

# LAN Academy

TRAINING BROCHURE



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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, Aginode 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 Aginode 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 Aginode sales representative or send a mail to [info@aginode.net](mailto:info@aginode.net)

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

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

Useful links - Liens utiles

- ▶ File library
- ▶ Aginode Tools
- ▶ Product Data Sheets
- ▶ LAN Academy User Guide - Guide d'utilisation LAN Academy

My Progress - Ma progression

Legend:

- Not started
- In progress
- Failed
- Passed

Welcome to the LAN Academy platform - Bienvenue à la plateforme LAN Academy

This on-line e-learning platform allow us to deliver an upgraded training offer in a more convenient way for your Aginode training certification. We will naturally be developing the scope and content of the platform on an ongoing basis.

There is a drop down menu on the top right of this home page next to your name, where you are able to change some of your account information.

**Select "Training" from the Navigation menu on the top left to access your training Session(s)**

You will also be able to access received posts and send an e-mail to the trainer. You can also use the dropdown to log out of the platform.

We hope you enjoy our learning channel.

Please make sure to contact us at [lan.academy@Aginode.net](mailto:lan.academy@Aginode.net) if you have any questions.

*Alain Geypens*  
Training and Warranty Certification Manager

Cette plateforme d'e-learning en ligne nous permet de proposer des prestations de formation améliorées et plus pratiques pour votre certification de formation Aginode. Naturellement, nous élargirons en continu l'offre et les contenus des cours sur la plateforme.

Le menu déroulant situé en haut à droite de la page d'accueil, près de votre nom, vous permet de modifier les informations de votre compte.

**Sélectionnez "Training" dans le menu de navigation en haut à gauche pour accéder à vos séance(s) de formation.**

Vous pourrez également accéder aux messages reçus et envoyer un e-mail au formateur. Le menu déroulant vous permet également de vous déconnecter.

Nous espérons que vous apprécierez notre plateforme d'apprentissage.

Si vous avez des questions, n'hésitez surtout pas à nous contacter par courriel à [lan.academy@aginode.net](mailto:lan.academy@aginode.net).

*Alain Geypens*  
Responsable Formations et Certification de Garantie

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 further be developing the scope and content of the platform on an ongoing basis.

# E-learning Sessions

<b>Certified Installer Copper and Fibre Update Training</b>	 <b>Copper and Fibre Update Training</b>
● 0 h 00 min % 0	7 training course
<b>Copper Site Supervisor Certification</b>	 <b>Copper Site Supervisor Training</b>
🔊 0 h 01 min % 1.7	6 training course
<b>Copper Supervisor (Site &amp; Design) and Expert Fibre</b>	 <b>Copper Supervisor (Site &amp; Design) and Expert Fibre Training</b>
🔊 0 h 24 min % 18.2	11 training course
<b>Copper Supervisor (Site and Design)</b>	 <b>Copper (Site &amp; Design) Supervisor Training</b>
🔊 0 h 23 min % 13.9	9 training course
<b>LAN Cabling Fundamentals and Products</b>	 <b>LAN Fundamentals + Copper and Fibre Products Training</b>
● 0 h 00 min % 0	5 training course
<b>Programme de remise à niveau pour les partenaires certifiés</b>	 <b>Programme de remise à niveau pour les partenaires certifiés</b>
✅ 1 h 06 min % 99.4	5 training course
<b>Superviseur Cuivre (Site &amp; Design) et Expert Fibre</b>	 <b>Formation de Superviseur Cuivre (Site &amp; Design) et Expert Fibre</b>
🔊 0 h 22 min % 11.1	10 training course

# In-Class Training Modules Overview

Module 1	Premises Cabling Standards and Design *	7
Module 2	Testing Copper Cabling Systems *	7
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Module 6	Installation Practice GG45 & Testing Class F-FA-II Links	9
Module 7	Optical Fibre Theory and Principles *	10
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Module 10	Fibre To The Office Cabling System Design (FTTO)	11

\* 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
Supervisor Cu & FO	3 days	.	.	.	.	.		.	.	.	
Supervisor Cu	2 days	.	.	.	.	.					
Supervisor Cu & GG45	2 1/2 days	.	.	.	.	.	.				
Supervisor Cu	1 day	*NOTE	.	.	.						
Supervisor FO	2 days	.						.	.	.	
Supervisor FO & FTTO	2 1/2 days	.						.	.	.	.
		* 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											
Qualification	Duration	1	2	3	4	5	6	7	8	9	10
Copper Cat 6-6A		.	.	.	.	.					
Cat 7/7A/8.2		.	.	.	.		.				
Optical Fibre		.						.	.	.	

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: 7:00h

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

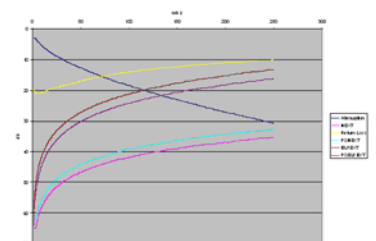


## 2 Testing Copper Cabling Systems

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 Aginode 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 Aginode 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 Aginode 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

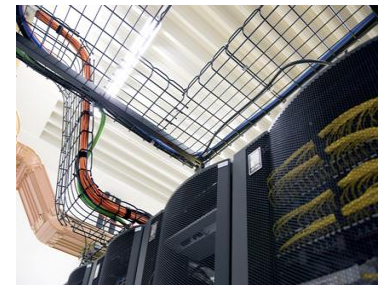
Cable handling and Storage

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
- Aginode Visio Templates
- Aginode 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, F<sup>1</sup>/UTP, F/FTP and S/FTP copper cables  
How to build high performance Class E and Class Ea Links  
Installation practices for 2, 3 & 4 Connector links  
LANmark-6 EVO screened and unscreened, Solid and stranded  
LANmark-6A Ultim Screened  
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 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/V (Cat 7/7A/8.2) testers
- Testing 2, 3 and 4 connector links
- Calibration, Firmware, Testing limits
- Analyses of the test results
- Troubleshooting



*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*

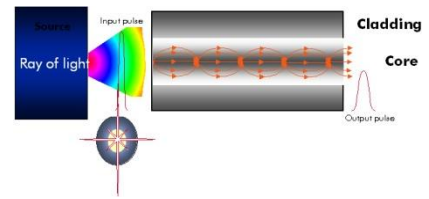
**Prerequisites: Knowledge of Cabling Installation Rules and Copper Cabling Parameters**



## 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 Aginode 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 Aginode Warranty Program



**LANmark™**

*Time required: 3:00h*

### 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 Aginode Cabling System Products
- ✓ Be more competitive in the market

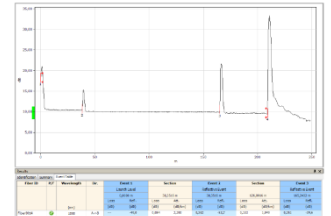
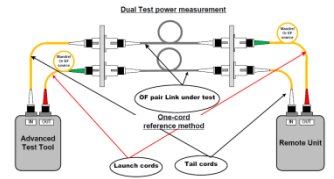
**Prerequisites: Knowledge of Standards on Optical Fibre Cabling**



## 9 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



## 10 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, Aginode SFP Modules
  - Power Supply options, POE/POE+
  - Micro Switch Accessories



### LANactive

Time required: 2:00h

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

## How can we help?

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