



**Become a Certified
EION Wireless Engineer for WiMAX, WiFi
& Wireless Networks Technology**



WiMAX RF Planning, Network Design, and Implementation

Course Outlines

- **WiMAX Planning, Coverage and Capacity**
 - Performing Site Surveys
 - Calculating the Link Budgets
 - RF and Capacity Planning
 - Analyzing the Data Stream
 - Frequency Plan & Allocation
 - Principles of Frequency Reuse
 - Determining Line of Site
 - Computing Fresnel Zone
 - Adaptive Modulation and Cell Planning
 - Subscriber Station (SS)
 - Base Station (BS)
 - Base Stations Locations
 - BS Frequency Assignments
 - Complete Coverage (no gaps)
 - Interference sources
- **Design a WiMAX Network**
 - Carrier-Grade Infrastructure Equipment
 - Backhauling Base Stations
 - Selecting an Appropriate Network Topology
 - Point to Point Network
 - Point to Multipoint Network
 - Use of Repeaters
 - Sectorization
 - Polarization Diversity
 - Cell Splitting
 - Line of Sight and Non-Line of Sight
 - Absorption, Reflection, and Diffraction considerations
- **Implementing a WiMAX Network**
 - Hardware Check List
 - Bench Testing
 - Integrating Wireless with Wireline Infrastructure
 - IP Connectivity
 - Service Deployments
 - Security Configuration
 - QoS Configuration
 - Management and Monitoring
 - Real WiMAX networks implementations Examples
 - Network Performance Tasting (Throughput & Latency)
 - Network Troubleshooting
 - Field Acceptance Testing (FAT)

Who Should Attend

This course is designed for anyone who is involved in a WiMAX project deployment. Anyone who needs to implement wireless extensions to an existing MAN-Network. Design engineers, Field engineers, Test engineers, software and hardware engineers will benefit from the course.

Course length: 4 Days

Prerequisites: Basic understanding of RF fundamentals, wireless and radio communications is recommended

Get Certified



WiMAX & EION Certified Wireless Engineer

Move your career ahead by distinguishing yourself in the wireless industry with EION/Wi-LAN professional certification

Certification Courses – First TWO courses are required for WiMAX Essentials Wireless Engineer Certificate

1. RF and Wireless Fundamentals
2. WiMAX Fundamentals
3. WiMAX RF Planning, Network Design, & Implementation
4. 802.16e Mobile WiMAX Fundamentals

EION Product Specific Courses – Each Course qualify for EION Wireless Engineer Certificate

1. Libra MAX Network Design, Installation, & Troubleshooting
2. Libra 5800 Network Design, Installation, & Troubleshooting
3. Ultima3 Network Design, Installation, & Troubleshooting
4. VIP 110-24 Network Design, Installation, & Troubleshooting
5. Ranger 5145 Network Design, Installation, & Troubleshooting



2923 – 5th Avenue NE
Calgary, Alberta, T2A 6T8, Canada
Tel: +1 (403) 695-7851
Africa, Middle East & Central Asia Division
www.eionwireless.com

Hassan Abdelghany
Vice President of Sales
Lebanon Region Office
Mobile: +961-3-775-254
Fax: +961-7-530-786
Email: Hassan@eion.com

Dr. Waleed Hosny
International Applications Engineer
Cairo, Egypt
Mobile: +2012-212-2845
Fax: +2012-219-8595
Email: whosny@eion.com