

LAN Academy

TRAINING BROCHURE 2021



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Introduction,

"The transmission quality of a cabling installation depends on the cabling system used, as well as the installation itself."

To provide end users with maximum confidence, Nexans Certified Solutions Partners (CSP's) must pass training to ensure they are competent to install LANmark Solutions to the required standard and able to offer the full [Certified Solution Warranty](#).

The LAN Academy is an e-Learning platform which aims to improve access to training, especially for installation partners wishing to become Nexans Certified Solution Partners (CSP's).

Currently "Copper Supervisor Site & Design" theory training and refresher/update courses in English and French are available, additional courses and languages will be added as they become available.

In class Training is given at the Competence Centre near Brussels, as well as on demand at your premises worldwide or in our Training centres in different regions by our Certified Trainers in local languages.

Courses are typically based on a specific agenda, although training may vary slightly by country depending on local requirements and needs. However, the programmes are all based on [Training Modules](#) to ensure a minimum standard and consistency is guaranteed around the globe.

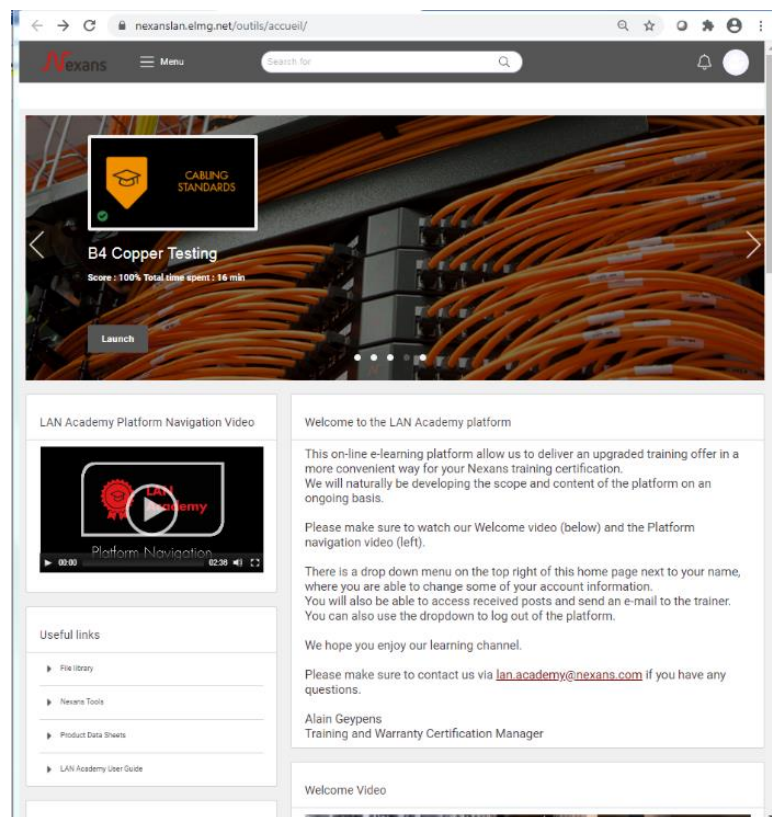
To make this "level training" program possible, the training has been divided into modules which are all addressing specific topics. A tailored training is also possible to address the needs for different trainee profiles.

To apply for training, please contact your local Nexans sales representative or send a mail to info.ncs@nexans.com



This on-line e-learning platform allow us to deliver an upgraded training offer in a more convenient way for your Nexans training certification.

Access to the site is by invitation only for nominated CSP applicants.



Full Copper and Fibre Supervisor training sessions are available to obtain a LANmark Certified Supervisor/Installer Certificate.

For those installers who need to renew their certificate after two years, we have the Copper and Fibre update session.

Sessions are available in both English and French.

We will naturally be developing the scope and content of the platform on an ongoing basis.



E-learning Sessions


Certified Installer Copper and Fibre Update Training

Update Training



COPPER AND FIBRE
UPDATE TRAINING

7 training course  


- ▶ U1 Copper and Fibre updates 
- ▶ B1 Smart Choices for Installers 
- ▶ B2 LANmark Copper Cabling Solutions 
- ▶ C2 LANmark-OF Cabling Solutions 
- ▶ Copper and Fibre Update Exam 
- ▶ A1 Copper Fundamentals (OPTIONAL) 
- ▶ B3 Installation rules and guidelines (OPTIONAL) 

Copper Supervisor (Site and Design)

Copper Supervisor (Site and Design)



COPPER SITE
SUPERVISOR

9 training course  



- ▶ Copper Fundamentals Pre-Exam 
- ▶ A1 Copper Fundamentals 
- ▶ B1 NCS introduction 
- ▶ B2 LANmark Copper Cabling Solutions 
- ▶ B3 Installation rules and guidelines 
- ▶ B4 Copper Testing 
- ▶ B5 Copper Connector Termination 
- ▶ D1 Copper Design Supervisor 
- ▶ Final Exam Copper Supervisor (Site and Design) 

Fibre Site Supervisor Certification

Fibre Site Supervisor Certification



FIBRE SITE
SUPERVISOR

1 training course  

LAN Cabling Copper and Fibre Products

LAN Cabling Copper and Fibre Products



NEXANS
INTRODUCTION

3 training course  

In-Class Training Modules Overview

Module 1	Premises Cabling Standards and Design *	7
Module 2	Testing Copper Cabling Systems *	7
Module 3	Nexans LANmark Copper Cabling Solutions *	8
Module 4	Installation Rules and Guidelines *	8
Module 5	Installation Practice & Testing Class D-E-EA Links *	9
Module 6	Installation Practice GG45 & Testing Class F-FA-II Links	9
Module 7	Optical Fibre Theory and Principles *	10
Module 8	Nexans LANmark Optical Fibre Cabling Solutions *	10
Module 9	Fibre Installation Practice on Direct Termination	11
Module 10	Fibre Installation Practice on Fusion Splicing	11
Module 11	Testing Optical Fibre Links *	12
Module 12	Fibre To The Office (FTTO)	12

* Module part of the 3 Day Supervisor/Expert Training Program

In Class TRAINING PROGRAM													
Qualification	Duration	Modules											
		1	2	3	4	5	6	7	8	9	10	11	12
Supervisor Cu & FO	3 days	•	•	•	•	•		•	•	optional		•	
Supervisor Cu	2 days	•	•	•	•	•							
Supervisor Cu & GG45	2 1/2 days	•	•	•	•	•	•						
Supervisor Cu	1 day	*NOTE		•	•	•							
Supervisor FO	2 days	•						•	•	optional		•	
Supervisor FO & FTTO	2 1/2 days	•						•	•	optional		•	•
		* Participants require existing knowledge of topics covered by Modules 1 & 2 which will be included as part of final assessment											

Certified Solutions Partner - LANmark Warranty Requirements													
Copper Cat 5e-6-6A		•	•	•	•	•							
Cat 7/7A/8		•	•	•	•		•						
Optical Fibre		•						•	•	optional		•	

In class Training is given at the Competence Centre in Buizingen (Belgium), as well as on demand at your premises worldwide in our Training centres in different regions by our Certified Trainers in local languages.

Training modules



1 Premises Cabling Standards and Design



Contains:

- Standardization update:
- Comparison of the different standards
 - What, Why, impact on cabling, Roadmap
 - ISO/IEC 11801, Cenelec 50173, EIA/TIA 568
 - Categories versus Class performances
 - Configuration model
 - M.I.C.E.

- Horizontal channel design:
- 2, 3 and 4 connector channels
 - Length calculation of a channel
 - Cross-Connect, Consolidation Point, Service outlet, MPTL

- Horizontal & Vertical Signal routing:
- Data Signal Routing Copper and Fibre
 - Entrance Facilities
 - PoE

Time required: 6:00h

This module enables you to:

- Understand requirements and philosophy of the Premises Cabling System Standards*
- Identify components in a structured cabling system*
- Identify vertical and horizontal routing of data and service signals.*
- Calculate maximum distances for horizontal channels*
- Define requirements for a Structured Cabling System on Campus, Riser and Horizontal links.*

Prerequisites: none

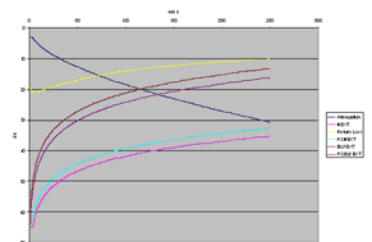


2 Testing Copper Cabling Systems

Contains:

Technical Parameters

- Megabits versus Megahertz
- Data applications: Ethernet, Fast Ethernet, Gigabit Ethernet, Encoding systems
- IL, NEXT, ACR-N
- PS specs, FEXT, ACR-F, RL, NVP, Delay Skew
- DC-loop resistance, Alien crosstalk parameters, SNR
- Their influence on cabling installation practices



Time required: 2:00h

This module enables you to:

- ✓ Analyse Test results
- ✓ Identify errors in a copper link
- ✓ Create high performance copper links
- ✓ Avoid installation errors

Prerequisites: Knowledge of Standards on Copper Cabling



3 Nexans LANmark Copper Cabling Solutions

Contains:

- Product update
- Why Systems?
- LANmark 5/6/6A and 7/7A/8 Systems
- GG45 Cat 7, Cat 7A, CAT 8.2
- When and how to use each Cabling System Class?
- Structural Hardware
- Services
- The Nexans Warranty Program



LANmark

Time required: 2:00h

This module enables you to:

- ✓ Identify each component in the copper product range
- ✓ Select a Cabling System according to the end-users needs
- ✓ Discover unique features of the Nexans Cabling System Products
- ✓ Be more competitive in the market

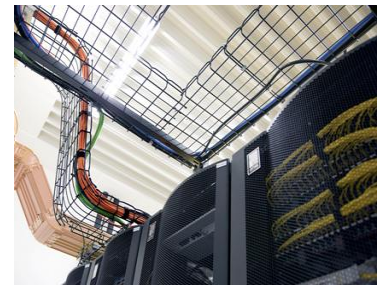
Prerequisites: Knowledge of Standards on Copper Cabling



4 Installation Rules and Guidelines

Contains:

- Indoor cabling, Outdoor cabling
- Cable handling and Storage
- Protective and Functional Earth
 - Safety versus EMC
 - Requirements for correct Earthing
- Administration and documentation
 - Master cable schedule
 - Floor Distributor Cable schedule
 - Building cabling plans
 - Cabinet Layout
 - Nexans Visio Templates
 - Nexans Toolkit



Time required: 2:00h

This module enables you to:

- ✓ Acquire basics on installation practices
- ✓ Apply installation rules and guidelines during design
- ✓ Create professional administration documents
- ✓ Understand requirements from Standards on installation practices
- ✓ Increase performance in a cabling system

Prerequisites: Knowledge of Standards on Copper Cabling



5 Installation Practice & Testing Class D-E-EA Links

Contains:

- Termination of U/UTP, F¹/UTP, F/FTP and S/FTP copper cables
- How to build high performance Class D, Class E and Class Ea Links
- Installation practices for 2, 3 & 4 Connector links
- LANmark EVO screened and unscreened, Solid and stranded:
 - Snap-in termination practice
- Earthing/Screening/Bonding
- Testing:
 - Using Certified Level IV/V testers
 - Testing 2, 3 and 4 connector links
 - Testing MPTL
 - Calibration, Firmware, Testing limits
 - Analyses of test results
 - Troubleshooting



Time required: 2:00h

This module enables you to:

- ✓ Create high performance copper links
- ✓ Decrease installation times
- ✓ Testing Class D, E and EA links according to the Standards
- ✓ Solve problems of failing links

Prerequisites: Knowledge of Cabling Installation Rules and Copper Cabling Parameters



6 Installation Practice GG45 & Testing Class F-FA-II Links

Contains:

- Termination of LANmark-7A & 8 S/FTP copper cables
- GG45 termination practice
- Easy termination tool
- 2, 3 & 4 Connector links
- Testing:
 - Using Certified Level IV (Cat 7/7A) testers
 - Testing 2, 3 and 4 connector links
 - Calibration, Firmware, Testing limits
 - Analyses of the test results
 - Troubleshooting



LANmark-7A

Time required: 4:00h

This module enables you to:

- ✓ Create high performance CLASS F/FA/II copper links
- ✓ Decrease installation time
- ✓ Test Class F, FA and II links according to the Standards
- ✓ Solve problems of failing links

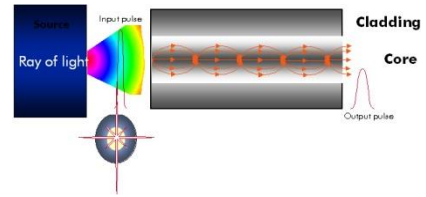
Prerequisites: Knowledge of Cabling Installation Rules and Copper Cabling Parameters



7 Optical Fibre Theory and Principles

Contains:

Theoretical Introduction
 Fibre Construction, Fibre types
 Optical windows, Refractive index
 Multimode versus Single mode
 Step Index, Dispersion and Graded index
 Optical Transmitters:
 - LED, VCSEL, LASER
 - Launch conditions
 Transmission characteristics:
 - Attenuation
 - Bandwidth, dip, maximum link length
 Advantages of Optical Fibre
 Fibre Termination options and connector types



Time required: 2:00h

This module enables you to:

- ✓ Identify Fibre types
- ✓ Consider Length restrictions during design
- ✓ Identify Components of an optical fibre link
- ✓ Define Optical Fibre cabling requirements

Prerequisites: none



8 Nexans LANmark Optical Fibre Cabling Solutions

Contains:

LANmark-OF Fibre types
 Application to Length implication
 Cable constructions:
 - Outdoor, Indoor
 - Data centre
 Modular patch panels, Snap-in couplers
 Optical Fibre Termination products:
 - Splicing / Anaerobic
 Patch cords
 Pre-terminated Fibre Assemblies
 MPO/MTP
 The Nexans Warranty Program



LANmark-OF

Time required: 4:00h

This module enables you to:

- ✓ Identify each component in the Optical Fibre product range
- ✓ Select a Cabling System according to the end-users needs
- ✓ Discover unique features of the Nexans Cabling System Products
- ✓ Be more competitive in the market

Prerequisites: Knowledge of Standards on Optical Fibre Cabling



9 Fibre Installation Practice on Direct Termination

Contains:

- Fibre Installation Practice
- Recommendations to maintain Duplex OF Channel Polarity
- Patch panel & Zone Distribution box:
 - Anaerobic Connectorisation
 - SC, LC on 900 μ Fibres
 - SC, LC on 2 or 3mm Patch cable



Time required: 4:00h

This module enables you to:

- ✓ Identify each component in the Optical Fibre product range
- ✓ Maintain Duplex OF Channel Polarity
- ✓ Create high performance Fibre links
- ✓ Decrease installation times
- ✓ Troubleshoot

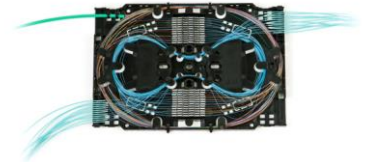
Prerequisites: Knowledge of Fibre Theory and principles



10 Fibre Installation Practice on Fusion Splicing

Contains:

- Fibre Installation Practice
- Recommendations to maintain Duplex OF Channel Polarity
- Fusion Splicing Methods
- Patch panel & Zone Distribution box:
 - Organisation of fibres in splice trays
 - Protecting splices:
 - Metallic
 - 250 μ fibres
 - Heat-shrink
 - 250 μ & 900 μ Fibres



Time required: 4:00h

This module enables you to:

- ✓ Identify each component in the Optical Fibre product range
- ✓ Maintain Duplex OF Channel Polarity
- ✓ Create high performance Fibre links
- ✓ Decrease installation times
- ✓ Troubleshoot

Prerequisites: Knowledge of Standards on Optical Fibre Cabling



11 Testing Optical Fibre Links

Contains:

Parameters

Causes of Attenuation

Optical Budget calculation

Cleaning Practices on LC, SC, MPO connectivity

Microscope and Video scope

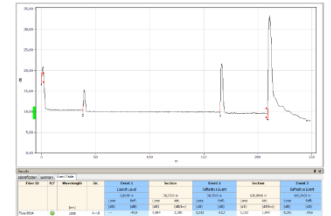
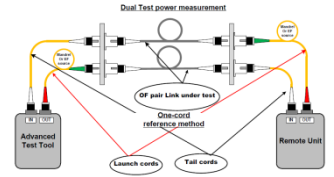
Optical Fibre Measurement

LSPM

- Power Meter Types, Power meter principle
- Setting Reference
- Test cord verification
- Limits configuration
- Analysing results

OTDR

- Optical Time Domain Reflectometer principles
- Reflective events, Dead zones, Ghosts



Time required: 4:00h

This module enables you to:

- ✓ Identify each component in the Optical Fibre link
- ✓ Test Optical Fibre links according to the Standards
- ✓ Solve problems of failing links
- ✓ Implementing correct cleaning practices
- ✓ Certify Installations

Prerequisites: Knowledge of Standards on Optical Fibre Cabling and Fibre Theory



12 Fibre To The Office

Contains:

Cabling Concepts for FTTO

FTTO Cabling Topologies

- Star Topology
- Physical Ring with Logical Star
- Redundancy

LANmark-OF product set

- Pre-Terminated assemblies, Extractable Bundle
- Ruggedized ZD-Box
- Micro-switch integration

LANactive Product set

- Micro-Switch versions, Nexans SFP Modules
- Power Supply options, POE/POE+
- Micro Switch Accessories



LANactive

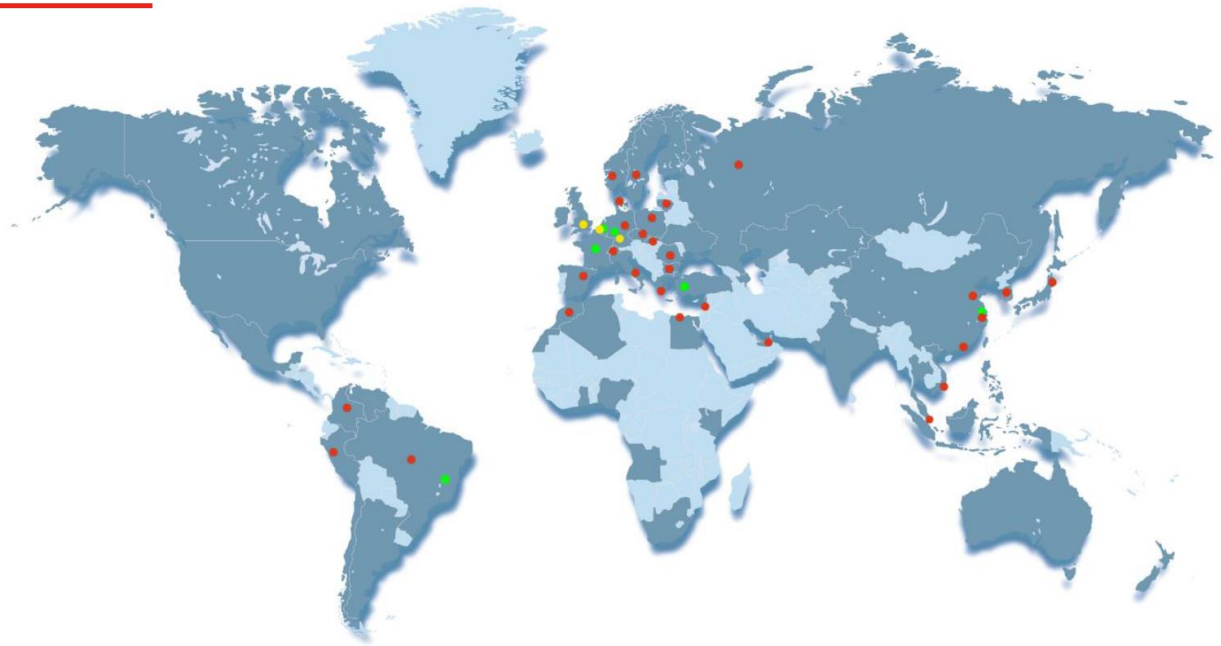
Time required: 4:00h

This module enables you to:

- ✓ Design a FTTO Cabling infrastructure with redundancy
- ✓ Identify components in a FTTO cabling system
- ✓ Identify vertical and horizontal routing of data and voice signals using FTTO

Prerequisites: Knowledge of Standards on Optical Fibre Cabling, Fibre Theory, Installation and Testing

Locations



- 3 Competence Centres: Belgium - Germany - UK
- >30 Sales Offices
- 7 Manufacturing Units
- >1000 Certified Partners

Nexans Cabling Solutions Training Centres

Europe

Austria
Belgium (HQ)
Cyprus
Czech Republic
Finland
France
Germany
Greece
Macedonia
Netherlands
Norway
Poland
Russia-CIS
Spain
United Kingdom

Middle East

United Arab Emirates

APAC

China
Singapore

South America

Brazil

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