

R&S® CMW290 Functional Radio Communication Tester

Perfect low cost solution for all things – IoT



The perfect choice for

RF parametric and preformance testing	Functional testing (audio, video, data throughput)
Power consumption	IP security

Bench-top antenna performance testing and co-existence verification

Truly cost effective and versatile

The R&S®CMW290 offers wireless design engineers and manufacturers of IoT devices a cost-effective, turnkey solution for verifying the overall functionality of their devices prior to launch, addressing key applications such as RF parametrics, user experience (audio, video, data throughput, power consumption), cybersecurity and antenna performance. Covering a wide range of radio access technologies with the ability to provide real-time emulation, users are able to test and verify their devices in an environment as close as possible to the environment in which the devices will be deployed.

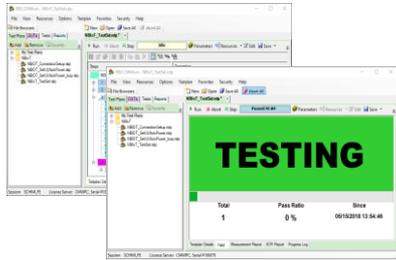
The built-in automation software together with the prepackaged technology software bundles allows users to streamline their testing requirements while controlling the overall equipment cost.

Key specifications	
Frequency range	70 MHz to 6 GHz
RF bandwidth (generation/analysis)	40 MHz/80 MHz
Supported radio access technologies	LTE Rel 8, eMTC, NB-IoT, HSxPA, WCDMA, GSM, TDSCMA, Wi-Fi (a,b,g,n,ac) Bluetooth LE, ZigBee (future)
Test modes	non-signaling, real-time base station emulation, data throughput testing
MIMO support	2x2 MIMO

Your benefit	Features
Lower overall cost	<ul style="list-style-type: none"> Bundled hardware and software options geared towards key IoT applications
Multi Technology Coverage	<ul style="list-style-type: none"> Embedded emulator for all major radio access technologies, including newly released eMTC, and NB-IoT functionality
User experience testing right out of the box	<ul style="list-style-type: none"> Embedded data application server for throughput testing Audio generation and analysis
IP security	<ul style="list-style-type: none"> Embedded deep packet inspection capability for in-depth IP analysis that provides information about IP protocols, ports and encryption while in a wireless connection

▷ For more information, visit <https://www.rohde-schwarz.com/catalog/cmw290>

Test sequencing/automation for RF parametric testing



RF parametric testing with built-in R&S CMWRun automation software for easy sequencing, testing and reporting

Over-the-air test for antenna performance



The R&S CMW290 in combination with the R&S DST200 or R&S CMW-Z10 shielded box provides an environment conducive to evaluating IoT device antenna performance under controlled conditions with repeatable characteristics

Turnkey solution for power measurements



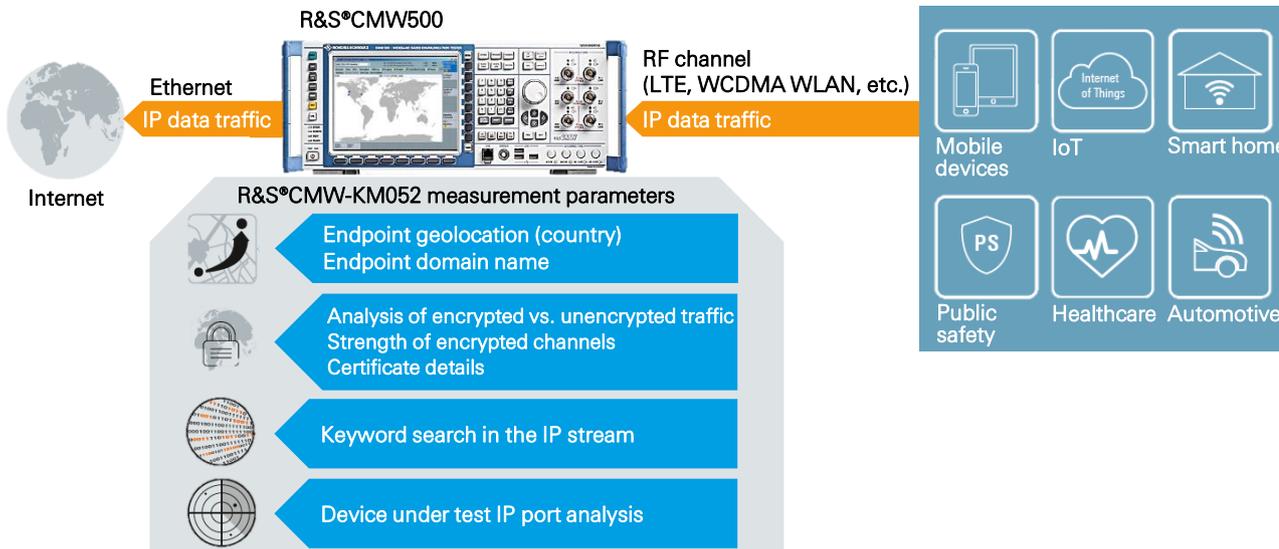
Combined with the R&S RT-ZVC multi-channel probe, precise measurements of current, voltage and power can be made while being tightly synchronized with network signaling events

Typical configuration

Mainframe	Type
Basic assembly	R&S CMW-PS291
Software options	
NB-IoT test bundle	R&S CMW-PK293
GSM/WCDMA test bundle	R&S CMW-PK294
LTE/eMTC test bundle	R&S CMW-PK295
Bluetooth® low energy test bundle	R&S CMW-PK296
WLAN IEEE 802.a/b/g/n test bundle	R&S CMW-PK297
CDMA2000®/1x EVDO test bundle	R&S CMW-PK298
Optional items	
Data application server	R&S CMW-B450D
Data application test bundle	R&S CMW-PK292

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Analyze IP data traffic of wireless devices



The R&S CMW290 equipped with the R&S CMW-KM052 IP connection security analysis option enables users to identify vulnerabilities in an IoT device's IP connection security at an early stage of development

Compact solution for functional video, audio & data throughput testing



Embedded data application server enables a compact out-of-the-box solution for testing the audio, video and data throughput functionality of IoT devices