



**CMT-07-090**

**FTTP NETWORK CONSTRUCTION  
& COMMISSIONING  
TRAINING COURSE**

**5 DAYS DURATION - DESIGNED FOR PEOPLE WITH  
MODERATE OPTICAL FIBRE NETWORK CONSTRUCTION  
SKILL LEVELS**

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**Telstra Certified**

# FTTP NETWORK CONSTRUCTION & COMMISSIONING TRAINING COURSE

## COURSE OUTLINE

### CMT-07-090-A

#### Basics of FTTP Architecture

1. What is FTTx
2. Benefits of FTTP networks
3. FTTP network architecture overview
4. What is PON
5. Overview of GPON
6. Understanding FTTx transport wavelengths
7. Single Fibre working systems
8. Basics of FTTP service delivery capability
9. Optical Connectors and pigtails (FTTP Specific)
10. Laser Safety and OH&S
11. Fibre optic connector and ONT cleaning principles
12. Operating optical microscopes
13. Operating Traffic Identifiers
14. Operating Visual Fault locators.

### CMT-07-090-B

#### FTTP Architecture in Detail

1. Detailed overview of FTTP architecture
2. Detailed overview of POLT
3. Detailed overview of VOLT
4. Detailed overview of WDM
5. Detailed overview of FDH
6. Detailed overview of Optical Splitter
7. Detailed overview of Multiport hardware
8. Detailed overview of Lead-in cable technology
9. MDU design overview (internal & external)
10. Detailed overview of PSU for internal and external ONTs
11. Detailed overview of external ONT-O
12. Detailed overview of internal ONT-I
13. Telecommunications demarcation boundaries
14. Network naming and numbering conventions within the FTTP network
15. Practical Exercise to reinforce above elements.

### CMT-07-090-C

#### FTTP Fibre Optic Cable Construction

1. Cable Types used within an FTTP environment
2. Cable markings and definition
3. Complete Fibre Optic cable numbering system
4. FTTP Lead in cable overview
5. Lead-in Multiport cable overview
6. Techniques for stripping cable protective coatings
7. Practical exercises and assessment of each of the items discussed.

### CMT-07-090-D

#### FTTP Joint Enclosure Assembly Principles

1. Assembly methodologies for Egerton 24/72 joint enclosure
2. Assembly methodologies for Corning UCNCP 9-24 MAX joint enclosure
3. Assembly methodologies for Distribution Lead-in (DLM) enclosure
4. Assembly methodologies for Lead-In (LM) enclosure
5. Installation methodologies FDH including splitter replacement
6. Manhole requirements for FTTP network elements
7. Installation methodologies for Lead-In cables
8. MDU hardware installation
9. ONT installation methodology (internal & external)
10. In-home cabling standards for FTTP
11. Practical exercises and assessment of each of the items discussed.

### CMT-07-090-E

#### Evaluating the Overall FTTP Optical Link Quality

1. Basics of evaluating optical link quality
2. Calculating optical loss budgets
3. Reasons for excessive optical loss
4. Measuring Insertion Loss
5. Practical – Calculate and measure the optical loss between FDH and ONT
6. Basics of OTDR technology
7. Analysing OTDR traces
8. Identifying optical fibre cable faults using an OTDR
9. Creating a professional and accurate optic link performance report using the Telstra Workbook and how this relates to Multiman
10. Understanding how optical network faults effect FTTP service delivery
11. Understanding Telstra DBoR environments as they relate to FTTP.

### CMT-07-090-F

#### FTTP Fault Methodology - Detailed

1. Assessing service delivery performance of the ONT
2. Active FTTP network testing overview
3. Basics of FTTP fault methodology
4. Optical loss threshold overview for FTTP
5. Measuring Optical Power on a live FTTP network
6. Practical – Measure optical power at the FDH, ONT & DLM using a PON Power Meter.

### CMT-07-090-G

#### Course Assessment

1. Theoretical Assessment
2. Practical Assessment.

# FTTP NETWORK CONSTRUCTION & COMMISSIONING TRAINING COURSE

## COURSE INFORMATION

### Course locations:

Melbourne, Adelaide, Sydney, Hobart, Canberra, Cairns, Brisbane, Darwin & Perth.

**Course times: 8.30am to 4.30pm.**

**Duration: Five days.**

Training is available Australia-wide.  
Please contact Celemetrix for details.

**Included:** Active FTTP training network, all FTTP external and internal network hardware, instructor, data projector, all required test equipment and hardcopy course manual for each attendee.

## INDUSTRY PROBLEM

- The telecommunication industry has seen a decline of the transfer of skills from experienced technical personnel to new personnel.
- Knowledge transfer to complete projects to the required quality/time standards has become increasingly scarce.

## CELEMETRIX SOLUTION

- Training programs are designed to protect against poor quality network builds, which result in costly rework and service interruptions.
- Emphasis on the importance of maintaining standardised installation and commissioning practices.
- Skill in the transference of knowledge is what we believe to be the "art of training."
- Unlike other training organisations which focus primarily on technology - Celemetrix Training Services are structured toward Field Operations staff. Technology theory is combined with practical elements to reinforce the learning process.
- Specifically designed training manuals, enhanced practical exercises and technical phone support ensure your investment delivers increased levels of productivity and confidence.
- All our training courses can be customised to meet your individual requirements.

All our trainers are qualified with Cert IV Assessment and Workplace Training from Corporate Training Australia.

## COURSE OVERVIEW

This course provides all the information required to confidently construct the unique elements of Telstra's FTTP environment and validate FTTP network quality. Attendees will be introduced to all components of an FTTP architecture as well as build relevant components and test the performance of the optical path. Attendees will also be introduced to live FTTP optical network validation procedures.

It is suggested that attendees have already completed Telstra approved splicing and network testing training courses within the last 3 years (E.g. CMT-05-001 – Fibre Optic OTDR, Commissioning & Reporting and/or CMT-06-020 – Fibre Optic splicing and joint enclosure).

**10 -15 people per course.**

**Training is available throughout Australia.**

## FURTHER INFORMATION

Call or email Celemetrix today, our courses result in the highest knowledge transfer and are Telstra Certified.

**CELEMETRIX AUSTRALIA PTY LTD  
SYDNEY - MELBOURNE**

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