

Ceragon Training Syllabus

5G E2E Essentials for Business Leaders

e-learning

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Introduction

The **5G E2E Essentials for Business Leaders** is a theoretical fundamentals course that aims to provide you with an understanding of the 5G use cases, new business opportunities and challenges, explaining the fundamental principles, requirements and implementation solutions.

After this course you will understand what the key features and benefits of the products forming the Ceragon's 5G Ready Microwave Networks portfolio.

Learning Objectives

Upon completion of this course the participants will be able to:

1. Understand what 5G means, what are the opportunities, use cases and challenges
2. Know the evolution of the cellular generations leading to 5G
3. Understand the 5G requirements and ecosystem
4. Explain the architecture and principles of 5G networks
5. Introduce the Ceragon IP-50 Portfolio | Disaggregated solutions
6. Know how to implement Ceragon products in 5G Networks | Use Cases
7. Understand the key features to support the 5G requirements

Target Audience

The Target audience for this course is:

Business Leaders and Entrepreneurs, Operational, Project and Technical Managers.

Learning Situation

This course is a theoretical e-Learning course with a duration of 5 hours.



Agenda



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5G E2E Essentials Agenda

1. Introduction
 - 1.1 What is 5G? Opportunities and Challenges
 - 1.2 In a nutshell: What is new in 5G?
 - 1.3 Why 5G? Use Cases and Requirements
 - 1.4 Who makes 5G? Standardization Organizations
2. How did we get to 5G: History & Evolution
 - 2.1 Cellular generations leading up to 5G
 - 2.2 Radio Access Network Evolution
 - 2.3 Core Network Evolution
3. The 5G Ecosystem
 - 3.1 5G actual deployments
 - 3.2 Operators' approach to 5G – deployment strategies
 - 3.3 RAN vendor eco-systems
 - 3.4 Market disruption
 - 3.5 End devices eco-system
 - 3.6 Industry organizations
 - 3.7 Wireless hauling in the 5G era
4. Disaggregated wireless hauling
 - 4.1 5G Wireless hauling challenges
 - 4.2 Disaggregated hauling Vales and Benefits
 - 4.3 Introducing the IP-50 Platform & Use Cases

Proprietary and Confidential

Course Content

The topics to be discussed during this training are:

1. Introduction to 5G

1.1. What is 5G: New Opportunities and Challenges

- 1.1.1. The 5G opportunities & challenges
- 1.1.2. Resolving the operators' 5G challenges
- 1.1.3. What's New in 5G in a Nutshell?

1.2. Why 5G: 5G use cases and requirements

- 1.2.1. Verticals for 5G (eMBB, URLLC, mMTC) and M.2083 goals
- 1.2.2. Enhanced Mobile Broadband
- 1.2.3. Residential Broadband (FWA)
- 1.2.4. Downstream Video (VoD) / Upstream Video
- 1.2.5. VR/AR/MR
- 1.2.6. Smart Homes / Smart Utilities / Smart Cities (5G IoT)
- 1.2.7. Industrial IoT (IIoT)
- 1.2.8. Connected Vehicles (V2X)
- 1.2.9. eHealth / Telemedicine
- 1.2.10. 5G Spider Diagram for applications
- 1.2.11. IMT-2020 Goals

1.3. Who makes 5G: Standardization Organizations you should know (3GPP, ITU, ORAN, OCP/TIP)



2. How did we get to 5G: History & Evolution

2.1. The evolution of Mobile Networks

- 2.1.1. Cellular generations leading up to 5G
- 2.1.2. What's missing in 4G?
- 2.1.3. 5G usage categories
- 2.1.4. From 4G to 5G

2.2. Radio Access Network Evolution

- 2.2.1. The new air interface (sub-6 and mmW, BWs, MIMO, integrated subframe, densification)
- 2.2.2. Decomposed gNB (RU, DU, CU), functional splits and vRAN/cRAN
- 2.2.3. Integrated Access Backhaul
- 2.2.4. New RAN transport features (required rates, slicing, TSN, IAB)

2.3. Core Network Evolution

- 2.3.1. The evolution to network slicing
- 2.3.2. 5G core Service Based Architecture
- 2.3.3. AMF, SMF, UPF and MEC

3. The 5G Ecosystem

- 3.1. 5G actual deployments
- 3.2. Operators' approach to 5G – deployment strategies
- 3.3. RAN vendor eco-systems
- 3.4. Market disruption
- 3.5. End devices eco-system
- 3.6. Industry organizations
- 3.7. Wireless hauling in the 5G era

4. Disaggregated Wireless Hauling

- 4.1. 5G Wireless hauling challenges
- 4.2. Disaggregated hauling Vales and Benefits
- 4.3. Introducing the IP-50 Platform and use cases
- 4.4. IP-50C&S Key features and usage scenarios
- 4.5. IP-50FX Key features and usage scenarios
- 4.6. IP-50E Key features and usage scenarios

5. Course Summary

6. Course Evaluation and Feedback



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