



10903D Understanding 4G VoLTE Smart Phone is a unique, self contained, easy to operate, training and platform that demonstrates the complete study and working of a 4G Dual SIM VoLTE handset to understand the fundamentals of Smart phone.

10903D is an ideal product for today's global technical professional. One of the main features of this kit is its real time operation and observation of signals/voltages. This kit introduces the user to the fundamental of 4G Dual SIM VoLTE mobile equipment and clears the concept underlying VoLTE technology in simple way. The touch screen display, SIM sockets and user interface section of Smart Phone i.e. Vibrator, Buzzer, Microphone, Speaker, Hands free port and camera have been exposed onboard with switched faults creation facility and test points for signal study. Another attractive feature is that user can make android application and IoT related application. Its enriched product tutorial containing useful technical information will help user in creating a full understanding of 4G Dual SIM VoLTE Smart Phone.

Features

- 1. Real time study and operation of Smart Phone
- 2. Supports to 4G VoLTE (Cat 4), 3G (UMTS/HSPA+), 2G (GSM/EDGE) Networks
- 3. 6.5" Touch screen full HD display
- 4. Full understanding of 4G Dual SIM VoLTE Smart Phone working principle and signals
- 5. Complete block diagram of a 4G Dual SIM VoLTE Smart Phone on-board
- 6. Easy identification of different parts and components of the system at a glance
- 7. Easy measurement of voltages and observation of waveforms on test points
- 8. Soldering free fault creation and troubleshooting
- 9. A testing Tool for Android based application and IoT related application.

Object

Study of:

- 1. Tx IQ/ Rx IQ signals and their constellation
- 2. Power Management Unit
- 3. Battery and Battery charging phenomena
- 5. User Interface section: Buzzer, Vibrator, MIC/Speaker, Hands free
- 6. Dual SIM interface section, SIM card detection
- 7. Touch Screen display section
- 8. Switch faults in all section of Smart Phone

Technical Specifications

Tx/Rx Frequency band

Cellular system : GSM - Band (2 / 3 / 5 / 8); WCDMA - Band (1 / 2 / 5 / 8); 4G VoLTE

(TDD) - Band (38 / 40 / 41), LTE (FDD) - Band (1 / 3 / 5 / 7 / 8 / 20) GSM / HSPA / LTE (850, 900, 1800, 1900 MHZ) UMTS/HSPA+ (850,

900, 1900, 2100 MHZ) 4G VoLTE (B1, 3, 5, 7, 8, 19, 20, 28, 38, 40)

Output power : +5...+33dBm/3.2mW...2W

OS & Processor Features

OS : Android 12, One UI Core 4.1

Chipset : Mediatek MT6765 Helio P35 (12nm)

CPU : Octa-core (4x2.3 GHz Cortex-A53 & 4x1.8 GHz Cortex-A53)

Note: Specifications are subject to change.

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GPU : PowerVR GE8320

Display Features

Display : PLS LCD

Size : 6.5 inches, 102.0 cm2 ($\sim 81.8\%$ screen-to-body ratio) Resolution : 720×1600 pixels, 20:9 ratio (~ 270 ppi density)

Memory & Storage Features

Internal storage : 64 GB RAM : 3 GB

Connectivity Features

Supported networks : 4G VoLTE UMTS/HSPA+ GSM/EDGE WLAN : Wi-Fi 802.11 b/g/n, Wi-Fi Direct

Bluetooth : 5.0, A2DP, LE

Positioning : GPS, GLONASS, GALILEO, BDS

Radio : Unspecified Wi-Fi hotspot : Yes Audio jack : 3.5 mm

Location services : GPS, A-GPS & GLONASS

Map support : Google Maps

GPS support : Yes

Camera Features

Dual : 13 MP, f/2.2, (wide), AF 2 MP, f/2.4, (depth)

Features : LED flash
Video : 1080p@30fps
Selfie Camera : Single 5 MP, f/2.2
Sound : Loudspeaker Yes

Video : Yes

General Information

Sensors : Accelerometer, Proximity.
SIM Support : Smart Dual SIM, Dual stand by

SIM Card type : Micro SIM

Battery type : Li-Polymer 5000mAH

Sound : Speaker and Earphone Jack (3.5mm)

On board sections : Battery Assembly, Power Management Unit, Charging Circuit, Touch

Display, Dual SIM Interface, User Interface

User interface : Buzzer, Vibrator, Mic, Speaker, Hands free port and display LEDs

Test points : More than 40 nos.

Switched fault : 25 nos.

 Power Supply
 :
 100 - 260V AC, 50/60 Hz

 Dimension (mm)
 :
 W 326 x D 252 113 x H52

 Weight
 :
 2.5 Kg (approximately)

 Operating condition
 :
 0-400C, 85% RH

Included Accessories:

Power Supply : 1 no.
Patch cord 16" : 2 nos.
Hands free kit : 1 no.
Mains cord : 1 no.
Mobile Charger & USB cable : 1 no.
SIM Adaptor : 1 no.
Mobile Battery : 1 no.

Note: Specifications are subject to change.