

# Keysight Technologies

## Wireless LAN Technology Fundamentals

### Course Overview

Course Number:  
H7216B #337

#### Course Overview

Keysight Technologies, Inc. offers this course to provide the student with an overview of the standards for Wireless Networking and their applications. It includes technical detail of the IEEE 802.11 standards and protocols. It ends with a discussion of RF design issues and interoperability of Wireless LAN (WLAN) devices and the concepts of OFDM being deployed in the newer generation of WLAN standards.

#### What you will learn

At the end of this course you will be able to:

- Know the trends and driving force behind wireless networking technology
- Recognize technical limitations and competing technologies.
- Describe the IEEE 802.11 (both a and b) System Level Architecture and understand the Physical and Medium Access Control protocols that support the architecture.
- Describe the timing, power management and security techniques for IEEE 802.11 WLAN systems.
- Understand the concept of OFDM used in IEEE 802.11a

#### Specifications

##### Course Type

Technology training

##### Audience

Engineers who need to understand the basic principles of Wireless LAN technology and in particular IEEE 802.11 a and b standards

##### Prerequisites

None

##### Course Length

1 day

##### Course Format

Lecture and demonstration

##### Delivery Method

Face to face, at customer site

#### Detailed Course Agenda

Overview of Wireless Networking Technologies

- Why use Wireless Networking?
- Trends
- Comparison of Types of WLAN

Understanding How Wireless LAN Works

- Advantages of Wireless LAN
- Applications
- Topologies
- Architecture (Physical and Medium Access Control Layer)

Comparison of the Standards

Standardization of Wireless LAN

IEEE 802.11b Wireless LAN Standard

- IEEE 802.11 Wireless LAN Architecture
- IEEE 802.11b Physical Layer
- IEEE 802.11b Medium Access Control (MAC) Layer protocol
- IEEE 802.11b MAC Layer Services
- Data Transfer
- Association/Re-association
- Power Management
- Authentication
- Security and Privacy

Interoperability of IEEE 802.11 Devices

IEEE 802.11a Wireless LAN Standard

Orthogonal Frequency Division Multiplexing in IEEE 802.11a

Conclusions and Summary

References for Additional Information



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A personalized view into the information most relevant to you.

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