



The **OSA 54XX Series** is a family of compact and cost-effective synchronization distribution and assurance devices that bring the power of Syncjack™ to any network. Following a toolbox approach, the family members of the OSA 54XX Series can be utilized in a variety of network synchronization applications.  
 OSA-ACCESS: 5410/11/12/20/21/22; OSA-CORE: 5430/40  
 OSA-MINI: 5405/5401; **Magnetic Cesium Clock: OSA3230B**

**Ensemble Sync Director** is an extension of Ensemble Controller Software for timing delivery management and sync assurance. Ensemble Controller is an advanced platform for reliable, secure and user-friendly management and surveillance of ADVA FSP and OSA networks, with full FCAPS support.

## Objective and Level

This training course introduces the full **OSA 54xx family** and magnetic **Cesium clock OSA3202B** with basic features, using CLI and GUI for provisioning. Students will be introduced to basic synchronization concepts including PTP, NTP and SyncE. Throughout the training we introduce some features of Ensemble SyncDirector - a useful tool which helps to understand OSA system design and protection (5430/40).

The last day focuses on using **Ensemble Sync Director** for Management and Monitoring of OSA services.

**This class is applicable to different industries (Broadcasting, Power and Enterprise).**

**Level: Introductory**

*Please, note: For installation and administration of Ensemble Controller Software, we offer a separate full Ensemble Controller training.*

*Contact us for an extended class on synchronization theory.*

*Please, note:*

*In case the training will take place remotely, it will be provided using GoToTraining or similar application – we will arrange a short test of the tool upfront the training – you will get invited for both – test and training session.*

*For the practical exercises trainer will hand over keyboard and mouse to one student at a time for e.g. a configuration exercise. This requires the student having the desktop application of GoToTraining installed.*

**Recording a session is not permitted**

## Audience and Benefits

- The class is aimed for beginners to Synchronization as well as experienced users who need to get familiar with the OSA 54xx devices, the OSA3230B and Ensemble Sync Director.
- Certificate of attendance; exam available – to be ordered separately
- Small courses, 8 attendants maximum

Agenda	THEORY	PRACTICE
	<ul style="list-style-type: none"> <li>• Basic introduction to Synchronization</li> <li>• System overview and comparison of the different OSA 54XX products</li> <li>• Sync Delivery and Sync Assurance applications (PTP, NTP &amp; SyncJack™)</li> <li>• Cesium Clock 3230B</li> <li>• Redundancy Principle on 5430/40</li> <li>• Introduction to Ensemble Controller Software</li> </ul>	<ul style="list-style-type: none"> <li>• Setting up a system and its components</li> <li>• Implementing DCN</li> <li>• Setting up PTP, NTP clock</li> <li>• Using GUI &amp; CLI command line</li> <li>• Database Backup &amp; Restore</li> <li>• Software upgrade</li> <li>• SyncJack™ configuration</li> <li>• Using Ensemble Sync Director for Management and Monitoring of OSA services</li> </ul>



# INSTALLING & OPERATING the OSA 54xx Family; Using Ensemble SyncDirector 4.5 days *remote* or *classroom* technical training

## Pre-requisites

Engineer or technician having a background in telecommunication networks.

## Contact

Training: [training@adva.com](mailto:training@adva.com)

<b>Day 1</b> 9am – 5pm	<b>Basic introduction to Synchronization (1/2 day)</b> <b>Setup of OSA 5410/11/12/20/21/22/30/40</b> <b>Sync Delivery using SyncE</b>
<b>Theory</b>	<ul style="list-style-type: none"> <li>• Basic introduction to Synchronization (3h) <ul style="list-style-type: none"> <li>○ The concept of PTP, NTP and SyncE technology</li> <li>○ Overview of the product family (afternoon) (1h)</li> </ul> </li> </ul>
<b>Lab Exercises</b>	<ul style="list-style-type: none"> <li>• Basic Setup of the OSA 5410/11/12/20/21/22/30/40 (3h) <ul style="list-style-type: none"> <li>○ Using local management port RS232 and DCN Ethernet port</li> <li>○ Navigating with WebGUI</li> <li>○ DCN Setup (IP settings)</li> <li>○ Basic Configuration (Name, Time, User)</li> </ul> </li> </ul>
<b>Day 2</b> 9am – 5pm	<b>Time &amp; Sync clock; PTP, NTP &amp; SyncE</b>
<b>Theory</b>	<ul style="list-style-type: none"> <li>• Time &amp; Sync clock configuration (GNSS) (2h) <i>morning</i></li> <li>• PTP &amp; NTP port configuration (2h) <i>afternoon</i></li> </ul>
<b>Lab Exercises</b>	<ul style="list-style-type: none"> <li>• Setup of the time &amp; sync clock on all OSA devices (<i>not on 5401/05 devices</i>)</li> <li>• PTP &amp; NTP port configuration on all OSA devices (<i>not on 5401/05 devices</i>)</li> </ul>
<b>Day 3</b> 9am – 5pm	<b>Cesium Clock, ePRTC, Maintenance</b> <b>Redundancy on OSA 5430/40</b>
<b>Theory</b>	<ul style="list-style-type: none"> <li>• Cesium theory and hardware (3230B) (2h)</li> <li>• ePRTC theory (1h)</li> <li>• Redundancy on OSA 5430/40</li> </ul>
<b>Lab Exercises</b>	<ul style="list-style-type: none"> <li>• with e.g. OSA 5420 <ul style="list-style-type: none"> <li>○ Port Enabling</li> <li>○ Database Backup &amp; Restore</li> <li>○ Software upgrades</li> <li>○ Performance Monitoring</li> <li>○ Replacing modules on 5430/40 <ul style="list-style-type: none"> <li>▪ Power Supply, Extension Card, CSM</li> </ul> </li> </ul> </li> </ul>
<b>Day 4</b> 9am – 5pm	<b>Introduction to SyncJack™</b> <b>Introduction to 5401/5405</b>
<b>Theory</b>	<ul style="list-style-type: none"> <li>• Theory on SyncJack™ (1h)</li> <li>• Introduction to 5401/5405</li> <li>• Short presentation on antenna installation (15 min) (<i>if requested</i>)</li> </ul>
<b>Lab Exercises</b>	<ul style="list-style-type: none"> <li>• Setting up SyncJack™ probe (1 h)</li> <li>• Connection and configuring 5401/5405 with CLI (2h)</li> </ul>

Day 5 (1/2) 9am – 1pm	Synchronization Management and Monitoring using Ensemble Sync Director
Theory	<ul style="list-style-type: none"><li>• Introducing Ensemble Controller with focus on Ensemble Sync Director</li></ul>
Lab Exercises	<ul style="list-style-type: none"><li>• Best practices for monitoring and managing synchronization using Ensemble Sync Director</li><li>• Synchronization views for SyncE and PTP, internal &amp; network timing topology views</li><li>• GNSS Assurance</li><li>• Monitoring Sync Quality using SyncJack™ with PTP (Time &amp; Phase) Assurance</li></ul>