

Universal Radio Communication Tester R&S®CMU 200

Cost-efficient models for service and production

Due to its versatility and measurement speed together with high measurement accuracy, the Universal Radio Communication Tester R&S®CMU 200 is equally valued in production, development and quality assurance. However, cost considerations may outweigh the need for high versatility or high measurement speed in some cases. We have therefore designed two new R&S®CMU 200 models for meeting the requirements of high-end service or board-level testing/adjusting. They can be manufactured cost-efficiently and offered at a very favorable price.

R&S®CMU200V10 high-end service tester

A mobile radio tester for use in service must be ideal for numerous applications. In addition to general RF measurements, it must be able to handle all relevant mobile radio standards such as GSM, WCDMA and CDMA2000®. The price of a measuring instrument is the main consideration in service applications, which have lower measurement speed requirements than production applications. The new R&S®CMU 200V10 has been designed for use in service and comes equipped with all relevant software packages for measurements or signaling in line with GSM, GPRS, EGPRS, WCDMA and CDMA2000® standards. You only need the corresponding signaling module (FIG 1) to enable the functions. All other relevant measurement and generator functions are also available, of course. The setting and measurement speed is slightly lower compared to the standard R&S®CMU 200, and product-specific options cannot be installed. The high-end service tester can be equipped with the R&S®CMU-B52 and R&S®CMU-B41 options which provide comprehensive audio tests. It thus includes all required standard-specific measurement functions required for service, e.g. various power and spectrum measurements as well as BER and BLER measurements. All standard-specific signaling functions such as call setup and call release, channel and power change, handover within a standard or between WCDMA and GSM are available. The measurement and signaling functions in the R&S®CMU 200V10 are identical to those in the standard R&S®CMU 200 model provided that it is equipped with the corresponding

options. The new service tester is the ideal choice when you need extensive functionality at a favorable price.

R&S®CMU200V30 non-signaling production tester

Signaling functionality is often not required for board-level testing or adjusting in production, where measurement speed and high measurement accuracy are the decisive factors. The new R&S®CMU 200V30 offers the high measurement and setting speed of the standard R&S®CMU 200 model. Even without options installed, it provides all GSM, WCDMA, CDMA, and 1xEVDO non-signaling transmitter measurements as well as general measurements. All production-specific transmitter measurements such as Smart Alignment (R&S®CMU-K47) and I/Q versus Slot (R&S®CMU-K48) are included. Also, an FM stereo transmitter (R&S®CMU-K14) is part of the basic version. The generator end supports CW, AM, SSB, FM and GSM (without channel coding) as standard. Channel-coded GSM, WCDMA, CDMA and 1xEVDO generator signals can be generated by means of the R&S®CMU-B21, -B68, -B83 and -B88 options (FIG 2). You can perform BER measurements on receiver modules with generator signals if a corresponding evaluation function is implemented in the modules. This method is often called single-ended BER measurement. If the receiver modules do not have any evaluation functions, you can also configure the R&S®CMU 200V30 to perform BER measurements in the GSM and WCDMA standards by installing the R&S®CMU-B21 option. The R&S®CMU 200V30 is equipped with the

R&S®CMU-B99 option as standard. As it has two identical RF connectors, this option is ideal for use in production. You can test a mobile phone at one connector while the next mobile phone is being adapted at the second connector. The R&S®CMU 200V30 offers the standard-specific measurement and generator functions required for all board-level tests, e.g. various power, spectrum and modulation measurements as well as single-ended BER measurements at high speed. The new tester is the ideal solution if high measurement speed or fast adjustment at the board level is required at a favorable price.

Summary

Since the R&S®CMU 200V10 and R&S®CMU 200V30 have been designed for specific uses, production processes can be optimized. You can thus benefit from an even further enhancement of the already excellent price/performance ratio of the Universal Radio Communication Tester R&S®CMU 200 – at the same high measurement quality.

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More information and data sheets at
www.rohde-schwarz.com
 (search term: CMU 200)

FIG 1 Measurement options with the R&S®CMU 200V10.



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	General RF tests	GSM (GPRS / EGPRS)	WCDMA	CDMA2000®
Transmitter measurements	✓	✓	✓	R&S®CMU-B83 required
Generator without channel coding	✓	✓	–	–
Generator with channel coding (single-ended BER)	–	R&S®CMU-B21 required	R&S®CMU-B68 required	R&S®CMU-B83 required
Signaling and receiver measurements	–	R&S®CMU-B21 required	R&S®CMU-B21 / -B56 / -B68 required	R&S®CMU-B83 required

FIG 2 Measurement options with the R&S®CMU 200V30.



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	General RF tests	GSM (GMSK / 8PSK)	WCDMA	CDMA2000®	1xEVDO
Transmitter measurements	✓	✓	✓	✓	✓
Generator without channel coding	✓	✓	–	–	–
Generator with channel coding (single-ended BER)	–	R&S®CMU-B21 required	R&S®CMU-B68 required	R&S®CMU-B83 required	R&S®CMU-B83 / -B88 required
BER evaluation in the R&S®CMU 200	–	R&S®CMU-B21 required	R&S®CMU-B21 / -B68 required	–	–