

5G Radio Unit—(n32, n3, and n1) Hardware Overview

Duration

- Online: Self-paced

Contents

The 5G Radio Unit—(n32, n3, and n1) Hardware Overview Course describes the RU hardware, capabilities, installation, ports and cabling, and maintenance interface.

Who Should Attend

The 5G Radio Unit—(n32, n3, and n1) Hardware Overview course is designed for those seeking information about the features, capabilities, installation and maintenance overview. The course shows installation procedure for the Nokia-specific bracket mount, cable installation and Fujitsu-recommended procedures. LED indications are outlined for local maintenance activities.

Outline(

Introduction

- Trademarks and Copyrights
- Course Description
- Contact Information
- Technical Documentation
- Safety
- Tri-Band RU Hardware Overview
 - Objective
 - Overview
 - Overview (Cont.)
 - O-RAN Capable
 - ORAN Split 7-2X
 - Bands and Carriers — LTE and 5G NR
 - 4G LTE and 5G NR Operation
 - Bandwidths and Carrier Aggregation
- Tri-Band RU Hardware Capabilities
 - Objective
 - Capabilities of RU - Band 3
 - Capabilities of RU - Band 32
 - Capabilities of RU - Band 1
 - RU Common Operating Specifications
 - Optical Ports
 - RU DC Power Specifications

- RU Dimensions
- Antenna Port Configuration
- Tri-Band Hardware Installation
 - Objective
 - Installation Precautions
 - Installation Tools
 - Installation Checklists
 - Unpacking
 - Exploded View of Mounting Hardware
 - Connector Guards
 - RU Mounting Adapter
 - Nokia Bracket Installation
 - Complete Assembly with Nokia Adapters and Bracket
 - Torque Specifications for Mounting Hardware
 - Recommended Clearances
- Tri-Band RU Hardware Ports and Cables
 - Objective
 - Protective Ground Connection
 - Return and Ground Connections
 - Ground Lug Location on RU
 - Optical Ports
 - Optical Interface Connections
 - Installing Optical SFP
 - Fiber Cabling Connectors
 - Remove Protective Covers
 - Remove Caps and Pull Back Sub-Assembly
 - Insert Optical Cables into SFP
 - Connecting Optical Cable Assembly
 - Lock Enclosure
 - Mate Protective Covers
 - Alarm Connections
 - External Alarm Port
 - Remote Electrical Tilt
 - Installing AISG RET Cables
 - RF Connections
 - Installing RF Cables
 - RU Antenna Connectors
 - Torque Specs and Wrench – 4.3-10 Connectors
 - DC Power Connection
 - Installing DC Power Cables
- Maintenance Interface
 - Objective
 - The Maintenance Cover Location
- RU LED Location
- LED Status Indications
- RJ-45 and 1PPS Ports
- Removal and Return Procedures
- Removal Process
- Returning Defective Equipment
- Appendix A
 - References — Standards Bodies and Guidelines
 - RF Regulatory Bodies
- Appendix B
 - SFP List
- Appendix C
 - Standard Weatherproofing Procedure
- Appendix D
 - Link to Fiber Handling Guide
- Appendix E
 - Alarm Lists
 - Alarm Types – O-RAN and Vendor Specific
 - Critical Alarm Examples
 - Major Alarms
 - Minor Alarms