable systems.

Complete deep fiber access offering

Ericsson can provide an end-to-end solution for a deep fiber access network that includes passive and active infrastructure, as well as system integration and managed services. Our passive offering includes ducts, air blown fiber systems, traditional optical fiber cables, optical distribution frames, splicing equipment and other installation accessories. We design and test all products to meet high-quality and environmental standards. Our passive network deployment and integration services include customer project management, network design, permits and

lease management, site engineering and civil works. The installation comprises all activities for implementing fiber cables, splitters, joint closures and distribution frames.

Passive feeder/distribution network

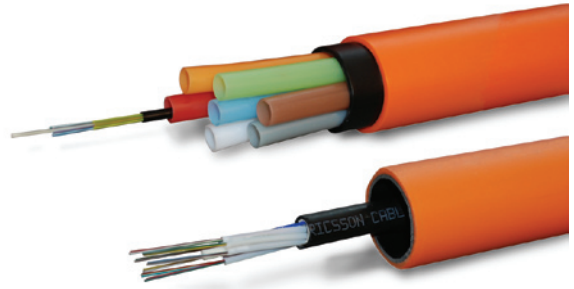
The following chapters describe the typical elements in a passive network infrastructure solution from Ericsson.

In a deep fiber access network there are two different approaches to the feeder/distribution network: Point-to-point (P2P) with individual fibers or point-to-multipoint (P2MP or Passive Optical Network, PON) with fewer and partly shared fibers that use optical splitters to connect the distribution points.

The natural location for optical splitters in a PON networks is inside a Fiber Distribution Hub (FDH). The FDH is the demarcation point between feeder cabling from the Central Office and distribution cabling to a customer's premises. Ericsson's range of FDH products are designed to handle any topology or combination of topologies, for example P2P fiber and Gigabit PON (GPON). Our FDHs are characterized by minimum visual impact and class-leading packaging density. They can handle any type of cabling such as air blown fiber, micro cable, traditional cable or a mix of all three.

Ericsson provides a wide range of traditional cables from loose tube to ribbon cable with small or very high fiber counts. They are designed for different applications such as an indoor, outdoor, underground or aerial installation. Micronet™ is Ericsson's air blown micro cable system that is mainly used in a feeder network. Micronet™ is designed for blowing multiple micro cables with a

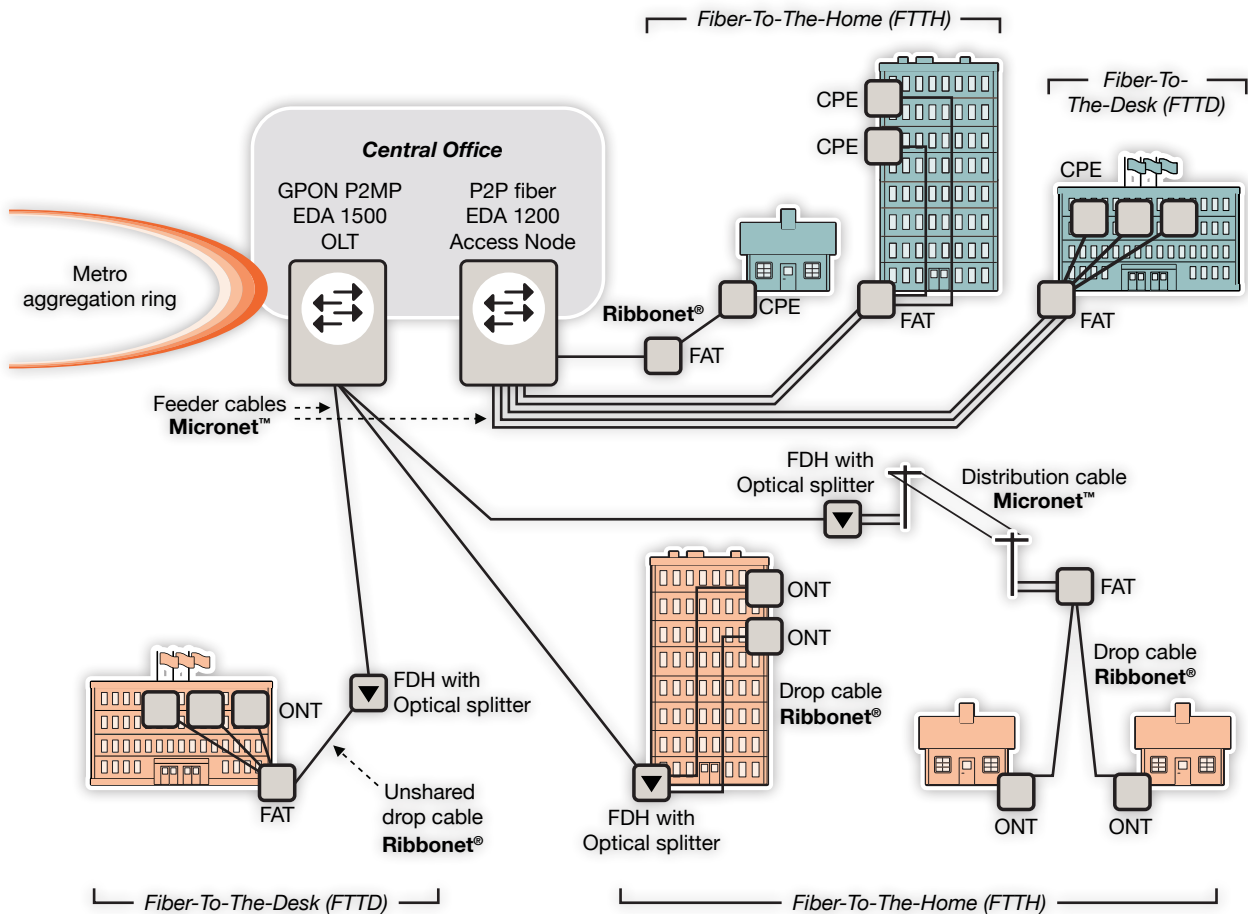
high fiber count into a duct system. Each micro cable can contain up to 96 fibers and our refined cable and blowing technologies help meet the demand for scalable expansions.

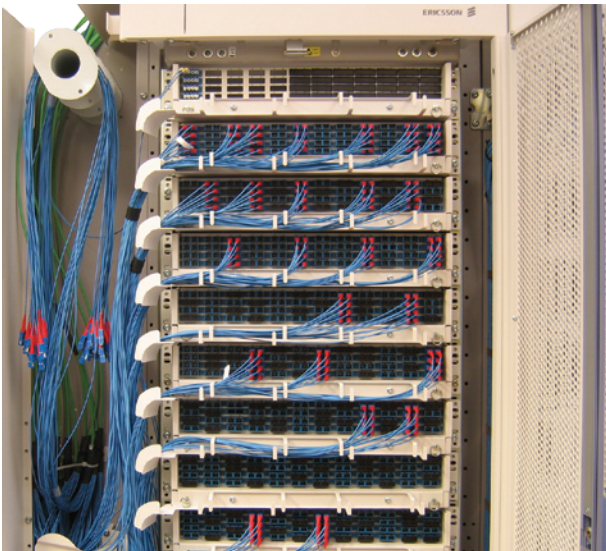


Micronet™ ducts with micro cable (top) and traditional cable

Cable management in the Central Office

In the Central Office, passive equipment takes care of fiber termination as well as patch cord handling and rearrangement. In particular, P2P installations result in a considerable amount of fibers that terminate in the Central Office. To minimize installation costs and floor space, Ericsson offers a Cable Management System – a fiber termination and organizing unit that provides the cabling interface between the active equipment and a passive network.





Distribution frame as part of the Cable Management System

The Cable Management System comprises an efficient method to guide and store fibers, pigtails, splices, connectors and passive devices inside a node where they are no longer protected by the cable sheath. The system offers features such as the high-density packing of fibers, small footprint, protection, ease-of-installation, rearrangement and high reliability.

Pre-fabricated fiber distribution frames (FDF/ODFs) and cable assemblies are included. The installed, pre-connected cable (normally indoor) is available in different lengths and spliced to virtually any type of incoming cable (normally outdoor) in a splice cabinet or joint closure. The main benefits of pre-connected units are a factory-tested guaranteed performance, faster installation and time-to-revenue.

Installation at customer premises

When speaking of deep fiber access and true broadband, premises such as single-family units, multi-dwelling units and offices are all examples of fiber network termination points.

In single-family units, the fiber terminates in an Optical Network Terminal (ONT) in PON networks. In P2P fiber networks, the fiber terminates in Customer Premises Equipment (CPE) such as a Digital Residential Gateway or a fiber optic termination box.

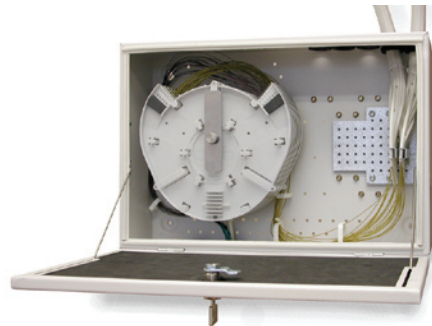
Ericsson's fiber optic termination box is a multi-purpose fiber demarcation point. The box provides a flexible and truly future-proof solution that can be completed with an optical/electrical media converter that transforms the passive outlet into an active fiber optic user node.

In multi-dwelling units, the fibers from end users need to be concentrated to cables with higher fiber counts. This is done in a Fiber Access Terminal (FAT), which is usually placed where the ducts or cables change from indoor to outdoor or at the curb. The drop network is a "last mile deployment" and connects end users or a group of end users to the FAT.



Ericsson's fiber optic termination box

For the drop network, Ericsson offers traditional fiber optic cables for indoor deployment. In order to provide a more flexible and efficient installation, we have developed Ribbonet®, our air blown fiber system that features an Ericsson patented air blowing tool, pre-connected high-performance fiber (EPFU) and micro-ducts. The Ribbonet® fiber blowing system is by far the fastest blowing fiber installation technology available today.



Example of a Fiber Access Terminal at customer premises

Additional fiber optic equipment

Ericsson offers a wide range of additional equipment for optimized and future-proof installation, including fiber joint closures, ducts, duct joint closures, easy snap-on connectors and cold joint branch closures. They can be used indoors or outdoors, in aerial installations and existing conduits, or buried underground. All products are designed for optimal installation. An example is the interior of the Micronet™ ducts that are specially treated to reduce friction.



Ducts and duct joint closure (left) and air blowing tool (right)

Ericsson is shaping the future of Mobile and Broadband Internet communications through its continuous technology leadership. Providing innovative solutions in more than 140 countries, Ericsson is helping to create the most powerful communication companies in the world.