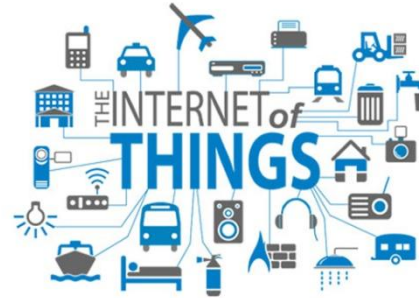


Battery Life Testing



Test Suites Supported

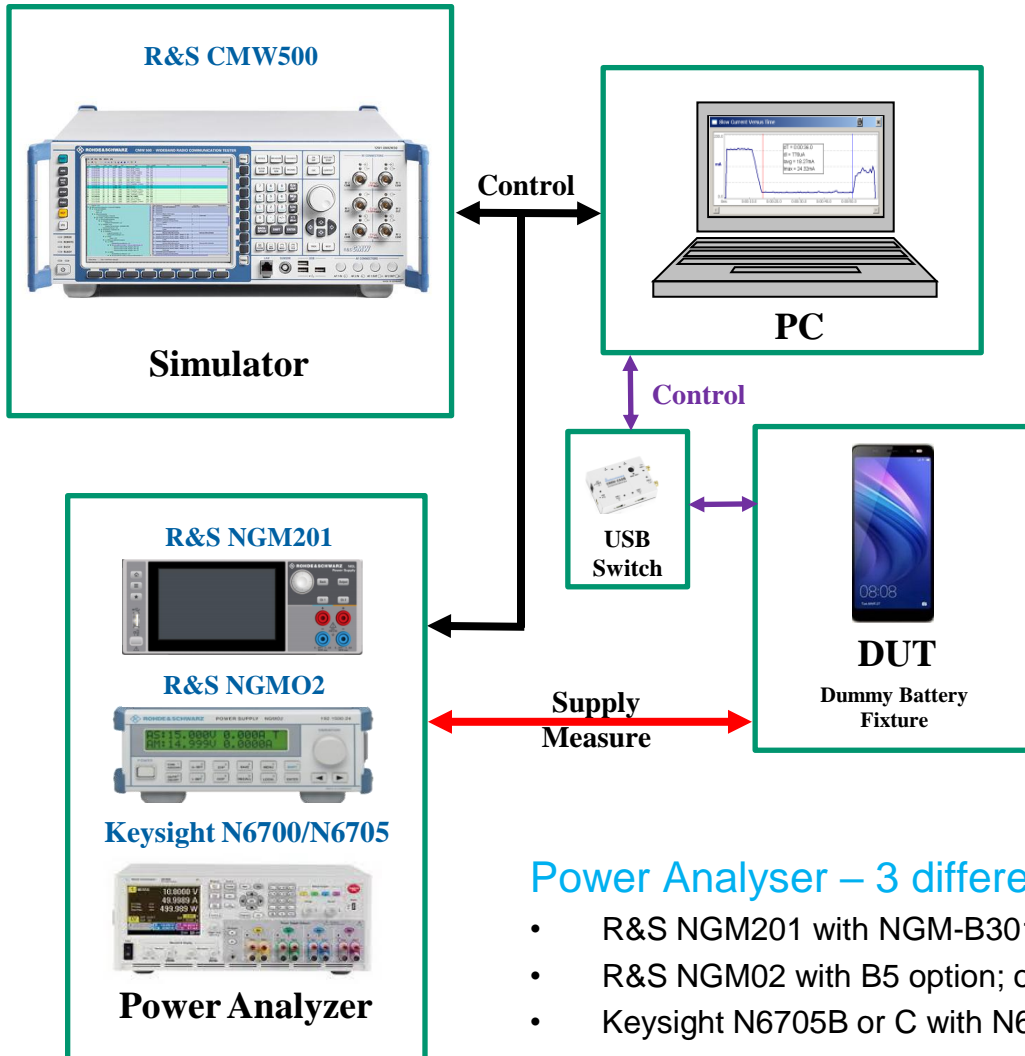


- **AT&T 10776**
 - For AT&T Approved Vendor Labs
 - Only platform offering all WCDMA and LTE Legacy tests
 - Only validated platform providing Dual SIM Battery Life
 - All 5G Battery Life tests validated
- **GSMA TS.09 version 11.0**
 - Includes Standby, Talk-Time and Application Tests
 - Includes new NB-IoT tests
- **GCF PC**
 - The GCF Performance Criteria Tests (based on GSMA TS.09)
- **CTIA Test Plan**
 - Only approved platform for use by CTIA Labs
 - Mandatory testing for all AT&T devices
 - Includes smartphone, smartwatch and MIoT testing
- **T-Mobile**
 - New LTE and 5G Battery Life TRD Test Suite
 - Used with R&S PQA 5G Data Throughput and Current Drain tests

Analytek Framework supports:

- **Network Simulators**
 - R&S CMW500: To support Test Scripts covering LTE, WCDMA, GSM, CDMA
 - R&S CMX500: To support Test Scripts for FR1 and FR2, FDD and TDD and NSA and SA devices
- **Power Analysers**
 - R&S NGM201: Requires NGM-B301 option for higher accuracy
 - R&S NGMO2: Requires NGM-B5 option for continuous measurements. Legacy PSU (no longer available)
 - Keysight N6705B/C: Requires N6781A (3A) or N6785A (8A) option. Mandatory for CTIA Test Suite
- **Temperature**
 - Hameg HMC8012: include temperature measurements with Current Drain recorded in parallel
- **GNSS Simulator**
 - LabSat 3: Dynamic or Static GPS signals for testing with Location Based Services enabled

AT&T 10776 Battery Life Testing



Validated Platform ID 225

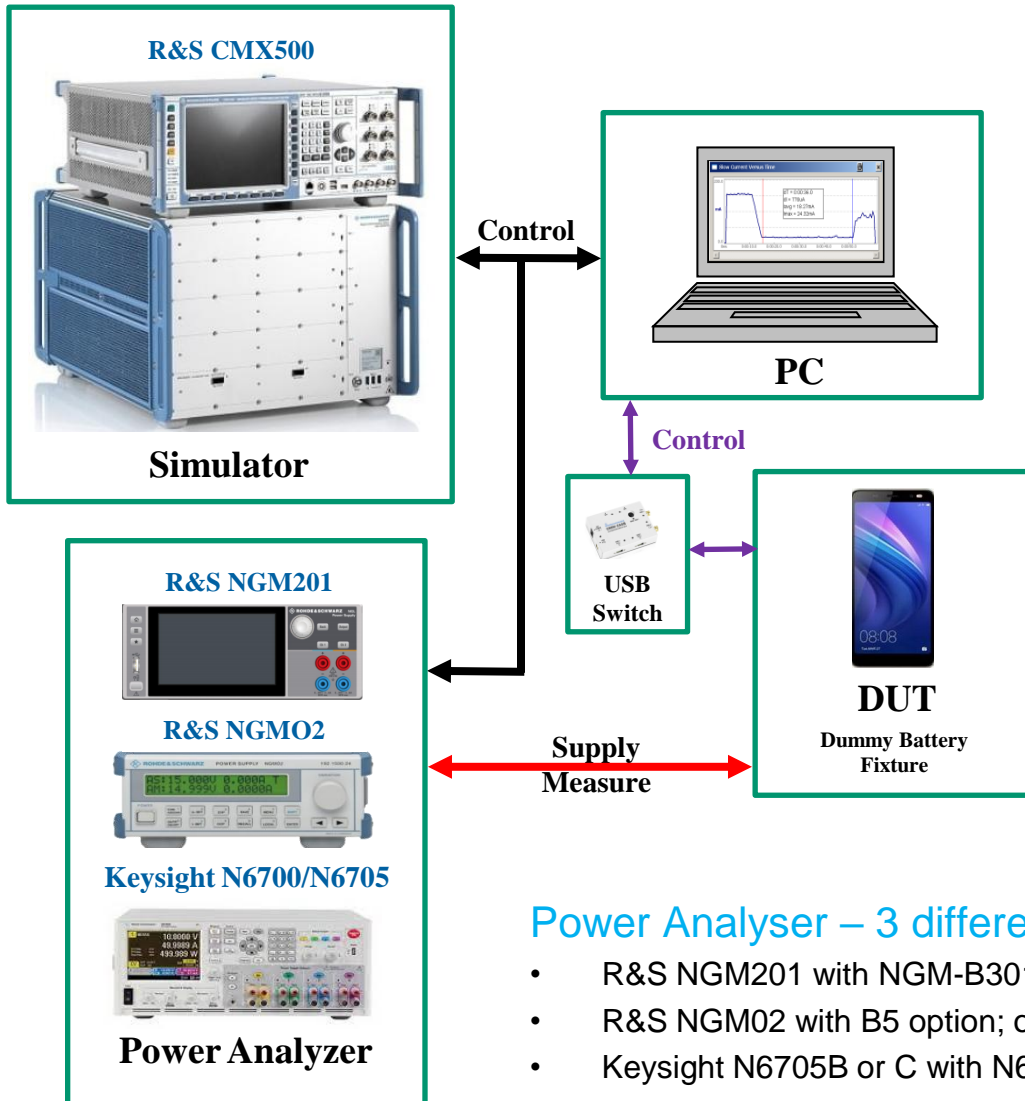
Only platform validated for all Battery Life Tests:

- WCDMA Idle Mode
- LTE Idle Mode and Connected Mode
- VoLTE (speech) and ViLTE (video) Calls
- LTE CA throughput
- Dual SIM Idle Mode Battery Life
- Idle Mode WEA
- Measurements using different AT&T cDRX settings

Power Analyser – 3 different models supported

- R&S NGM201 with NGM-B301 option; or
- R&S NGM02 with B5 option; or
- Keysight N6705B or C with N6781A or N6785A option

Part Number
ANA-TSB-AT&T-01



Validated Platform ID 313

Validated for FR1 and FR2 Tests:

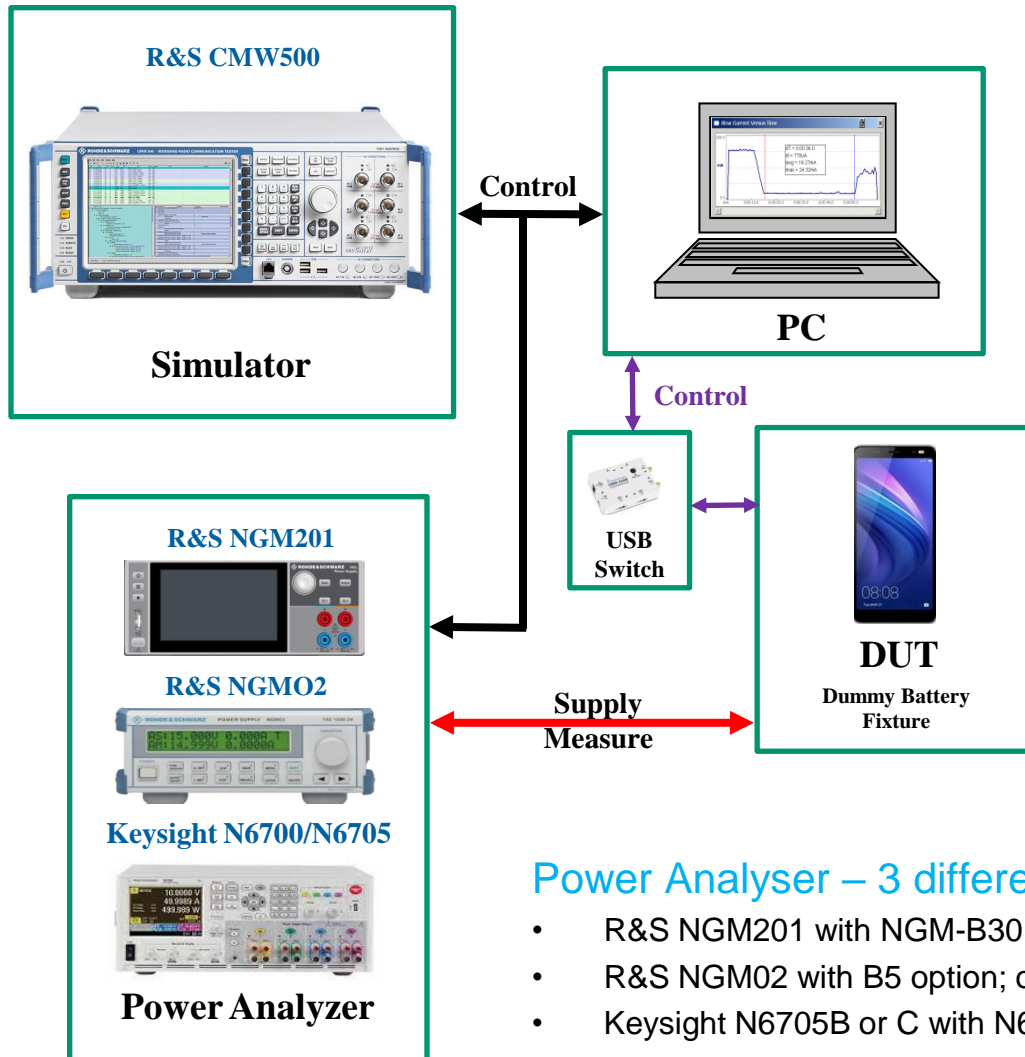
- N20-1-201 5G NR Idle Mode Battery Life
- N20-1-202 5G NR Connected Mode Battery Life
- N20-1-203 5G NR Connected Mode USB-C Battery Life
- N20-1-204 Idle Mode Battery Life for sub6 GHz
- N20-1-205 Connected Mode Battery Life for sub6 GHz

Power Analyser – 3 different models supported

- R&S NGM201 with NGM-B301 option; or
- R&S NGM02 with B5 option; or
- Keysight N6705B or C with N6781A or N6785A option

Part Number
ANA-TS-AT&T-5G

GSMA TS.09 Battery Life Testing



Tests supporting GSM, WCDMA and LTE:

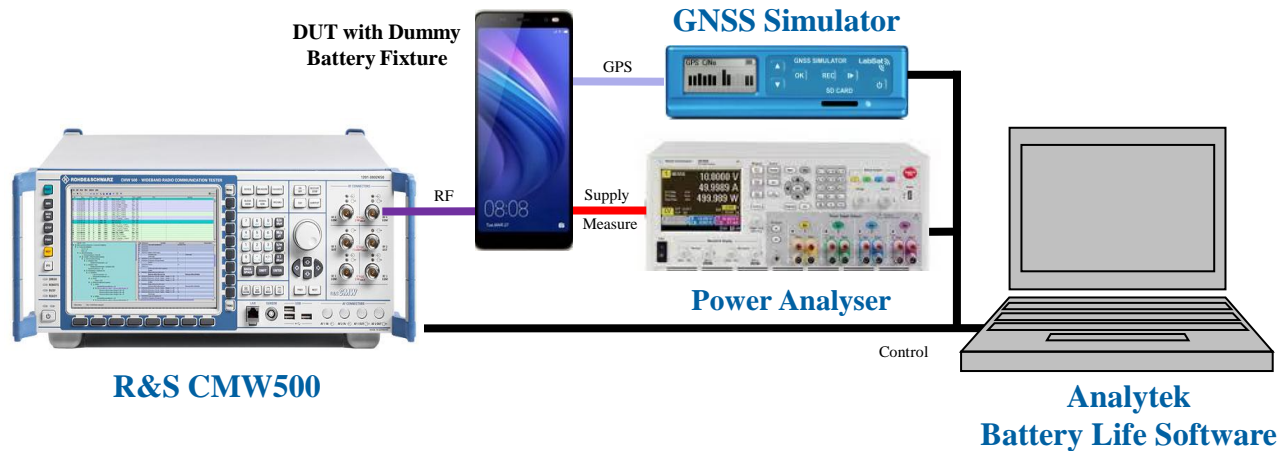
- Standby
- Talk Time (VoLTE, Circuit Switched)
- Packet Transfer Upload and download
- Browsing
- Video streaming (DASH/Progressive) and Audio streaming
- Video recording and playback
- Camera operation
- Bluetooth headset usage
- NB-IoT device testing

Power Analyser – 3 different models supported

- R&S NGM201 with NGM-B301 option; or
- R&S NGM02 with B5 option; or
- Keysight N6705B or C with N6781A or N6785A option

Part Number
ANA-TSB-GSMA
ANA-TS-GSMA-NBIOT

CTIA Battery Life Testing

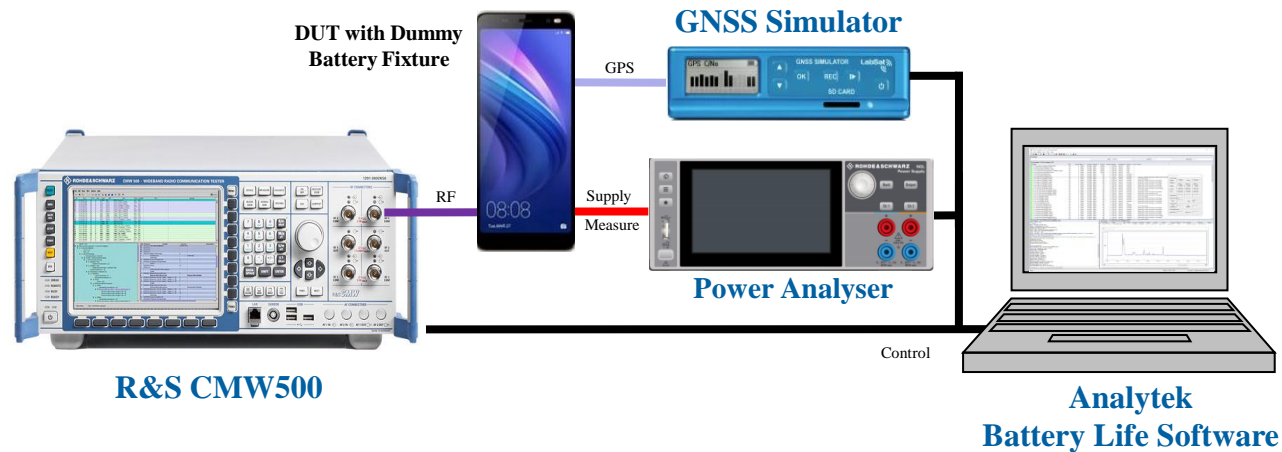


CTIA approved Platform for Battery Life Testing

- Mandatory for all AT&T devices; ref 10776 Reference LTE-BTR-1-2513
- Testing for smartphones and smartwatches for:
 - Standby and Homescreen
 - Voice, SMS and email
 - Video/Audio Streaming and music playback
 - Gaming
 - Measurement of available energy
- From Test Plan version 1.6, also includes testing for MIoT devices:
 - Standby, Power Saving Mode
 - Connected Mode

Part Number
ANA-TSB-CTIA
ANA-TS-CTIA-MIOT
ANA-OPT-GNSS-01

T-Mobile Battery Life Testing

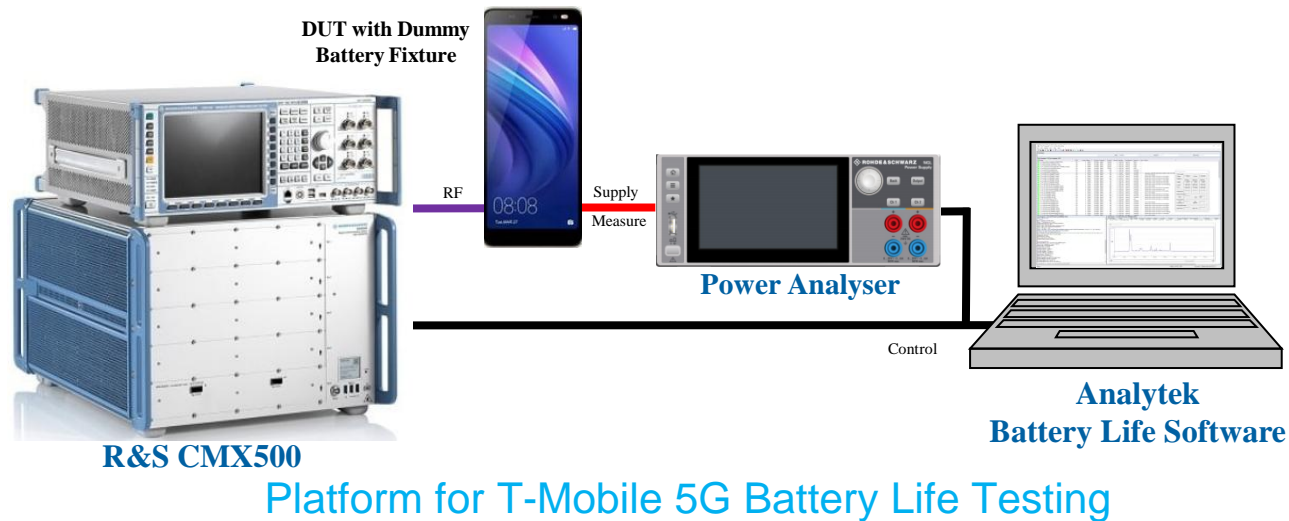


Platform for T-Mobile Battery Life Testing

- Legacy Solution ref T-Mobile US Master Terminal Requirements Battery Life TRD
- Testing for smartphones covering Sections:
 - 3.1 Battery Certification
 - 3.5 LTE Current Drain, Browsing and Practical Use Cases
 - 3.7 Wi-Fi Current Drain
 - 3.8 Wi-Fi Calling Current Drain
 - 3.10 Media (Music, Video, Audio) Current Drain
 - 3.11 Camera and Video Recording Current Drain
 - 3.12 UI ON Current Drain
 - 3.13 LTE, 5G FR1 NSA, 5G FR1 SA and 5G FR2 User Profiles
 - 3.15 Airplane Mode
 - 3.16 Navigation Current Drain Requirements
 - 3.17 Network Scan

Part Number
ANA-TS-TMO-LTE

T-Mobile 5G Battery Life Testing



- 5G Solution ref T-Mobile US Master Terminal Requirements Battery Life TRD
- Testing for smartphones covering:
 - 3.6 5G Current Drain
 - 4G LTE Standby with 5G FR1 and/or FR2 Neighbour Cells
 - 5G FR1 Standby Current Drain Tests
 - 5G FR2 Connected Mode Tests
 - 5G FR1 Connected Mode Tests
 - VoLTE TalkTime tests for 5G FR1 and FR2 capable devices
 - VoNR TalkTime tests for 5G FR1 SA capable devices
 - 5G FR1 SA Connected Mode Tests
 - 5G FR1 SA and NSA Browsing Tests
 - 5G FR1 SA and NSA Video Streaming Tests

Part Number
ANA-TS-TMO-5G

Ordering Information



Description	Analytek Part Number	R&S Part Number	SKU
AT&T 10776 Legacy Test Suite	ANA-TSB-AT&T-01	ANATSBATT	9029.5672.02
AT&T 10776 5G Test Suite	ANA-TS-AT&T-5G	ANAATT5G	3693.7563.02
GSMA TS.09 Battery Life Measurement	ANA-TSB-GSMA	ANATSBGSMA	9039.1463.02
GSMA TS.09 Battery Life Measurement - NBloT	ANA-UPG-GSMA-NBIOT	ANAGSMAIOT	3693.7570.02
GSMA TS.09 Battery Life Measurement – 5G	ANA-TS-GSMA-5G	TBC	TBC
CTIA Test Suite Bundle	ANA-TSB-CTIA	ANATSCCTIA	3592.8865.02
CTIA MIOT Test Suite	ANA-TS-CTIA-MIOT	ANACTIAIOT	3693.0381.02
T-Mobile Battery Life TRD - LTE	ANA-TS-TMO-LTE	ANATMOLTE	3690.3538.02
T-Mobile Battery Life TRD – 5G	ANA-TS-TMO-5G	ANATMO5G	3690.3609.02
T-Mobile PQA Current Drain Measurement	ANA-TSB-5G-CONTEST	ANACONTEST	3688.9810.02
GNSS Driver Option	ANA-OPT-GNSS-01	ANAGNSS	3693.0398.02