

# All-in-one Solution Supporting LTE and 3G/2G Terminal for R&D and Manufacturing

**MT8820C**  
Radio Communication Analyzer  
30 MHz to 2.7 GHz (3.4 GHz to 3.8 GHz)



The MT8820C combines high-level signalling and high-performance RF measurement technologies in a single hardware platform covering a wide frequency range from 30 MHz to 2.7 GHz (MT8820C-018: 3.4 GHz to 3.8 GHz). Installing the LTE FDD Measurement Software MX882012C (LTE TDD Measurement Software MX882013C) and LTE FDD Measurement Hardware MT8820C-008 in the MT8820C supports high-speed and high-accuracy RF Tx/Rx testing LTE FDD (TDD) terminals with UE category 1 and 3 on production lines in either the UE-connected mode or Test mode.

## Features

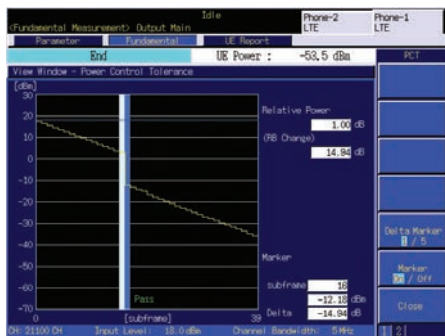
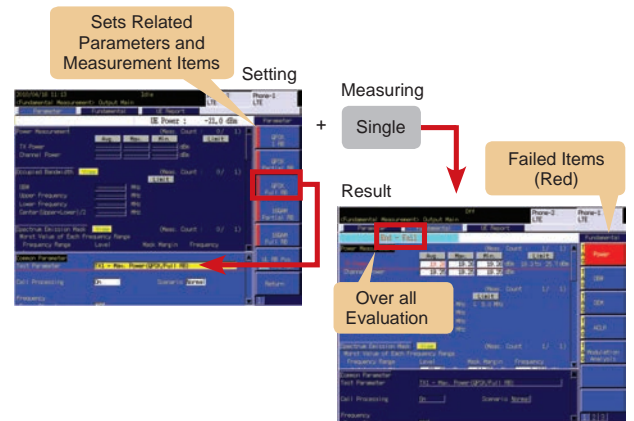
- Supports RF Tx and Rx tests in UE-connected and Test modes
- Supports 3GPP-standard test signals
- All-in-one unit supporting LTE/3G/2G R&D and manufacturing
  - LTE-Advanced FDD/TDD DL CA, LTE FDD/TDD W-CDMA/HSPA/HSPA Evolution/DC-HSPA/4C-HSDPA CDMA2000 1X/1xEV-DO Rev. A TD-SCDMA/TD-HSPA/TD-HSPA Evolution GSM/GPRS/EGPRS PHS/ADVANCED PHS

## LTE UE Evaluation

**RF Tx and Rx Testing in UE-connected and Test Mode**  
All RF Tx and Rx tests recommended by 3GPP (TS 36.521-1 chapters 6 and 7) can be performed in both the LTE FDD/TDD UE-connected mode and Test mode (UE not connected). In addition, various RF Tx and Rx test-related parameters can be changed.

## One-touch Setting of Tx Test Items

Settings for 3GPP-compliant main Tx tests are made by one touch operation. Evaluation starts when measurement is completed by pressing “Single”, continuously, allowing even novices to perform accurate measurements successfully. In addition, control programs can be created simply and test speed can be faster using relevant GPIB commands.



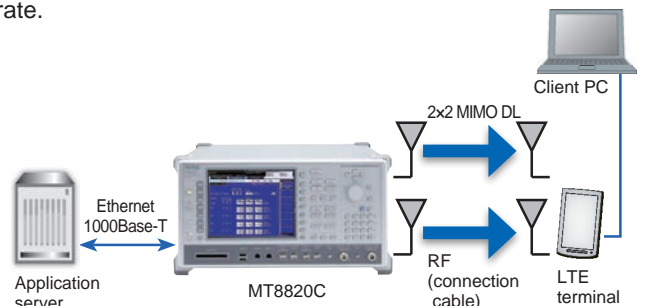
Transmitter Measurement (LTE FDD)



Receiver Measurement (LTE FDD)

## IP Data Transfer Test (2x2 MIMO DL)

Simultaneous installation of the MX882012C-006 LTE FDD IP Data Transfer (MX882013C-006 LTE TDD IP Data Transfer) option and the LTE FDD (TDD) 2x2 MIMO DL option supports connection with an external server and enables IP data communication at the maximum 2x2 MIMO Category 3 data rate.



MT8820C Connection Example

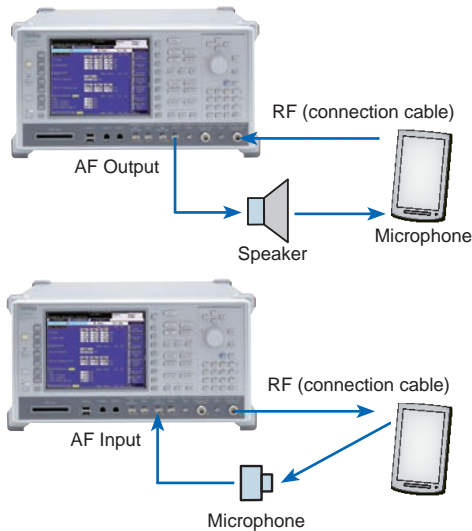
- \* Requires MT8820C-008 and MX882012C (MX882013C) for the main Tx and Rx characteristics of LTE FDD (TDD) terminal with Call Processing function.
- \* Requires MX882042C (MX882043C) for the main Tx characteristics of LTE FDD (TDD) terminal without Call Processing function. MX882042C (MX882043C) is non-Call Processing product. Refer to the MX882012C/13C/42C/43C catalog for details.
- \* For terminal connectivity, contact your Anritsu sales representative.

# Unique Functions Supporting RF TRx Tests for 3G and 2G

## Real-time Voice Encoding and Decoding

### Audio Transmitter and Receiver Measurement

The tone signal from the MT8820C AF Output connector is supplied to the microphone of the mobile terminal and the audio transmitter characteristics of the mobile terminal can be measured using the MT8820C to demodulate the uplink RF signal and measure the level, frequency, and distortion of the demodulated tone signal.



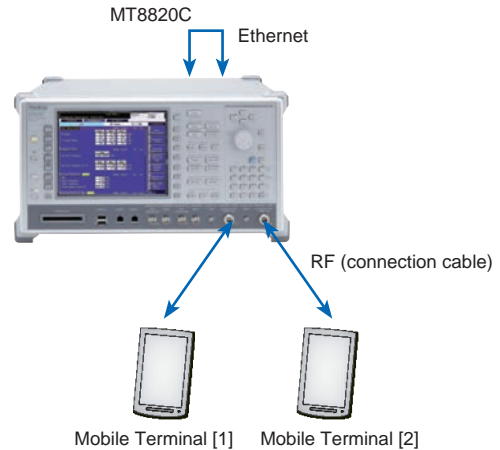
Refer to the MX882000C, MX882001C, MX882002C and MX882007C catalog for details.

## Video Phone Test

### End-to-End Video Phone Test

The MT8820C supports two-way tests between W-CDMA (TD-SCDMA) terminals with video functions via the MT8820C Ethernet port.

Two-way video phone tests require either two MT8820C units or one unit with the Parallelphone option.

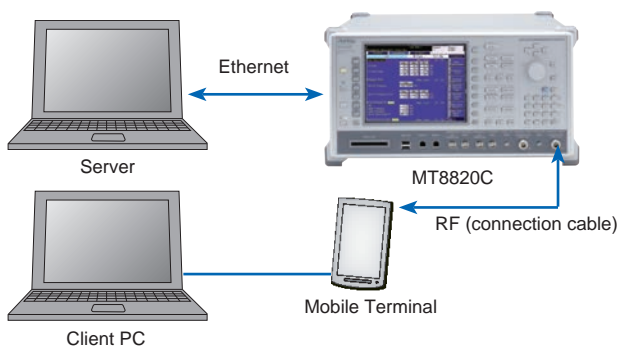


Sample MT8820C Connection: when MT8820C is one set (Parallelphone measurement correspondence)

## Packet Communication Data Transfer Test

### End-to-End Data Transfer Test

Using the External Packet Data Software option supports end-to-end data transfer between a mobile terminal (W-CDMA/HSDPA, GPRS, CDMA2000 1X/1xEV-DO Rev. 0) and an application server connected to the MT8820C, or a PC client connected to the terminal, and various application tests. The IP data transfer software option supports end-to-end data transfer with an LTE FDD/TDD terminal.



Sample MT8820C Connection

## Simultaneous Measurement of Two Mobile Terminals

Installing the Parallelphone Measurement option supports simultaneous measurement of two terminals using the second RF, AF, GPIB, or Ethernet port of a single MT8820C unit.

