

## Introduction to FTTx - Fiber to the x

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### Learn the fundamentals of FTTx.

This training course is designed to introduce the concepts and technologies that combine to provide fixed broadband access across fiber. Delegates will learn why FTTx has become such an important architecture today, including the technical and financial justifications. The different types of FTTx architectures are discussed, including the advantages and disadvantages of each, and the types of components that are required. The course also includes technical details of the specialized FTTx components like splitters and wavelength-division multiplexers, and the specifications for cables, connectors, splices and hardware.

The course is intended for network designers, network planners, supervisors, project managers, sales people, technicians and anyone new to the FTTx market

### Course Contents

#### Introduction to FTTx

##### What is a FTTx Access Network?

##### The drivers behind FTTx

- Cost efficiencies
- The demand for bandwidth
- Video
- Cloud services

##### The evolution of FTTx

##### FTTx network architecture

- FTTC, FTTH, FTTN, FTTD, FTTP

#### Fiber fundamentals

##### Fiber theory for FTTx

- Optical Fiber
- Optical Cable
- Termination Options
- WDM in FTTx Applications

#### Active vs Passive Architectures

##### Network design features

##### Cost comparisons

##### Strengths and weaknesses

#### FTTx Network Topologies

##### The physical topologies

- Point-to-point topologies
- Star topology
- Ring, mesh, and bus topologies
- Centralised vs Cascaded

#### FTTx PON Systems

##### PON Types

- BPON
- GPON
- EPON

##### xPON Comparison

##### GPON vs GEPON

##### PON Equipment

- Optical Line Terminal OLT
  - Optical Splitters
  - Optical Network Terminal ONT
  - Panels, Closures, and Cabinets
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