ANRITSU

MT8820C

The Anritsu MT8820C is a comprehensive Radio Communication Analyzer platform designed for LTE-Advanced FDD DL CA, LTE, 2G, and 3G mobile terminal testing. Covering a standard frequency range from 30 MHz to 2.7 GHz, extendable to 3.8 GHz via options, it supports high-speed batch measurements of RF transmitter/receiver characteristics, non-signaling calibration, and functional call-connection testing. Its robust architecture also supports multi-system parallel testing via Parallelphone™ and MIMO 2x2 Rx throughput testing, making it a staple for research, development, and high-volume cellular manufacturing.

SPECIFICATIONS

General

Interfaces	GPIB (IEEE-488.2), LAN (10BASE-T/100BASE-TX), USB 2.0, VGA
Display	8.4-inch color TFT LCD (SVGA, 800 × 600 pixels)

Physical

Power Supply	100 V (ac) to 240 V (ac), 50 Hz to 60 Hz, ≤ 300 VA
Operating Temperature	5 °C to 40 °C °C
Dimensions (W×H×D)	426 mm × 221.5 mm × 451 mm mm
Weight	18.0 kg

Frequency & Reference Timebase

RF Frequency Range	30 MHz to 2700 MHz (3.4 GHz to 3.8 GHz with MT8820C-018 installed)
Internal Reference Oscillator Frequency	10 MHz
Reference Oscillator Aging Rate	±1 × 10^-7/year
Reference Oscillator Temperature Stability	±2 × 10^-7 (5 °C to 40 °C)
External Reference Input Frequency	10 MHz / 13 MHz / 19.2 MHz (±1 ppm)
Reference Output Frequency	10 MHz
Reference Output Level	≥ 1 Vp-p (50 Ω)

RF Signal Generator (Output)

RF Output Port Configuration	Main 1, Main 2, Aux (Output)
Output Level Range (Main Port)	-140 dBm to -10 dBm (30 MHz to 2700 MHz)
Output Level Range (Aux Port)	-130 dBm to -10 dBm (30 MHz to 2700 MHz)
Output Level Resolution	0.1 dB
Output Level Accuracy	±1.0 dB (30 MHz to 2700 MHz, Main output, ≥ -120 dBm)
Output VSWR (Main Port)	≤ 1.2 (30 MHz to 2700 MHz)
Output VSWR (Aux Port)	≤ 1.3 (30 MHz to 2700 MHz)

RF Analyzer (Input)

RF Input Port Configuration	Main 1, Main 2
Maximum Input Power (Main Port)	+35 dBm
RF Input Level Range (Main Port)	-60 dBm to +35 dBm
Input VSWR (Main Port)	≤ 1.2 (30 MHz to 2700 MHz)

Supported Cellular & Wireless Technologies (Options)

LTE-Advanced FDD DL CA Support	Supported (requires option)
LTE FDD/TDD Support	Supported (requires MX882012C/13C)
W-CDMA / HSPA / HSPA Evolution Support	Supported (requires option)
GSM / GPRS / EGPRS Support	Supported (requires option)
CDMA2000 1X / 1xEV-DO Support	Supported (requires option)
TD-SCDMA / HSPA Support	Supported (requires option)
PHS / ADVANCED PHS Support	Supported (requires option)
Parallel Measurement / Dual-system Support	Supported (Parallelphone™ option for testing 2 phones simultaneously)
MIMO 2x2 Support	Supported (LTE DL Rx throughput with MX882012C/13C)

Audio Analyzer & Generator Capabilities

Audio Analyzer Frequency Range	100 Hz to 20 kHz
Audio Analyzer Input Connector	BNC (unbalanced)
Audio Generator Frequency Range	100 Hz to 20 kHz
Audio Generator Output Level Range	0 Vrms to 4 Vrms (unbalanced)

Control & Connectivity Interfaces

GPIB Interface	IEEE-488.2
LAN (Ethernet) Interface Speed	10BASE-T/100BASE-TX
USB Ports	USB 2.0 (Front ×1, Rear ×1)
External Display Interface (VGA/DVI)	VGA (15-pin D-sub)
Trigger Input / Output Connectors	Trigger Input (BNC), Trigger Output (BNC)

Physical, Environmental & Power

Storage Temperature Range	-20 °C to +60 °C
Operating Humidity Limit	≤ 85% (no condensation)

Power

Power Consumption	≤ 300 VA (with options)

RF Performance

RF Input Level Range (Aux Port)	-30 to +20 dBm (30 MHz to 2.7 GHz)

Audio Analyzer

Audio Analyzer Input Impedance	100 kΩ (unbalanced), 600 Ω (balanced) (with Option 011)
Audio Analyzer Level Measurement Range	0.1 mV to 10 Vrms (with Option 011)
Audio Analyzer Distortion Measurement Range	0.01% to 100% (with Option 011)

Audio Generator

Audio Generator Output Impedance	600 Ω (balanced), < 2 Ω (unbalanced) (with Option 011)
Audio Generator Distortion	≤ 0.1% (at 1 kHz, 1 Vrms) (with Option 011)

Hardware Options

Option MT8820C-001	TDMA Measurement Hardware
Option MT8820C-002	CDMA2000 Measurement Hardware
Option MT8820C-003	W-CDMA Measurement Hardware
Option MT8820C-005	PHS Measurement Hardware
Option MT8820C-007	TD-SCDMA Measurement Hardware
Option MT8820C-008	LTE Measurement Hardware
Option MT8820C-011	Audio Measurement Hardware
Option MT8820C-012	W-CDMA Voice Codec
Option MT8820C-017	LTE FDD DL 2x2 MIMO Measurement Hardware
Option MT8820C-018	LTE TDD DL 2x2 MIMO Measurement Hardware
Option MT8820C-038	LTE TDD 3.4 GHz to 3.8 GHz Band Expansion

Software Options

MX882000C	W-CDMA Measurement Software
MX882001C	GSM/GPRS Measurement Software
MX882002C	CDMA2000 1X Measurement Software
MX882003C	1xEV-DO Measurement Software
MX882005C	PHS Measurement Software
MX882006C	TD-SCDMA Measurement Software
MX882012C	LTE FDD Measurement Software
MX882013C	LTE TDD Measurement Software
MX882014C	LTE-Advanced FDD DL CA Measurement Software

Interfaces

GPIB Compliance	IEEE 488.2
Reference Output Connector	BNC female
External Reference Input Connector	BNC female

TECHNOLOGY

RF Test & Measurement / Communication Signaling

APPLICATIONS

RF TRx evaluation and call connection tests for LTE-Advanced, LTE, W-CDMA/HSPA, CDMA2000, TD-SCDMA, and GSM mobile terminals