



# PNA-X Operation and Application Training Course Overview

Course Numbers:  
H7215X-100

## Gain a better understanding of the PNA-X product operation

### Course overview

This is a two-day course that provides an introduction to the PNA-X, basic network analyzer theory, PNA-X block diagram architecture, front panel navigation, and network analyzer calibration. Optional 1-day modules are also available to gain immediate benefits and experience on the many different measurement application capacities of the PNA-X network analyzer.

### What you will learn

- Functions of a network analyzer
- Front panel operations of the PNA-X
- Optional 1-day Modules:
  - Time Domain
  - Mixer Test
  - Amplifier Test

### Specifications

#### Course type

User training

#### Audience

Engineers new to the PNA-X

#### Prerequisites

Knowledge on RF and microwave fundamentals

#### Course length

Two day Basics  
Four days with optional modules

#### Course format

Lecture with demos

### Detailed course agenda

#### Introduction

- Class overview and timeline
- What you can expect to learn
- What is a PNA-X

#### Network Analyzer Basics

- Light analogy
- S-parameters
- Basic network analyzer block diagram

#### PNA-X product overview

- Option list
- PNA-X block diagram
- Test set configurations
  - RF standard configuration
  - Forward/reverse measurements
  - Configuration options
  - Various configuration setups
  - Microwave standard configurations
  - Configuration options
  - Various configuration setups

#### Front Panel Overview

- Test methodology
- Hibernation
- Controlling the instrument
- Window
- Channels
- Traces
- Displays
- Markers
- Toolbars
- Printing

- Calibration sets and instrument states
- Recall states
- Path configuration function
- Help function

#### Calibration

- Measurement errors
- Calibration types
- Error models
- Calibration on the PNA-X
- Non-insertable devices
- New calibration features
  - Cal- Set Manager
  - Enhanced calibration wizard
  - Full 4-port calibration
  - Adapter- removal cal
  - Sliding- load cal
  - Multiple standards cal
  - Source power cal
  - Receiver power cal
  - Performance verification

#### Application (1 day optional module)

- Time Domain
- Mixer Test
- Amplifier Test

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