Scientech New

Built - in PC based Spectrum Analyzer

Scientech 2140 5G VoLTE Smart Phone Training System is a distinct, demonstration-based training solution. It offers a hands on lab experience of working and functioning of 5G Dual SIM VoLTE Smart phone. It focuses on in-depth knowledge and understanding the fundamentals of evolving 5G technology.

This training solution establishes a solid foundation in troubleshooting by simulated fault creation and helps students to expand their knowledge and skills. It comprises of a RF Spectrum Analyzer module that helps to study the RF signals on a PC. Together, the training platform and software provide a complete learning solution that accelerates 5G handset training and learning.

Scientech 2140 covers the complete circuit signal flow. Its enriched product tutorial containing useful technical information will help user in understanding of 5G Dual SIM VoLTE Smart phone.

Features

- A superior platform for study of 5G Smart phone and understanding 5G technology.
- Supporting bands: 5G Sub 6 FDD, 5G Sub 6 TDD Networks, along with 4G LTE FDD, 4G LTE TDD, 3G WCDMA, 2G GSM.
- 6.6" Touch screen TFT LCD full HD display.
- On-board elaborated block diagram of a 5G Smart phone.
- On-board display of various parts of Smart phone for easy identification at a glance.
- Section wise test points for easy observation signals/waveforms and voltage measurement.
- Understanding of working, and signals flow of various sections of a Smart phone.
- Soldering free fault creation and troubleshooting.
- USB interface for Spectrum Analyzer.

Scope of Learning

Study of:
- Real time operation of 5G Smart phone
- Identification and working of various parts of Smart phone viz.
  - Dual SIM interface section
  - Battery charging circuit
  - Touch screen display section
  - Power management unit
- Functioning of various User Interface section of Smart phone viz.
  - Buzzer
  - Vibrator
  - MIC/Speaker
  - Hands free
- Study the signal flow and switched faults in various sections of Smart phone
- Study of RF signals using RF Spectrum Analyzer module

Technical Specifications

Network/Bearer

Technology	:	5G Sub 6 FDD, 5G Sub 6 TDD, 4G LTE FDD, 4G LTE TDD, 3G WCDMA, 2G GSM
5G* TDD Sub 6	:	N38(2600), N40(2300), N41(2500), N78(3500)
5G* FDD Sub 6	:	N1(2100), N3(1800), N5(850), N7(2600), N8(900), N20(800), N28(700)
		(* As per the 5G network availability in particular region.)
4G TDD LTE	:	B38(2600), B40(2300), B41(2500)
4G FDD LTE	:	B1(2100), B2(1900), B3(1800), B5(850), B7(2600), B8(900), B20(800), B28(700)
3G UMTS	:	B1(2100), B2(1900), B5(850), B8(900)
2G GSM	:	GSM850, GSM900, DCS1800, PCS1900

Display

Size	:	16.72cm (6.6") full rectangle / 16.30cm (6.4") rounded corners
Resolution	:	1080 x 2408 (FHD+)
Technology	:	TFT LCD
Color depth	:	16M
Refresh rate	:	90Hz

Processor and OS

Chipset	:	MediaTek MT6833 dimensity 700 5G (7 nm)
CPU	:	Octa-core (2x2.2 GHz Cortex-A76 & 6x2.0 GHz cortex-A55)
GPU	:	Mali-G57 MC2
OS	:	Android 11, one UI core 3.1

Connectivity

Wi-Fi	:	802.11 a/b/g/n/ac 2.4G+5GHz, VHT80, Wi-Fi direct
Bluetooth version	:	Bluetooth v5.0
Location technology	:	GPS, Glonass, Beidou, Galileo
Radio	:	FM radio
USB interface	:	USB type
USB version	:	USB 2.0
Earphone jack	:	3.5mm jack
SIM interface	:	Dual
SIM slot type	:	SIM 1 + SIM 2 + MicroSD

Memory

Internal	:	6GB RAM, 128GB

Multi Camera System

Depth camera	:	2MP (F2.4)
Main camera	:	48MP (F1.8)
Ultra wide camera	:	5MP (F2.2)
Selfie camera	:	8 MP, f/2.0, (wide)
Features	:	LED flash, panorama, HDR

Battery

Type	:	Li-Po 5000 mAh, non-removable
Charging	:	Fast charging 15W

General Information

Sensors (embedded in motherboard)

	:	Accelerometer
		Fingerprint sensor
		Gyro sensor
		Geomagnetic sensor
		Virtual light sensor
		Virtual proximity sensor

Training Platform

On board sections	:	Touch display, Dual SIM interface, user interface, Battery charging circuit, Power management unit, and RF Spectrum Aanalyzer module
User interface	:	Buzzer, Vibrator, Mic, Speaker, Hands free port, and display LEDs
Test points	:	More than 55 nos.
Switched fault	:	30 nos.
Power Supply	:	100 - 260V AC, 50/60 Hz
Dimension (mm)	:	W457 X D165 X H330
Weight	:	5 kg approx.
Operating condition	:	0-40°C, 85% RH
Included accessories	:	Patch cord 16"-2 nos.
		Hands free kit -1 no.
		Mains cord -1 no.
		Battery -1 no.
		Mobile charger & USB cable -2 nos.

Subject to Change