

# now meets next

# DAS AND SMALL CELL TRAINING

Training Catalog – 2024

**EMEA/APAC REGION** 



eLearning & Webinar Training

CommScope offers a variety of eLearning and webinar training. Individuals can attend the training at their convenience



Instructor Led Training

CommScope offers Classroom and Virtual training for groups/individuals. Private training sessions are available upon request.

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# Introduction

CommScope's Mobility Solutions Training group provides a variety of learning opportunities related to products and technologies, including ERA, ONECELL and CBRS. Registered users can utilize a variety of self-paced eLearning courses in addition to attending live training events, such as distance learning Virtual Trainings sessions along with focused workshops and product-based classroom instruction. Users have access to the CommScope University Learning Management System (LMS), where they can track their in-progress and completed courses, review transcripts and pull information in training completions and certifications.

# **New User Registration**

To enroll in courses, you must first be registered in the learning portal, CommScope University (CU). The following steps need to be followed to complete the registration proves.

- Go to <a href="https://www.commscope.com/">https://www.commscope.com/</a>
- Click on the Login icon at the top of the page
- Click on the "Create an Account" button at the bottom of the page
- Complete the "New User Registration" form
- After My CommScope registration is complete login and request access to CommScope University
- After completing the access request Log out and then back into My CommScope
- On the My CommScope page click on the CommScope University (CU) tile for access to CU
- On the CU Dashboard select the DAS and Small Cell Training tile to access to the desired training

Here is a link to a tutorial video that will walk you through the registration process for setting up a My CommScope account and then requesting access to CommScope University - <u>CU Registration</u>

# Registered User Login

If you are already a registered user with CommScope's Mobility Solutions Training, you can login using the steps below.

- Go to <a href="https://www.commscope.com/">https://www.commscope.com/</a>
- Click on the Login icon at the top of the page.
- On the My CommScope page click on the CommScope University (CU) tile for access to CU
- On the CU Dashboard select the Mobility Solutions Training tile to access to the desired training



# **Course Enrollment**

At the CommScope University Dashboard you identify and enroll in the desired course using the steps below.

#### Find the desired training.

Use one of the following methods to find the desired training:

- 1. Search for training by typing search words in the 'Search" bar
- 2. Click on the "Mobility Solutions Training" tile, then select a course from the desired catalog

#### Enroll in the training.

#### E-Learning Courses

Identify the desired course and click on the "Enroll" button on the course tile. The "Enroll" button will change to the "Start" button. Click on the "Start" button and then simply follow the requirements for that course to completion.

#### Instructor Led Courses

- 1. Identify the desired course tile
- 2. Click on the button with a shopping cart and dollar value listed
- 3. The "dollar value" on the button will change to "added to cart", click on the button again.
- 4. Proceed through the checkout process.
  - a. If you have a coupon code for a discount on the dollar value enter it and click "Apply"
  - b. Click on the "Proceed to Checkout" Button, and a second time to confirm.
  - c. Enter in the needed information and Click on the "Proceed to Checkout" Button
  - d. The "Order Complete" window will appear. Click on the "View Course" button
- 5. Click on the "Enroll" button for the course, the button will change to "View", click on it to see the available dates for the training.
- 6. Click on the "Enroll" button for the desired training date. At this point you are enrolled in that date. You do have the option to either change or cancel the session at that point. Here is a link to an external <u>Training</u> <u>Calendar</u> to view schedule of upcoming Instructor led training sessions, so you can identify the desired date before you enroll.

Here is a link to a tutorial video that will walk you through navigation in CommScope University and DAS and Small Cell Training.

# **Private Training Sessions**



Any of the instructor-led courses are available as a private training class.

We can work with you and your local CommScope sales representative to develop a customized program that best fits your needs. Venue and cost for such training sessions will be determined on a case-by-case basis.

Please contact us at icn\_training@commscope.com

# **ELearning Courses**

This section of eLearning courses will give the learner a better understanding of CommScope's DAS and Small Cell and supporting technologies. These eLearning courses and instructional videos will give the learner a head start when attending our Instructor Led Training, so they can be more involved in class from the start. These courses offer preparation for any training that is attended in either a Classroom or Virtual environment.

9	EMEA Region Courses \ Audience	Installation & Commissioning	System Operations	System Engineering	Project Management
	Online Learning				
ND4111	ION-B System Operations and Commissioning Overview	Х	Х		Х
ND5100	AIMOS General Overview				Х
ND5101	Avoiding PIM in DAS Installation				Х
ND5102	Return Material Authorization (RMA) Process (Video)				Х
ND5103	Understanding dB and dBm				Х
ND5104	Wireless & DAS 101				Х
ND6432	Introduction to ION-M (Video)				Х
ND6442	ION-U Solution eLearning				Х
ND6463	ERA Overview				Х
ND6464	ERA RF Design				Х
ND6465	CommScope's ERA Interleaved MIMO				Х
ND6468	ERA WCS Airflow				Х
ND6469	ERA Installation & Commissioning (Recertification)				
ND6479	Node A Repeater Systems				Х
ND6500	Public Safety Repeater Installation, Configuration, Operations & Maintenance				Х
ND7111	ONECELL Overview				Х
ND7150	ONECELL DMS Network Management Overview				
ND7504	CBRS System Specialist				Х
ND7506	CBRS Installation and Commissioning				Х
ND7507	CBRS Operation and Maintenance				Х

# [ND7150] ONECELL DMS Network Management Overview

#### Overview

The OneCell DMS Network Management Overview provides a view into how a OneCell system is managed utilizing the Device Management System (DMS) along with other system tools.

#### **Target Audience**

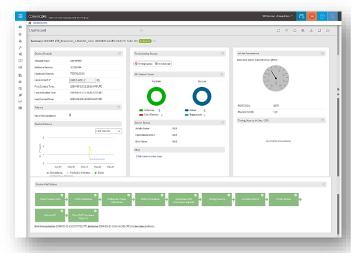
All Network Operators, CommScope partners and any integrator that's involved with or needs an understanding of the DMS solution.

## Objectives

This module is intended to provide:

- The Device Management System (DMS) structure
- The two DMS management portals (Network & Device)
- Network Alarm and Performance Management
- Device Operation and Maintenance Activities

Est. duration (30 Mins)



# [ND7111] OneCell Overview

#### Overview

This is CommScope's OneCell Overview. The module will provide a high-level overview of the OneCell Solution.

### **Target Audience**

This eLearning course is designed for anyone who is interested in learning about CommScope's OneCell Solution.

# Objectives

This module is intended to provide:

- OneCell basics
- OneCell benefits
- OneCell Component
- Overview of the DMS

Est. duration (30 Mins)



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### [ND6463] ERA Overview

#### Overview

CommScope's ERA™ Solution is CommScope's new C-RAN platform. This platform is fully compatible with CommScope's ION-E platform. Both platforms can be combined within a single deployment, providing even more flexibility.

#### **Target Audience**

Anyone who would like to learn about CommScope's new C-RAN platform, ERA™, and those who would like to take the instructor led certification course, [ND6460] ERA & ION-E Installation & Commissioning.

#### Objectives

This ERA Overview video will provide:

- ERA™ Overview
- Deployment Examples
- Modules
- CWDM Solution Overview
- Benefits

Est. duration (27 mins)



# [ND6464] ERA RF Design

#### Overview

The video will explain the configuration of the ERA RF design templates.

# **Target Audience**

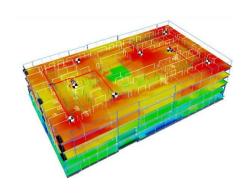
Any personnel/DAS engineer involved in using iBwave to design CommScope's ERA System.

# Objectives

Upon completion the learning will be able to:

- Describe the process of configuration of the ERA system and RF design
- Define how the design involves the CAN, SCAN, TEN, WIN, UAP and CAP L
- Identify Service Group Associations

Est. duration (1 hour)





# [ND6465] CommScope ERA Interleaved MIMO

#### Overview

An alternative to co-located MIMO is CommScope ERA Interleaved or software defined MIMO. Interleaved MIMO, also known as I-MIMO, can provide near-full MIMO performance without the cost of additional cabling or equipment.

#### **Target Audience**

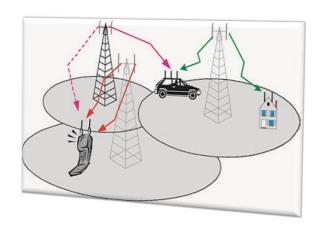
Any personnel/DAS engineer involved in using CommScope's ERA and ION-E Systems.

#### Objectives

Upon completion the learning will be able to:

- Describe CommScope's ERA Interleaved or software defined MIMO.
- Define how I-MIMO can provide near-full MIMO performance without the cost of additional cabling or equipment

Est. duration (1 hour)





"I really appreciated the eLearning. It's easy to use and easy to come back to the needed information.

Great!"

- Anonymous student

# [ND6468] ERA WCS Airflow

#### Overview

This course describes the requirement for proper airflow for ERA WCS cabinets. Highlighting potential issues that can restrict airflow within WCS 2 & WCS 4 subracks and common solutions to resolve the issues.

#### **Target Audience**

Any personnel/DAS engineer involved in using CommScope's ERA and ION-E Systems.

#### **Objectives**

**Topics Covered:** 

- Proper WCS Subrack Airflow
- Rack Mounting
- Cable Management
- Filler Panels
- Fan Units

Est. duration (10 Mins)



# [ND6479] Node A Repeater Systems

#### Overview

This instructional video aims to educate the learner on CommScope's digital repeater system.

# **Target Audience**

Anyone involved with or interested in repeater applications.

# Objectives

The objectives of this instructional video are to have the student:

- Understand the guidelines of repeater applications.
- Have a clear picture of Node A repeater system architecture.
- Operate the Graphical User Interface to correctly set the Node A system parameters

Est. duration (40 Mins)



# [ND5100] AIMOS (Advanced Integrated Monitoring Operating System

#### Overview

This eLearning module is designed to introduce the learner to CommScope's AIMOS. It will provide the learner with fundamental knowledge of AIMOS. Additionally, the module will provide basic AIMOS terms and definitions to assist the learner with learning about AIMOS and its features.

#### **Target Audience**

Sales personnel, NOC personnel or anyone involved with AIMOS

### **Objectives**

- Upon completion of the course the learner will be able to:
- Describe the benefits of AIMOS.
- Describe the function of AIMOS.
- Describe the purpose of AIMOS.
- Understand the best practices in avoiding and testing PIM in DAS installations.

Est. duration (35 mins)



# [ND5101] Avoiding PIM in DAS Installation

#### Overview

This eLearning provides the learner an overview of Passive Intermodulation (PIM) and its impact on DAS installation. It also covers CommScope's PIM calculation tool and best practices to avoid PIM in DAS installations.

### **Target Audience**

Anyone involved with DAS installation, commissioning, optimization & troubleshooting.

### Objectives

The objectives of this video for learners are to:

- Gain an understanding of PIM and how it affects DAS installations.
- · Learn how to calculate PIM frequencies.

Est. duration (28 mins)



# [ND5102] Return Material Authorization (RMA) Process

#### Overview

The purpose of this video is to make the Returns Process as efficient and painless as possible. The video will demonstrate how to successfully complete the Return process for defective and non-defective DAS and Small Cell products in warranty and non-warranty items.

#### **Target Audience**

Anyone involved in return process for defective and non-defective DAS and Small Cell products in warranty and non-warranty items.

### Objectives

Upon completion the learning will be able to:

- Identify Defective vs Non-Defective
- Describe Process In-Warranty and Out-of-Warranty
- Identify and Contact Tech Support
- Obtain an RMA
- Identify roles within the RMA process
- Describe Packaging, Shipping, Turnaround Time and Invoicing Policy

Est. duration (30 Mins)



# [ND5103] Understanding dB and dBm

#### Overview

This instructional video aims to educate the learner on the basic RF calculation terminology dB & dBm.

# **Target Audience**

Anyone involved in DAS design and commissioning.

# Objectives

The objectives of this instructional video are to:

- Describe the difference between dB and dBm.
- Provide examples of real-life calculations using dB and dBm.

Est. duration (12 mins)





### [ND5104] Wireless & DAS 101

#### Overview

This course provides a fundamental understanding of the increasing need for wireless coverage and capacity, the role of distributed antenna systems (DAS) to deliver wireless service, and CommScope products and their applications. It provides a foundation for the subsequent CommScope eLearning courses.

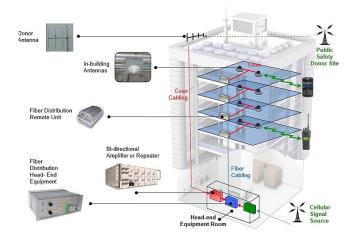
#### **Target Audience**

Any person who would like to learn the fundamentals of wireless and active DAS.

### Objectives

- Provide an overview of wireless technology.
- Provide an overview of active DAS.

Est. duration (30 Mins)



# [ND6432] Introduction to ION-M

#### Overview

This video provides the learner an overview of ION-M, one of CommScope's high power DAS platforms.

# **Target Audience**

Wireless operators, and CommScope partners and System Integrators.

### Objectives

After studying this video, the student is expected to be able to:

- Understand the general architecture of an ION-M system.
- Determine how ION-M could be deployed in various applications.
- Understand the various optimization parameters available through the ION-M Graphical User Interface (GUI).

Est. duration (40 Mins)





# [ND6442] ION-U Solution eLearning

#### Overview

This video provides the learner an overview of ION-U, one of CommScope's DAS platforms.

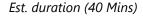
#### **Target Audience**

Wireless operators, and CommScope partners and System Integrators.

#### Objectives

After studying this video, the student is expected to be able to:

- Understand the Architecture, Components and Connections for the ION-U system.
- Determine the routing of subrack cabling, subrack controller options, ethernet vs. bus communications, rules of subrack addressing and cabling.
- Understand the ideal DAS deployment process.





# [ND4111] ION-B System Operations and Commissioning Overview

#### Overview

This eLearning training flow is designed to provide an overview of the basic Operations and Commissioning tasks for the ION-B system.

# **Target Audience**

Wireless operators, and CommScope partners and System Integrators.

# Objectives

After studying this video, the student is expected to be able to:

- Understand the overall ION-B System Architecture.
- Navigate the ION-B Graphical User Interface (GUI).
- Describe the ION-B Commissioning Process.
- Recognize common ION-B issues and the process to resolve them.

Est. duration (3 Hours)



# **Instructor-Led Training**

CommScope's DAS and Small Cell instructor-led courses offer students in class training that typically runs from 1 to 2 days. Our instructor-led courses are offered virtually, via online training platforms, or at the CommScope training center in Buchdorf Germany. The installation and commissioning certification training courses include PowerPoint presentations, hands-on exercises covering equipment configuration and GUI (Graphical User Interface) operations. Any certified training can be requested as private training for groups of 8 max individuals and will be quoted on an individual basis. For more information on private training, see <a href="Private Training Sessions">Private Training Sessions</a>.

	EMEA Region Courses \ Audience	Installation & Commissioning	System Operations	System Engineering	Project Management
	Instructor Led Training				
ND6475	Era Installation & Commissioning Certification Workshop (2 days)	Х			Х
ND6490	ERA Operation and Maintenance (1 day)		Χ	Χ	Χ
ND6472	ION-M Installation & Commissioning (1/2 day)	Х			Х
ND6476	6 Node A+/AM Installation, Commissioning & Maintenance (1day) X X X X				Χ
ND5110	AIMOS Technical Solution Overview (1/2 day)				
ND7210	ONECELL Technical Solution Overview (1/2 day)	Х	Χ	Χ	Χ
ND7222	ONECELL On-Site Installation & Commissioning (1/2 day)	Х			Χ
ND7230	ONECELL System Design (1/2 day)		Χ	Χ	Χ
ND7240	ONECELL DMS Operation & Maintenance (1/2 day)				

#### Certification

Upon completion of a certification course the learner will receive a 2-year certificate. Once the certification expires, the student may recertify by completing either the eLearning recertification course to receive an additional year of certification or by completing the ILT certification course to receive an additional 2 years of certification.

# [ND6475] ERA Installation & Commissioning

#### Overview

This 2-days certification course is designed to enable learners to set-up and commission an Era system with various configuration types consisting of the important components - CAN, WIN, TEN and 1<sup>st</sup> and 2<sup>nd</sup> generation Access Points UAP/UAP2, CAP/CAP2.

## Target Audience & Class Size

All CommScope partners and any integrators that are involved with or need a detailed understanding of the installation and commissioning of an ERA System. The class min/max size is 3/10.

#### Curriculum

Upon completing this ILT course, students will verify they're able to:

- Define CommScope's ERA system components, specifications, and architecture.
- Demonstrate how correctly install an ERA system to prepare the system ready for commissioning.
- · Properly commission an ERA system in a lab environment



#### Certification

Upon completion the student will receive a 2-year ERA Installation & Commissioning certificate. If you need to recertify on ERA Installation & Commissioning, see the <u>Recertification</u> section in this document.

# [ND6490] ERA Operation and Maintenance

#### Overview

This 1-day certification course is designed to enable learners to operate, troubleshoot and maintain an ERA system. This is an instructor led classroom course that includes PowerPoint presentations along with live GUI sessions.

#### Target Audience & Class Size

All CommScope partners directly involved in the operations and maintenance of an ERA system. The class min/max size is 3/10.

#### Curriculum

Upon completing this ILT course, students will verify they're able to:

- Understand and define common terminology regarding the ERA system.
- Explain the possible different architectures of the ERA system.
- Explain the purpose and function of the major components.
- Explain the major signal paths through an ERA system.
- Use the Graphical Users Interface to troubleshoot common alarms.
- Identify how to resolve alarms using CommScope documentation.



#### Certification

Upon completion the student will receive a 2-year ERA Installation & Commissioning certificate. If you need to recertify on ERA Operation and Maintenance, see the <u>Recertification</u> section in this document.

# [ND6472] ION-M Installation & Commissioning

#### Overview

This 1-day certification course is designed to enable learners to perform the installation of ION-M DAS networks for cellular band. This is an instructor led classroom course that includes PowerPoint presentations along with live GUI sessions.

# Target Audience & Class Size

All CommScope partners and any integrators that are involved with or need a detailed understanding of the installation and commissioning of an ION-M system. The class min/max size is 3/10.



#### Curriculum

Upon completing this ILT course, students will verify they're able to:

- Understand and define common terminology regarding the ION M System
- Explain the possible different architectures of the ION M using various types of Master Unit configuration and Remote unit types.
- Explain the purpose and function of the major components.
- Use the Graphical Users Interface to commission, troubleshoot common alarms and view/edit configuration.

#### Certification

Upon completion the student will receive a 2-year ION-M Installation & Commissioning certificate. If you need to recertify on ION-M Installation & Commissioning, see the <u>Recertification</u> section in this document.

# [ND6476] Node A+/AM Installation, Commissioning & Maintenance

#### Overview

This 1/2 - day certification course is designed to train the students to install and commission a Node A+ for cellular operator use. This is an instructor led classroom course that includes PowerPoint presentations along with live GUI sessions.

#### **Target Audience & Class Size**

All CommScope partners and any integrators that are involved with or need a detailed understanding of the installation and commissioning of a Node A+. The class min/max size is 3/10.

#### Curriculum

Upon completing this ILT course, students will verify they're able to:

- Understand and define common terminology regarding Node 2A/4A+ system.
- Explain the possible different types of deployment of NodeA using various types of cards, cabling, and antenna.
- Explain the purpose and function of NodeA+ that is responsible for improvement in the Mobile coverage after collecting input from the Donor antenna.
- Use the Graphical User Interface to commission, troubleshoot common alarms, view/edit configuration and to connect OMC.



#### Certification

Upon completion the student will receive a 2-year NodeA+/AM Installation, Commissioning & Maintenance certificate. If you need to recertify on NodeA+/AM Installation, Commissioning & Maintenance, see the Recertification section in this document.



# [ND5110] AIMOS Technical Solution Overview

#### Overview

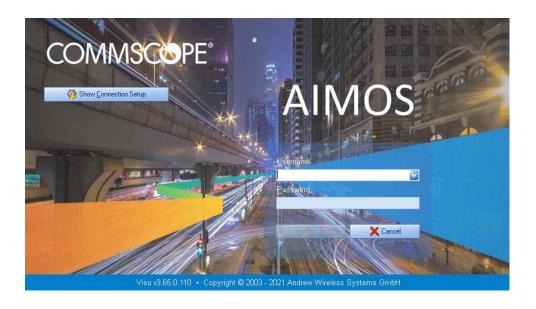
This 1/2 - day course is designed to enable students to perform, network operation from AIMOS visualization.

### Target Audience & Class Size

All CommScope partners and NOC engineers involved with or need a detail understanding of AIMOS operation.

#### Curriculum

- Explain the basic AIMOS architecture/structure.
- Explain the communication principle between Repeater and AIMOS
- AIMOS GUI usage
- Integrate DAS/Repeater into AIMOS
- Login DAS system with AIMOS and perform basic operations.
- Interpret incoming alarms.
- · Fault management
- Configuration management
- Performance management
- Network Element Management



### [ND7210] ONECELL Technical Solution Overview

#### Overview

The course will provide a detailed summary of the OneCell Solution. It highlights the benefits of implementing the solution, the system components and connectivity requirements. The course also provides an overview of the system installation, configuration, monitoring and performance management processes.

#### **Target Audience & Class Size**

This course is designed for management and technical support personal needing a more in-depth understanding of the OneCell Solution. The class min/max size is 3/10.

#### Curriculum

- Describe the OneCell Solution.
- Identify the different hardware units the comprise a OneCell system.
- Define the basic connectivity requirements for the system.
- Describe the basic process of installing and configuration the hardware units.



# [ND7222] ONECELL Installation & Commissioning

#### Overview

This course is designed to enable students to perform the On-site installation and commissioning activities for a OneCell Solution. Includes detailed instructions for installation, commissioning and acceptance testing for the Baseband Controller, Radio Points and System Switches

### **Target Audience & Class Size**

All CommScope partners and any integrators that need to be certified in the installation and commissioning of a OneCell Solution. The class min/max size is 3/10.

#### Curriculum

- Identify the different hardware units the comprise a OneCell system.
- Define the process and requirements for installing OneCell system components.
- Describe the installing and commissioning steps to bring up the OneCell hardware units
- Identify the required post-installation tests and documentation.





# [ND7230] ONECELL System Design

#### Overview

This course is designed to enable students to perform the Design of a OneCell System solution. The course includes instructions for performing the Site Survey, Capacity Planning, Design of the Fronthaul and Backhaul and System Timing solution. In addition to the course there is also an Assessment Exercise for those desiring to be certified in OneCell system design.

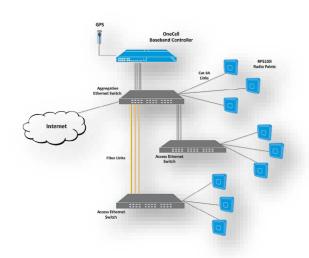
#### Target Audience & Class Size

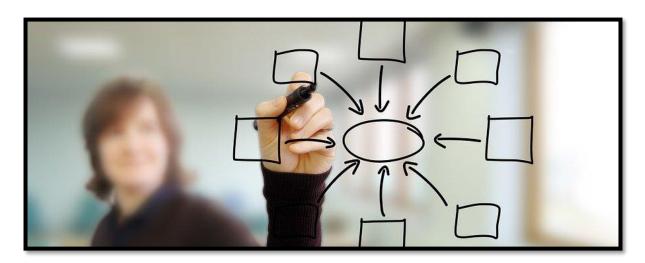
All CommScope partners and any integrator that's involved with or needs a detailed understanding of the Design of a OneCell System solution. The class min/max size is 3/10.

# Objectives

Upon completion the learning will be able to:

- Determine the number and location of the Baseband Controller(s)
- Determining the number of Radio Points and placement for optimal performance
- Identify the different hardware units the comprise a OneCell system.
- Define the process and requirements for installing OneCell system components.
- Identify the process of installing and commissioning the OneCell hardware units and system.





"The instructor did an excellent job of gauging my level of understanding and would use analogies to convey the subject matter. I have been removed from the technical aspect of DAS and I appreciated that."

Anonymous Student



# [ND7240] ONECELL DMS Operation & Maintenance

#### Overview

This course is designed to understand the function of DMS console in Operation and Maintenance of OneCell devices.

### Target Audience & Class Size

All CommScope partners and any integrators that are involved with performing a OneCell installation and commissioning, monitoring alarms/performance using DMS console.

#### Curriculum

- How exactly DMS and OneCell Baseband Controller communicates with each other.
- Device management and the Network management through DMS portal
- Alarm/Fault and performance management of a OneCell network
- Step by step process of Plug and Play of a device



# Recertification

Re-certification on a product can be completed in two ways, either by taking the original Instructor Led certification course again and receiving a new 2-year certification, or by completing our eLearning recertification courses (listed below) a receiving a new 1-year certification. The eLearning recertification course is a self-paced option, enabling the student to complete eLearning learning modules and instructional videos at their own pace, which is followed by a course exam. When a student successfully completes the eLearning recertification option, they will be recertified for 1 year. After the 1-year recertification expires, and they want to recertify again, they are required to attend the instructor led certification course and will receive an additional 2 years of certification. \*Note the eLearning recertification course must be taken within 1 month of certification expiration.

# [ND6485] ERA Installation & Commissioning Recertification

#### Overview

This eLearning training course allows those who have completed the [ND6460] ERA Installation & Commissioning course to recertify their certification for 1 year before having to attend a classroom certification course.

#### Pre-requisites

Successful completion of [ND6475] ERA Installation & Commissioning.

#### **Target Audience**

Any personnel who have successfully completed CommScope's [ND6475] ERA Installation & Commissioning course.

### Objective

This eLearning training course is designed to recertify the student's ability to design, install and commission CommScope's ERA DAS solutions. The student must complete the eLearning training modules and pass the course exam.

#### Certificate

Upon completion of the eLearning recertification course the student will receive a 1-year ERA Installation & Commissioning certificate. After the 1-year certification has expired, the student must attend the instructor led certification course to maintain active certification for the product.



# [ND6487] ERA Operation & Maintenance Recertification

#### Overview

This eLearning training course allows those who have completed the [ND6467] ERA Operation & Maintenance course to recertify their certification for 1 year before having to attend a classroom certification course.

#### **Pre-requisites**

Successful completion of [ND6490] ERA Operation & Maintenance.

#### **Target Audience**

Any personnel who have successfully completed CommScope's [ND6490] ERA Operation & Maintenance course.

### Objective

This eLearning training course is designed to recertify the student's ability to operate, troubleshoot and maintain an ERA system. The student must complete the eLearning training modules and pass the course exam.

#### Certificate

Upon completion of the eLearning recertification course the student will receive a 1-year ERA Installation & Commissioning certificate. After the 1-year certification has expired, the student must attend the instructor led certification course to maintain active certification for the product.

# [ND6480] ION-M Installation and Commissioning (Re-Certification)

#### Overview

This Re-certification course is designed to train the students with updates to perform the installation of ION-M DAS networks.

# **Target Audience**

Any personnel who successfully completed CommScope's [ND6470] ION-M Installation & Commissioning Certification Workshop.

#### Curriculum

- New functions in Software
- New components and functions in Hardware
- · Practical workshop, hands on equipment
- Special questions and solutions using our equipment.
- Troubleshooting
- Discussion, questions, and answers on everyday work



# [ND6486] Node A+ Installation & Commissioning (Re-Certification)

#### Overview

This certification course is designed to train the students with updates to install and set-up a Node A+ for cellular operator use.

### **Target Audience**

Any personnel who have successfully completed CommScope's [ND6476] Noe A+ Installation & Commissioning Certification Workshop.

#### Curriculum

- New functions in Software
- New components and functions in Hardware
- · Practical workshop, hands on equipment
- · Special questions and solutions using our equipment
- Troubleshooting
- Discussion, questions and answers on everyday work

# **Legacy Product Support**

If there is a need for training on legacy products, such as Prism, ION-B, ION-M and ION-U, we can assist you with that. You'll need to submit an email request to icn\_training@commscope.com, and in the request please identify the product type, specific training need (i.e. Operations, Maintenance, etc.), the number of personal that need the training and the desired timeframe for delivery of the training. We will evaluate the request and reply with potential options to address your needs. Regarding the timeframe for delivery, there will normally be a minimum of 60 days required, from the time the desired training is agreed upon, to the delivery date of the actual training session.



Legacy Product Training Areas
ION-M Operation & Maintenance
ION-U Installation & Commissioning
ION-U Operation & Maintenance
Prism Installation & Commissioning
ION-B Operation & Maintenance

# **Discontinued Courses**

The following training courses have been discontinued and will no longer be available on CommScope University as eLearning or scheduled for Instructor Led delivery. Where applicable an alternative course is listed in the table.

Discontinued Courses	Status/Alternative Course
ND4110 Introduction to ION-B	ND4111 ION-B System Operations and Commissioning Overview
ND6443 ION-E Installation & Commissioning	ND6475 ERA Installation & Commissioning
ION-E Solution (eLearning)	ND6463 ERA Overview
ION-E iBwave Template Configuration	ND6464 ERA RF Design
ION-U Solution (eLearning)	Discontinued



# **Webinars**

CommScope regularly offers webinars on various topics that are often recorded and posted to our learning management system to be viewed for convenience or future reference. Please contact us to inquire about or request other topics. Mobility Solutions Training webinars can be requested via email and will be reviewed on a case-to-case basis. To request a webinar, you can email a request to icn\_training@commscope.com





# **Cancellation and No-Show Policy**

CommScope's Mobility Solutions Training will adhere to the following cancellation policy regarding all training courses. By registering for any course, you acknowledge that you agree and consent to the terms of this cancellation policy. CommScope is not responsible for any losses that may be incurred due to a failure to abide by this cancellation policy.

ALL CANCELLATIONS MUST BE SENT IN WRITING TO: icn training@commscope.com

#### E-Learning Training Cancellation Policy:

The following policy shall apply to CommScope's Mobility Solutions Training E-Learning Training classes. Credit Card payments will be charged upon registration for the class.

Cancellation requests must be made in writing by emailing <u>icn training@commscope.com</u>Except for the issuance of a voucher to a participant in the limited circumstances as provided below, CommScope shall not be responsible for any loss incurred by the participant as a result of cancellation.

Cancellation requests must be made within 48 hours of course registration, if none of the course materials have been accessed. Cancellations that meet these criteria will be issued a voucher\* equal to the amount that the participant paid for the current registered e-learning course. This voucher may be applied toward a future e-learning training course offered through CommScope's Mobility Solutions Training site. This voucher must be used within one (1) year of the original registration date. No vouchers will be honored after such one (1) year period.

\* Vouchers are the customary method of resolving cancellations within the policy time period noted above. Alternatively, a participant eligible for a voucher can request for approval for a credit card refund of the amount paid by the participant for the current registered class, and CommScope shall determine in its sole discretion whether to grant approval. Such requests for refunds must be sent to <a href="mailto:icn training@commscope.com">icn training@commscope.com</a>

#### Instructor-Led Training Cancellation and No-Show Policy:

The following policy shall apply to CommScope's Mobility Solutions Training Instructor-Led Training classes. Credit Card payments will be charged upon registration for the class. If you wish to cancel or reschedule a class for which you have registered and been confirmed for in writing, we will try to accommodate your request, subject to the Cancellation Policy. Except for the issuance of a voucher or a refund to a participant in the specific, limited circumstances as provided below, CommScope shall not be responsible for any loss incurred by the participant as a result of cancellation.



Table 1 - Instructor-Led Training Cancellation and No-Show Policy			
Policy Area	Timing	Action	
Participant Cancels	10 days or more from scheduled training class	CommScope will issue a voucher* equal to the amount paid for the current registered class to apply toward a future in-person training offered through the CommScope Mobility Solutions Training site. This voucher must be used within one (1) year of the original class date. No vouchers will be honored after such one (1) year period.	
	9 days or less from scheduled training class	No voucher or refunds will be made for cancellations within nine days of the scheduled training date.	
No Shows		No vouchers or refunds will be made for "No Shows" (a "No Show" is a person who registers for the training but does not cancel or attend the training class).	
CommScope Cancels Class		If a training class that participant is registered for is cancelled by CommScope due to circumstances beyond its reasonable control (e.g. minimum class size requirements not met, weather, natural disasters, etc.) and participant chooses not to reschedule such training class, CommScope will issue a refund equal to the amount paid for such registered class.	
		CommScope also reserves the right to cancel registrations of its competitors, and no refund or voucher will be issued in such situation.	
Private Training Cancellations by Requestor	20 days or more from scheduled training class	All unrecoverable expenses will be deducted by CommScope from any payment received prior to reimbursement.	
Private Training Cancellations by Requestor	20 days or less from scheduled training class	This will be reviewed by CommScope, and any unrecoverable expenses will be deducted by CommScope from any payment received.	

Substitutions for another student are allowed with at least 24-hour notice prior to the class start date.





<sup>\*</sup> Vouchers are the customary method of resolving cancellations within the policy time period noted above. Alternatively, a participant eligible for a voucher can request approval for a credit card refund of the amount paid by the participant for the current registered class, and CommScope shall determine in its sole discretion whether to grant approval. Such requests for refunds must be sent to <u>icn training@commscope.com</u>

# **Contact Us**



Got questions on training programs or course pricing? We're here to help!

#### Mobility Solutions Training – 8am-5pm (GMT+2) (Mon-Fri)

• Email: icn\_training@commscope.com

Website: <u>DAS and Small Cell Training</u>

Got questions on product support? We've got you covered!

#### **Mobility Solutions Technical Support – 24/7**

Website: www.commscope.com/wisupport

• Phone: 1-888-297-6433

