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R&S®CMU200 options and accessories

Type	Description	GSM/GPRS/EDGE	TDMA	AMPS	CDMA2000® 1xRTT	CDMA2000® 1xEV-DO	WCDMA/HSPA	Bluetooth®	Order No.
R&S®CMU200	Base unit with following accessories: power cord, operating and service manual for instrument	☑	☑	☑	☑	☑	☑	☑	1100.0008.02
R&S®CMU-B11[1]	Reference OCXO, aging 2×10^{-7}/year	☺	☺	☺	☺	☺	☺	☺	1100.5000.02
R&S®CMU-B12[1]	High-stability OCXO, aging 3.5×10^{-8}/year; oven crystal with highest long-term stability	☺	☺	☺	☺	☺	☺	☺	1100.5100.02
R&S®CMU-B17	Analog I/Q IF interface	☺	☺	–	☺	☺	☺	☺	1100.6906.02
R&S®CMU-B21	Unversal signaling unit; provides multistandard signaling hardware; required for WCDMA 3GPP FDD	☑	☑	☑	–	–	☑	☑	1100.5200.14
R&S®CMU-B21	Universal signaling unit; includes signaling module for AMPS, TDMA, GSM/GPRS/EGPRS	☑	☑	☑	–	–	☑	☑	1100.5200.54
R&S®CMU-B41	Audio generator and analyzer; includes audio frequency (AF) generator, voltmeter, distortion meter	☺	☺	☑	☺	☺	☺	☺	1100.5300.02
R&S®CMU-B52	Internal versatile multimode speech coder/decoder; R&S®CMU-B21 necessary	☺	☺	–	–	–	☺	☺	1100.5400.14
R&S®CMU-B53	Bluetooth® extension; R&S®CMU-B21 necessary	–	–	–	–	–	–	☺	1100.5700.14
R&S®CMU-B55	HD option for (E)GPRS application testing with more than 2 UL slots	☺	–	–	–	–	–	–	1159.4000.14
R&S®CMU-B56	WCDMA (3GPP FDD) signaling module for R&S®CMU-B21 model 14	☺	–	–	–	–	☑	–	1150.1850.14
R&S®CMU-B68	Versatile baseband board for WCDMA (3GPP FDD) layer 1, DL and UL, non-signaling	–	–	–	–	–	☑	–	1149.9809.02
R&S®CMU-B83[2]	CDMA2000® 1xRTT signaling unit	–	–	–	☑	☑	–	–	1150.0301.12
R&S®CMU-B83[2]	CDMA2000® 1xRTT signaling unit; required for CDMA2000® 1xEV-DO Rev. 0 and A signaling	–	–	–	☑	☑	–	–	1150.0301.22
R&S®CMU-B85	8 k/13 k QCELP, 8k EVRC speech codec for R&S®CMU-B83 CDMA2000® 1xRTT signaling unit	–	–	–	☺	☺	–	–	1100.7002.12
R&S®CMU-B85	8k/13k QCELP, 8k EVRC, EVRC-B speech codec for R&S®CMU-B83 model 22 CDMA2000® 1xRTT signaling unit	–	–	–	☺	☺	–	–	1100.7002.22
R&S®CMU-B87	Interface for extensive CDMA2000® 1xRTT /1xEV-DO data testing for CDMA2000® 1xRTT signaling unit R&S®CMU-B83; requires R&S®CMU-K87	–	–	–	☺	☺	–	–	1150.2404.02
R&S®CMU-B88[3]	CDMA2000® 1xEV-DO Rev. 0 and A non-signaling generator for R&S®CMU-B83 model 12 CDMA2000® 1xRTT signaling unit	–	–	–	☺	☑	–	–	1158.9908.02
R&S®CMU-B89[3]	CDMA2000® 1xEV-DO Rev. 0 and A signaling module for R&S®CMU-B83 model 22 CDMA2000® 1xRTT signaling unit	–	–	–	☺	☑	–	–	1159.3090.02
R&S®CMU-B95	Auxiliary generator that covers the requirements of present BCCH by GSM/GPRS/EGPRS and application testing for (E)GPRS	☺	–	–	–	–	☺	–	1159.0504.02
R&S®CMU-B96	2nd TX RF channel with full functionality; for generation of small-band signal (GSM BCCH, channel A) or of wideband signal (WCDMA BCCH, channel B)	☺	–	–	–	–	☺	–	1159.1600.02
R&S®CMU-B99	RF1 level range identical to RF2	☺	☺	☺	☺	☺	☺	☺	1150.1250.02
R&S®CMU-K14	Stereo FM transmitter	☺	☺	☺	☺	☺	☺	☺	1200.7503.02
R&S®CMU-K16	WCDMA (3GPP FDD) band 10, UE test signaling software (R&S®CMU-B68, R&S®CMU-B21 model 14 or 54, R&S®CMU-B56 necessary)	–	–	–	–	–	✓	–	1200.9158.02
R&S®CMU-K17	WCDMA (3GPP FDD) band 11, UE test signaling software (R&S®CMU-B68, R&S®CMU-B21 model 14 or 54, R&S®CMU-B56 necessary)	–	–	–	–	–	✓	–	1200.9258.02
R&S®CMU-K20	GSM400 mobile station signaling/non-signaling test software	✓	–	–	–	–	–	–	1115.5900.02
R&S®CMU-K21	GSM900, R-GSM, and E-GSM mobile station signaling/non-signaling test software	✓	–	–	–	–	–	–	1115.6007.02
R&S®CMU-K22	GSM1800 (DCS) mobile station signaling/non-signaling test software	✓	–	–	–	–	–	–	1115.6107.02
R&S®CMU-K23	GSM1900 (PCS) mobile station signaling/non-signaling test software	✓	–	–	–	–	–	–	1115.6207.02
R&S®CMU-K24	GSM850 mobile station signaling/non-signaling test software	✓	–	–	–	–	–	–	1115.6307.02
R&S®CMU-K26	GT800 mobile station signaling/non-signaling test software	✓	–	–	–	–	–	–	1115.6507.02
R&S®CMU-K27	IS-136/cellular (800 MHz band) mobile station signaling/non-signaling test software	–	✓	–	–	–	–	–	1115.6607.02

[1] R&S®CMU-B11 or R&S®CMU-B12 possible. One of two OCXOs should be installed to ensure high frequency accuracy, or an external frequency reference may be used, if available.
[2] Either R&S®CMU-B83 model 12 or R&S®CMU-B83 model 22 is required.
[3] Either R&S®CMU-B88 or R&S®CMUB89 is required.

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Type	Description	GSM/GPRS/EDGE	TDMA	AMPS	CDMA2000® 1xRTT	CDMA2000® 1xEV-DO	WCDMA/HSPA	Bluetooth®	Order No.
R&S®CMU-K28	IS-136/PCS (1900 MHz band) mobile station signaling/non- signaling test software	–	✓	–	–	–	–	–	1115.6707.02
R&S®CMU-K29	AMPS mobile station signaling/non-signaling test software	–	–	☑	–	–	–	–	1115.6807.02
R&S®CMU-K42	GPRS test software extension for all GSM test software packages	☺	–	–	–	–	–	–	1115.4691.02
R&S®CMU-K43	EGPRS classic (EDGE) signaling test software for all GSM test software packages	☺	–	–	–	–	–	–	1115.6907.02
R&S®CMU-K44	Dual transfer mode: simultaneous CS and PS connection for all GSM packages	☺	–	–	–	–	–	–	1157.4277.02
R&S®CMU-K45	AMR test software extension for all GSM test software packages	☺	–	–	–	–	–	–	1150.3100.02
R&S®CMU-K46	Wideband adaptive multirate signaling for GSM and WCDMA (GSM or WCDMA signaling option necessary)	☺	–	–	–	–	☺	–	1200.8800.02
R&S®CMU-K47	R&S®Smart Alignment for all GSM and CDMA2000® packages	☺	–	–	☺	☺	–	–	1157.4477.02
R&S®CMU-K48	I/Q versus slot measurement for adjustment of polar modulators	☺	–	–	–	–	–	–	1157.5309.02
R&S®CMU-K53	Bluetooth® test software	–	–	–	–	–	–	☑	1115.5000.02
R&S®CMU-K56	HSUPA 5.7 Mbit/s extension, 3GPP/FDD/UE, Rel.6 (R&S®CMU-B68, R&S®CMU-B21 model 14 or 54, R&S®CMU-B56 necessary)	–	–	–	–	–	☺	–	1200.7803.02
R&S®CMU-K57	WCDMA signaling 3GPP/FDD/UE, band 7 (R&S®CMU-B68, R&S®CMU-B21 model 14 or 54, R&S®CMU-B56 necessary)	–	–	–	–	–	✓	–	1200.7903.02
R&S®CMU-K58	WCDMA signaling 3GPP/FDD/UE, band 8 (R&S®CMU-B68, R&S®CMU-B21 model 14 or 54, R&S®CMU-B56 necessary)	–	–	–	–	–	✓	–	1200.8000.02
R&S®CMU-K59	WCDMA signaling 3GPP/FDD/UE, band 9 (R&S®CMU-B68, R&S®CMU-B21 model 14 or 54, R&S®CMU-B56 necessary)	–	–	–	–	–	✓	–	1200.8100.02
R&S®CMU-K60	HSDPA 14 Mbit/s extension 3GPP/FDD/UE, Rel. 5 (R&S®CMU-K64 necessary)	–	–	–	–	–	☺	–	1200.8200.02
R&S®CMU-K61	WCDMA (3GPP FDD) band 4, UE test signaling software	–	–	–	–	–	✓	–	1157.3670.02
R&S®CMU-K62	WCDMA (3GPP FDD) band 5, UE test signaling software	–	–	–	–	–	✓	–	1157.3770.02
R&S®CMU-K63	WCDMA (3GPP FDD) band 6, UE test signaling software	–	–	–	–	–	✓	–	1157.3870.02
R&S®CMU-K64	3.6 Mbit/s HSDPA	–	–	–	–	–	☺	–	1157.3970.02
R&S®CMU-K65	WCDMA (3GPP FDD) UL user equipment TX test, non-signaling test software	–	–	–	–	–	☑	–	1115.4891.02
R&S®CMU-K66	WCDMA (3GPP FDD) DL generator, non-signaling test software	–	–	–	–	–	☑	–	1115.5100.02
R&S®CMU-K67	WCDMA (3GPP FDD) band 3, UE test signaling software	–	–	–	–	–	✓	–	1150.3000.02
R&S®CMU-K68	WCDMA (3GPP FDD) band 1, UE test signaling software	–	–	–	–	–	✓	–	1115.5300.02
R&S®CMU-K69	WCDMA (3GPP FDD) band 2, UE test signaling software	–	–	–	–	–	✓	–	1115.5400.02
R&S®CMU-K83	CDMA2000® 1xRTT 450 MHz bands (band class 5, 11) test software	–	–	–	✓	–	–	–	1150.3500.02
R&S®CMU-K84	CDMA2000® 1xRTT cellular bands (band class 0, 2, 3, 7, 9, 10, 12) test software	–	–	–	✓	–	–	–	1150.3600.02
R&S®CMU-K85	CDMA2000® 1xRTT PCS bands (band class 1, 4, 8, 14) test software	–	–	–	✓	–	–	–	1150.3700.02
R&S®CMU-K86	CDMA2000® 1xRTT IMT-2000 bands (band class 6, 13, 15, 16, 17) test software	–	–	–	✓	–	–	–	1150.3800.02
R&S®CMU-K87	Extensive CDMA2000® 1xRTT/1xEV-DO data testing; requires R&S®CMU-B87	–	–	–	☺	☺	–	–	1150.4007.02
R&S®CMU-K88	CDMA2000® 1x EV-DO Rev. 0 and A non-signaling test software package for R&S®CMU-B88, including 450 MHz + cellular + PCS + IMT-2000 bands	–	–	–	☺	☺	–	–	1150.3900.02
R&S®CMU-K92	(E)GPRS application testing; external PC, Windows XP/2000, GPRS or EGPRS software option, and R&S®CMU-B95 auxiliary generator plus power PC required	☺	–	–	–	–	–	–	1157.4077.02
R&S®CMU-K96	WCDMA application testing; at least one WCDMA signaling band necessary	–	–	–	–	–	☺	–	1157.4177.02
R&S®CMU-K839	CDMA2000® 1xEV-DO 450 MHz bands (band class 5, 11) test software for R&S®CMU-B89	–	–	–	☺	✓	–	–	1200.8300.02
R&S®CMU-K849	CDMA2000® 1xEV-DO Cellular bands (band class 0, 2, 3, 7, 9, 10, 12) test software for R&S®CMU-B89	–	–	–	☺	✓	–	–	1200.8400.02
R&S®CMU-K859	CDMA2000® 1xEV-DO PCS bands (band class 1, 4, 8, 14) test software for R&S®CMU-B89	–	–	–	☺	✓	–	–	1200.8500.02
R&S®CMU-K869	CDMA2000® 1xEV-DO IMT-2000 bands (band class 6, 13, 15, 16, 17) test software for R&S®CMU-B89	–	–	–	☺	✓	–	–	1200.8600.02

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Type	Description	GSM/GPRS/EDGE	TDMA	AMPS	CDMA2000® 1xRTT	CDMA2000® 1xEV-DO	WCDMA/HSPA	Bluetooth®	Order No.
R&S®CMU-PK20[4]	Software package for R&S®CMU200 including GSM850 + 900 + 1800 + 1900 + GPRS signaling (R&S®CMU-K21, -K22, -K23, -K24, -K42)	☺	–	–	–	–	–	–	1159.3303.04
R&S®CMU-PK60[4]	Software package for R&S®CMU200 including WCDMA signaling: 3GPP/FDD/ UE, TX test, DL generator, band 1+2+3+4+5+6 (R&S®CMU-K61, -K62, -K63, -K65, -K66, -K67, -K68, -K69)	–	–	–	–	–	☺	–	1159.3355.04
R&S®CMU-PK80[4]	Software package for R&S®CMU200 including CDMA2000® bands 450 MHz + PCS + cellular + IMT-2000; analog AMPS (R&S®CMU-K83, -K84, -K85, -K86, -K29)	–	–	☺	☺	–	–	–	1159.3403.02
R&S®CMU-PK100[4]	Software package for R&S®CMU200 including GSM/GPRS/EGPRS + WCDMA + CDMA2000® 1xRTT + 1xEV-DO + AMPS + IS-136 (R&S®CMU-PK20, -PK60, -PK80, -PK800, -K27, -K28, -K43, -K88)	☺	☺	☺	☺	☺	☺	–	1159.3455.06
R&S®CMU-PK800	Software package for R&S®CMU200 including CDMA2000® 1x EV-DO Rev. 0 and A for 450 MHz + cellular+ PCS + IMT-2000 bands (R&S®CMU-K839, -K849, -K859, -K869)	–	–	–	–	☺	–	–	1200.0609.02
R&S®CMU-U80	Low jitter trigger output connector (for A-GPS)	–	–	–	☺	☺	–	–	1150.1750.02
R&S®CMU-Z1	256 Mbyte memory card for use with PCMCIA interface; flash ATA formatted, also named PC Card ATA	☺	☺	☺	☺	☺	☺	☺	1100.7490.04
R&S®CMU-Z6	Enhancement of wideband modulation (WCDMA 3GPP FDD) analyzer accuracy	–	–	–	–	–	☺	–	1150.0001.02
R&S®CMU-Z10	Antenna coupler 900 MHz/1700 MHz to 2200 MHz	☺	☺	☺	☺	☺	☺	☺	1150.0801.10
R&S®CMU-Z11	RF shielded cover, extension for R&S®CMU-Z10	☺	☺	☺	☺	☺	☺	☺	1150.1008.02
R&S®CMU-Z12	Bluetooth® antenna, extension for R&S®CMU-Z10	☺	–	–	☺	☺	☺	☺	1150.1043.02
R&S®CMU-Z13	USB 2.0 feedthrough for R&S®CMU-Z10	☺	☺	☺	☺	☺	☺	☺	1159.1200.20
R&S®CMU-Z46	WCDMA (3GPP FDD) message analyzer and recorder	–	–	–	–	–	☺	–	1159.0804.02
R&S®CMU-Z50	Handset for R&S®CMU200	☺	☺	☺	☺	☺	☺	☺	1159.0104.02
R&S®CMU-Z89	Hybrid mode test kit; for connecting two R&S®CMU200 for CDMA2000® 1xRTT and 1xEV-DO hybrid mode applications	–	–	–	☺	☺	–	–	1200.0750.02
R&S®CMU-DCV	Documentation of calibration values	☺	☺	☺	☺	☺	☺	☺	0240.2193.08
R&S®CRT-Z2	GSM/GPRS test SIM for GSM900 and DCS1800 for loopback mode; required for BER and other applications	☺	–	–	–	–	–	–	1039.9005.02
R&S®CRT-Z12	GSM/GPRS test SIM for GSM850 and PCS1900 for loopback mode; required for BER and other applications	☺	–	–	–	–	–	–	1139.1205.02
R&S®CRT-Z3	3G UICC/USIM test card for UMTS	–	–	–	–	–	☺	–	1139.1005.02
R&S®ZZA-411	19" rack adapter	☺	☺	☺	☺	☺	☺	☺	1069.3283.00

Comments on table

☑ mandatory
✓ signaling option (at least one is mandatory)
☺ optional
– not applicable

[4] When ordering one of the R&S®CMU-PK20 to -PK100 software packages, the signaling software included in these packages does not have to be ordered separately.

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