

# 5G NR Mobile Device Test Platform

**ME7834NR** 







# Trusted Performance Based on Long-term Market Presence and Reputation

Anritsu has delivered high quality Conformance Test solutions that exceed customer expectations since the beginning of 3G and that tradition continues today with 5G Anritsu test solutions deliver state-of-the-art technology to our customers for conformance and carrier acceptance testing based on our industry leading experience.

### Market Leading 3GPP Compliant Test Cases

Anritsu delivers first to market test cases compliant to the latest 3GPP specifications.

### Market Leading 5G Carrier Acceptance Test

Anritsu delivers state of the art Carrier Acceptance test cases supporting all major carriers to test the latest LTE and NR features for carrier compliance.



### **5G NR Mobile Device Test Platform ME7834NR Features**

### **Key Features**

5G NR Mobile Device Test Platform ME7834NR supports both protocol conformance test (PCT) and carrier acceptance test (CAT) for UE manufacturers and test houses. ME7834NR covers not only 5G but also LTE/LTE-Advanced and UMTS. It can flexibly configure PCT and CAT environment by combining components of Hardware, Software and Test Package.

### All-in-One 5G NR Support for Protocol Conformance Tests and Carrier Acceptance Test

The ME7834NR is the test platform for 3GPP based Protocol Conformance Tests (PCT) and Carrier Acceptance Testing (CAT) of mobile devices incorporating Multiple Radio Access Technologies (RAT). The ME7834NR supports 5G New Radio (NR) Technology in both Standalone and Non-Standalone mode, in addition to LTE, LTE-Advanced (LTE-A), LTE-A Pro, and W-CDMA.

### Supports 3GPP defined bands from Sub-6GHz to mm-Wave

The 5G NR Mobile Device Test Platform ME7834NR covers the 5G frequency bands defined by 3GPP including sub-6 GHz and millimeter Wave when combined with Anritsu's new OTA chamber MA8171A and RF converter.

#### Upgrade your current ME7834 system for 5G

The 5G NR Mobile Device Test Platform ME7834NR provides a smooth transition to 5G whilst continuing to support LTE, LTE-Advanced (LTE-A), LTE-A Pro and legacy W-CDMA technologies. This enables existing customers to upgrade to 5G whilst capitalizing on a well proven LTE-A test environment and stay abreast of the latest technology evolution.

### **Detailed Support System**

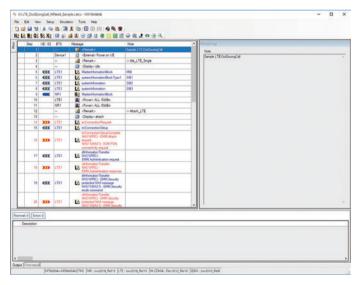
To assure more efficient use of this system, we offer installation and post-technical support services (fees apply to both), which help assure a smooth and trouble-free customer workflow.

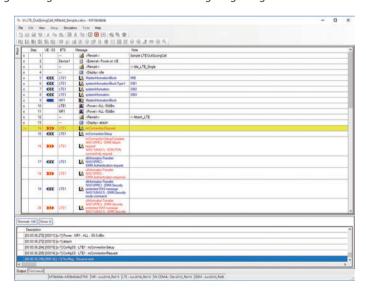
#### Software

The 5G NR Mobile Device Test Platform ME7834NR follows the conventional 4G Test Platform GUI. It is not necessary to train newly using measuring software since you can perform Protocol test of 5G terminal with the operation as before.

### **Easy Sequence Creation and Editing**

In the Carrier Acceptance Test (CAT), Adopted a GUI based on MSC (Message Sequence Chart) used in protocol test specification, so you can easily perform the test by reading it. You do not need detailed knowledge of programming for scenario creation when doing a signaling test.





**Test Example** 

### **5G NR Mobile Device Test Platform ME7834NR Layout**

### **System Configuration**



\* Example of maximum configuration for 5G NR NSA mmWave testing

- 1 Radio Communication Test Station MT8000A All-in-one test platform that can perform 5G NR protocol testing.
- 2 Signalling Tester MD8430A
  LTE/LTE-Advanced, W-CDMA compatible base station simulator for non-Standalone (NSA) mode testing.
- 3 RF Combiner Unit MN8142B

  Connect the UE and transmit the RF signal to each instrument in the Test platform.
- 4 RF Converter
  Convert mm-wave signal between MT8000A and RF Chamber.
- 5 RF Chamber MA8171A Used for Over The Air (OTA) test.
- 6 Position Controller MA8174A
  Control Positioner MA8175A in RF Chamber MA8171A.

## **5G NR Mobile Device Test Platform ME7834NR Specifications**

### **5G NR Mobile Device Test Platform ME7834NR**

	Downlink output accuracy
Electrical Characteristics	±3 dB (after system calibration implemented at MN8142B antenna port)
	Downlink frequency range
	450 MHz to 6000 MHz (MD8430A signals. Option required from 3000 MHz to 6000 MHz)
	500 MHz to 2650 MHz (MD8475A signals)
	450 MHz to 6000 MHz (MT8000A signals)
	Uplink measurement accuracy
	±3 dB (after system calibration implemented at MN8142B antenna port)
	Uplink frequency range
	450 MHz to 6000 MHz (MD8430A signals. Option required from 3000 MHz to 6000 MHz)
	500 MHz to 2530 MHz (MD8475A signals)
	450 MHz to 6000 MHz (MT8000A signals)
	Power Supply
	Power voltage: 100 V(ac) to 120 V(ac)/200 V(ac) to 240 V(ac) (-15/+10%, Except 250 V max.)
	Frequency: 50 Hz/60 Hz
	Power consumption: ≤8500 VA (maximum configuration)
General	Dimensions
	570 (W) × 1980 (H) × 797 (D) mm (1 rack, excluding projection)
	1140 (W) × 1980 (H) × 797 (D) mm (2 racks, excluding projection)
	Mass
	≤650 kg (maximum configuration)
Environmental Conditions	Temperature range
	+15°C to +35°C (operating, without rack)
	+15°C to +30°C (operating, with rack, space of 30 cm on the back and 30 cm on the side is necessary)
	0°C to +50°C (storage)
	EMC: EN61326-1, EN61000-3-2, KN61000-6-1
	LVD: EN61010-1
	RoHS: EN50581

### **RF Combiner Unit MN8142B**

KI COMBINE OMENIA	<del></del>
	Frequency range
Electrical Characteristics	450 MHz to 6 GHz
	Maximum input level
	TRX1, RX1, TRX2, RX2: +33 dBm
General	Dimensions: 426 (W) × 264 (H) × 570 (D) mm (Excluding projection)
	Mass: ≤30 kg
	Power Supply
	Power voltage: 100 V(ac) to 120 V(ac)/200 V(ac) to 240 V(ac) (-15/+10%, Except 250 V max.)
	Frequency: 50 Hz/60 Hz (±5%)
	Power consumption: ≤150 VA
	Temperature range
	Operating temperature and humidity range: +15°C to +45°C, ≤95% (without condensation)
	Storage temperature range: –20°C to +60°C
	CE
	EMC: EN61326-1, EN61000-3-2
	LVD: EN61010-1
	RoHS: EN50581

Key specifications are listed only. Contact your Anritsu sales representative for detailed.

See "OTA Product Catalog" for detailed information of RF Chamber MA8171A, Position Controller MA8174A, and Positioner MA8175A. Contact your Anritsu sales representative for further information.

### **Supported Test Standards**

The system design is based on the following standards:

### **Protocol Conformance Test (PCT)**

3GPP TS38.523-1 (5G NR) 3GPP TS36.523-1 (LTE) 3GPP TS34.123-1 (UMTS)

### **Carrier Acceptance Test (CAT)**

Complies with the standards of the world's major carriers.

Contact your Anritsu sales representative for supported test cases and carriers.

# **5G NR Mobile Device Test Platform ME7834NR Ordering Information**

Only key components are listed. Please specify the model/order number, name and quantity when ordering. The names listed in the chart below are Order Names. The actual name of the item may differ from the Order Name.

	Name
Model/Order No.	Name Name
ME7834NR	Main Frame     5G NR Mobile Device Test Platform
	Accessories
ME7834NR-AK000	Accessory Kit for ME7834NR
ME7834NR-AK001	Accessory Kit for ME7834NR-001
ME7834NR-AK003	Accessory Kit for ME7834NR-003 (OTA Chamber1)
ME7834LA-AK010	Accessory Kit for ME7834NR-010
ME7834LA-AK011	Accessory Kit for ME7834NR-011
ME7834LA-AK020	Accessory Kit for ME7834NR-020
ME7834LA-AK021	Accessory Kit for ME7834NR-021
ME7834LA-AK027	Accessory Kit for ME7834NR-027
ME7834LA-AK100	Accessory Kit for ME7834LA-to-NR
ME7834LA-AK103	Accessory Kit for ME7834NR-003 (LTE/FR1 OTA)
ME7834LA-AK203	Accessory Kit for ME7834NR-003 (LTE/FR1 Conducted)
	Configuration Items
MT8000A	Radio Communication Test Station
MT8000A-001	Control Module
MT8000A-009	Multi-box Data Connection
MT8000A-011	Baseband Module
MT8000A-012	Data Test Module
MT8000A-020	RF Base Module
MT8000A-022	3GHz-12GHz RF Sub Module RF Combiner Unit
MN8142B MN8142B-001	Sync Switch
MD8430A	Configuration Items for NSA Signalling Tester
MD8430A-002	Extended Frequency Range to 3.8GHz
MD8430A-005	Extended Frequency Range to 3.8GHz Hardware2
MD8430A-035	LTE Enhanced Test Model (ETM)
MD8430A-060	LTE FDD Option
MD8430A-061	LTE TDD Option
MD8430A-064	LTE Anchor Option
MD8430A-075	LTE DL 4×4 MIMO Option
MD8430A-081	LTE RoHC Option
MD8430A-086	Ciphering Option
MD8430A-087	LTE CoMP Option
	Converter
MA80001A	28GHz RF Converter
MA80002A	39GHz RF Converter
B0747A	Converter Rack
	Chamber
MA8171A	RF Chamber
MA8174A MA8175A	Position Controller
B0746A	Positioner Chamber Rack
Z1996A	28GHz/39GHz Test Antenna
_1330/	Options
ME7834NR-001	5G NR RF Combiner Unit 1
ME7834NR-003	5G NR OTA Chamber 1
ME7834NR-007	ME7834NR System Rack 1
ME7834NR-008	ME7834NR System Rack 2
ME7834NR-010	5G NR Signalling Unit 1
ME7834NR-011	5G NR Signalling Unit 2
ME7834NR-020	Positioner
ME7834NR-021	1st OTA unit for 28GHz
ME7834NR-022	2nd OTA unit for 28GHz
ME7834NR-024	1st OTA unit for 39GHz
ME7834NR-025	2nd OTA unit for 39GHz
ME7834NR-027	1st 28GHz/39GHz Test Antenna
ME7834NR-028	2nd 28GHz/39GHz Test Antenna
ME7834NR-070	CAT NR Application 1
ME7834NR-071	CAT NR Application 2
ME7834NR-080	PCT NR Application 1
ME7834NR-200	Common Platform SW 1 Common Platform SW 2
ME7834NR-201 ME7834NR-203	Common Platform SW 2
IVIE / 0.341NR-203	Common Flationin SW 4

Model/Order No. Name  ME7834NR-204 Common Platform SW 5  ME7834NR-205 Common Platform SW 6  ME7834NR-206 Common Platform SW 7  ME7834NR-207 Common Platform SW 8	
ME7834NR-205 Common Platform SW 6 ME7834NR-206 Common Platform SW 7 ME7834NR-207 Common Platform SW 8	
ME7834NR-206 Common Platform SW 7 Common Platform SW 8	
ME7834NR-207 Common Platform SW 8	
ME7834NR-208   Common Platform SW 9	
ME7834NR-209 Common Platform SW 10	
ME7834NR-210 Common Platform SW 11	
ME7834NR-211 Common Platform SW 12	
ME7834NR-212 Common Platform SW 13	
ME7834NR-213 Common Platform SW 14	
ME7834NR-214   Common Platform SW 15	
ME7834NR-290   Common Platform SW 28	
ME7834NR-291   Common Platform SW 29	
ME7834NR-292 Common Platform SW 30	
ME7834NR-700 PCT NR Subscription, Rel-15 NSA Opt3 FR1	
ME7834NR-701 PCT NR Subscription, Rel-15 NSA Opt3 FR2	
ME7834NR-702 PCT NR Test Package, Rel-15 NSA Opt3 Phase1 FR1	
ME7834NR-703 PCT NR Test Package, Rel-15 NSA Opt3 Phase1 FR2	
ME7834NR-708 PCT NR Subscription for Verizon ME7834NR-709 PCT NR Test Package for Verizon, Stage 1	
ME7834NR-711 PCT NR Test Package, Rel-15 NSA Opt3 Phase3 FR1 ME7834NR-712 PCT NR Test Package, Rel-15 NSA Opt3 Phase3 FR2	
ME7834LA-075 CAT Application 6	
ME7834LA-076 CAT Application 7	
Software	
MX783410A NR Protocol System SW	
MX783410A-001 NR TDD Platform	
MX783410A-003   Ciphering	
MX783410A-004   NR DL 2×2 MIMO	
MX783410A-005	
111.525,15.1	
MX783410A-008	
MX783410A-010   NR UL 2×2 MIMO	
MX783410A-011   NR UL 2 CA	
MX783410A-012   NR UL 3/4 CA	
MX783410A-013   NR UL 5/6 CA	
MX783410A-014 NR UL 7/8 CA	
MX783410A-291 Band Option Sub6GHz	
MX783410A-292 Band Option 28GHz	
MX783410A-293 Band Option 39GHz	
MX783420A-200 38.523 Rel-15 Subscription, NSA Opt3 FR1	
MX783420A-201 38.523 Rel-15 Subscription, NSA Opt3 FR2	
MX783420A-202 38.523 Rel-15 Test Package, NSA Opt3 Phase 1 FR1	
MX783420A-203 38.523 Rel-15 Test Package, NSA Opt3 Phase 1 FR2	
MX783420A-208 38.523 Subscription for Verizon	
MX783420A-209 38.523 Test Package for Verizon, Stage 1	
MX783420A-211 38.523 Rel-15 Test Package, NSA Opt3 Phase 3 FR1	
MX783420A-212 38.523 Rel-15 Test Package, NSA Opt3 Phase 3 FR2	
MX783480A Carrier Acceptance Test Core Software	
MX783480A-001 CAT Up to LTE Option	
MX783480A-002 5G CAT Option3x Option	
MX783480A-092	
MX785220A PROTOCOL CONFORMANCE TEST TOOLKIT CORE SOFT	WARE
MX785220A-200 NR Rel-15 PCT NSA Opt3	
MX787401A SET OF SIGNALLING APPLICATION SUPPORT TOOLS	
MX787401A-016 PROTOCOL ANALYSER (CAT)	
MX800030A NR Protocol Platform Software	
MX800030A-081 Protocol System	
Application Parts	
Z2018A Standard PC for ME7834NR CAT/PCT (with monitor)	
Z1452G Data Server PC (CentOS)	
Z1591A USB Dongle (Protocol)	
Z2021A Upgrade Kit for ME7834LA-to-NR 1st Rack	
Z2022A Upgrade Kit for ME7834LA-to-NR 2nd Rack	

Contact your Anritsu sales representative for detailed ordering information.

### **Related Products**



LTE-Advanced Mobile Device Test Platform ME7834LA



New Radio RF Conformance Test System ME7873NR



Shield Box MA8161A



RF Chamber MA8171A