5G NR Signaling

1 Hr. 24 Min.

LEARNING OBJECTIVE:

Upon completing the course, the participant will be able to:

- ➢ 5G NR Layer 2 Air interface between UE and GNB
- ➢ 5G L2 Channels - RRC Signaling
- ➢ Layer 2 Structure Of Sublayer
- ➢ 5G Protocol Layers
- ➢ CP &UP Traffic with 5GC Traffic

COURSE OBJECTIVE:

In this course the participant will understand the air interface and the protocol architecture for 5G. Discussion about the protocols, control plane and user plane stack for different interfaces will be done. We will also cover the protocol stack for non 3GPP untrusted access signaling and control plane stack.

WHO SHOULD ATTEND:

This course is designed to provide a in-depth knowledge about the 5G protocols in CP and UP so telecommunications professionals, network professionals and others who plan to work and gain knowledge in 5G wireless network can come on board.

TARGET AUDIENCE:

RF Engineers, 5G Engineers and Optimizers

INSTRUCTIONAL METHODS:

Lectures in Classroom, Virtual Classroom trainings, discussion, Questions & Answers. All participants will also receive comprehensive course materials.

COURSE OUTLINE:

1. 5G NR Layer 2 Air interface between UE and GNB

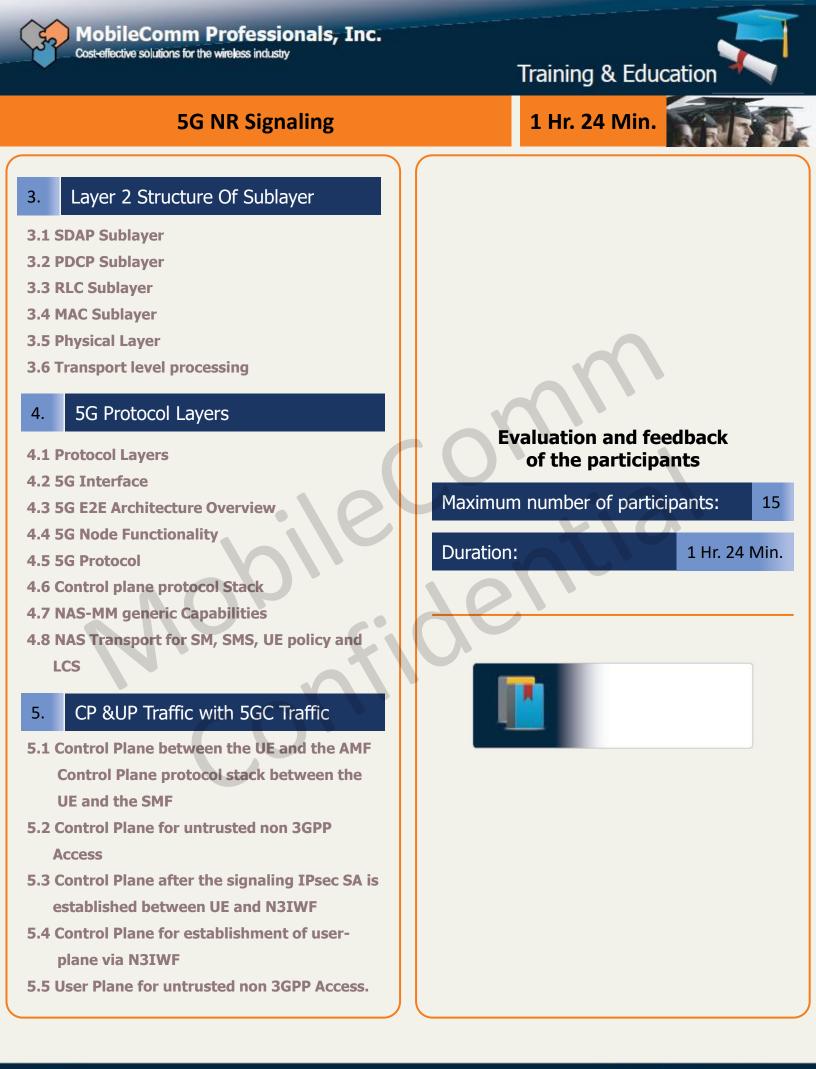1.1 Radio link L2 Interface Protocol

   Architecture

1.2 Radio Interface Protocol Architecture

2. 5G L2 Channels - RRC Signaling

2.1 5G NR Radio Channels

2.2 5G Layer 2 Air Interface

5G NR Signaling

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3. Layer 2 Structure Of Sublayer

3.1 SDAP Sublayer

3.2 PDCP Sublayer

3.3 RLC Sublayer

3.4 MAC Sublayer

3.5 Physical Layer

3.6 Transport level processing

4. 5G Protocol Layers

4.1 Protocol Layers

4.2 5G Interface

4.3 5G E2E Architecture Overview

4.4 5G Node Functionality

4.5 5G Protocol

4.6 Control plane protocol Stack

4.7 NAS-MM generic Capabilities

4.8 NAS Transport for SM, SMS, UE policy and LCS

5. CP &UP Traffic with 5GC Traffic

5.1 Control Plane between the UE and the AMF Control Plane protocol stack between the UE and the SMF

5.2 Control Plane for untrusted non 3GPP Access

5.3 Control Plane after the signaling IPsec SA is established between UE and N3IWF

5.4 Control Plane for establishment of user-plane via N3IWF

5.5 User Plane for untrusted non 3GPP Access.

Evaluation and feedback of the participants

Maximum number of participants:	15
Duration:	1 Hr. 24 Min.