

TESTING **WIRELESS** DEVICES



FOR THE **WORLD**

SGS

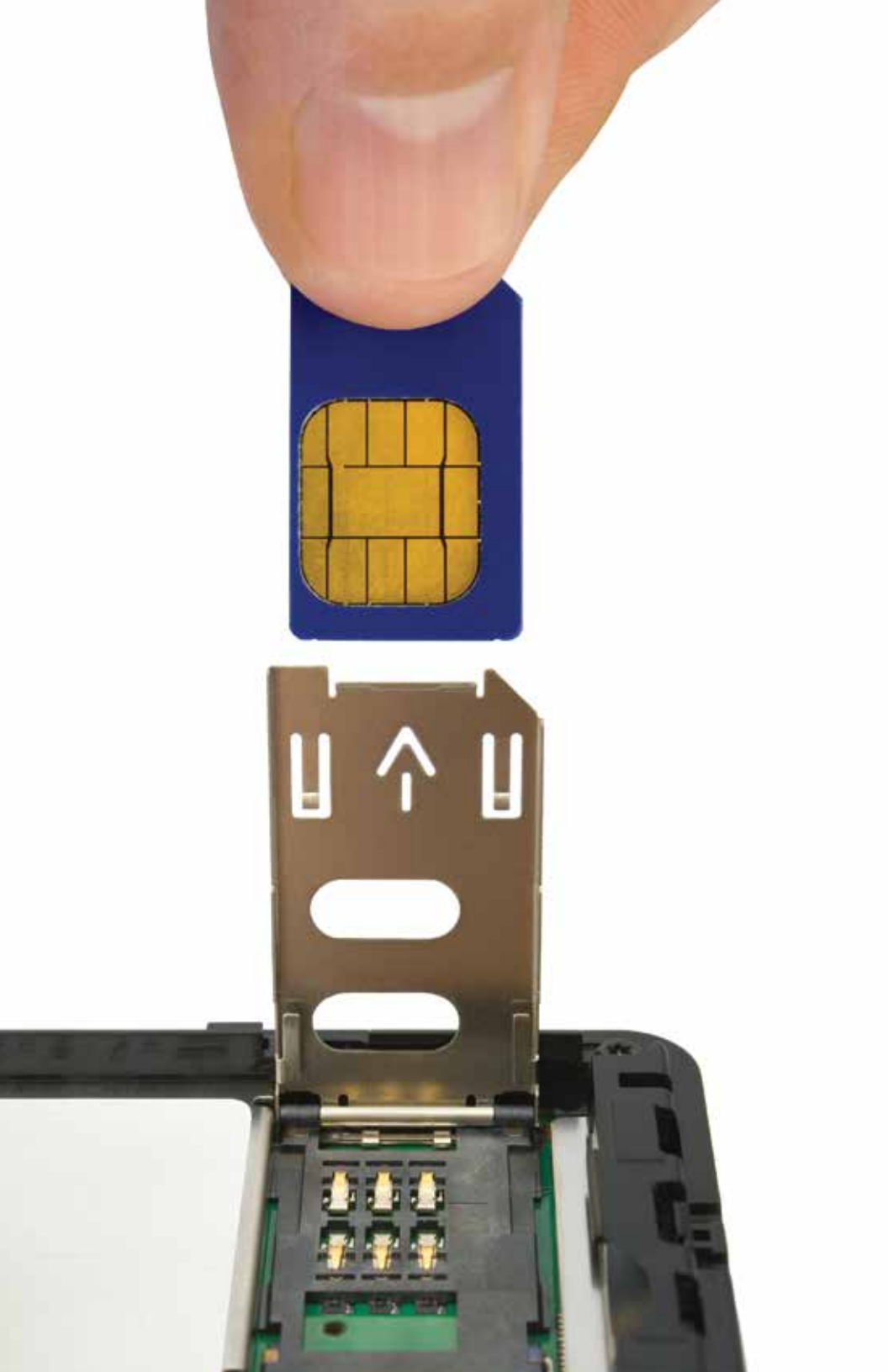
WHO IS SGS?

SGS is the world's leading inspection, verification, testing and certification company. Recognized as the global benchmark for quality and integrity, we employ 75,000 people and operate a network of more than 1,500 offices and laboratories worldwide.

SGS is a leading global supplier of complete solutions for wireless testing and certification services. With competence centers in key countries we have a strong portfolio of certifications and accreditations, including laboratories worldwide that are ISO 17025 accredited and GCF, PTCRB, CTIA and CCF approved. Our global presence makes us the industry leader in wireless testing and certification.

SGS operates a highly experienced and knowledgeable network committed to innovation and improvement. We will identify the applicable regulations and standards based on your current programs to certify the safety, quality and performance of your products helping to set you apart from the rest in today's competitive world. With our rapid turnaround time, SGS will get you to market faster so that you can take advantage of those short windows of opportunity.





SGS WIRELESS SOLUTIONS

SGS's global network of labs offers true end-to-end testing solutions to mobile manufacturers, carriers, ODMs and OEMs. Our experienced Software Development Team of engineers produce automated wireless test applications, giving us unique insight and knowledge of the technologies we provide services for that the competition can't match.

RF AND PROTOCOL CONFORMANCE TESTING

Making sure your device meets the minimum standards set by carriers and technology groups (e.g.: GCF, 3GPP, Bluetooth SIG, PTCRB).

ANTENNA PERFORMANCE TESTING

Ensuring your device meets requirements for LTE OTA, CTIA OTA (TRP/TIS), CTIA CWG (WiFi) OTA, aGPS, OTA.

APPLICATION TESTING

Testing devices according to specific carrier test plans and requirements, ensuring a positive user experience.

REGULATORY

Testing for FCC, EMC, RF, SAR, HAC, Safety, RSE.

END TO END CERTIFICATIONS

UNPARALLELED TEST COVERAGE AND ACCESSIBILITY

SUPPORTED TECHNOLOGIES AND STANDARDS:

- LTE
- CDMA / EVDO
- GSM/UMTS/WCDMA
- WiFi
- Bluetooth
- NFC (Near Field Communication)
- Regulatory/International Type Acceptance (ITA)

SUPPORTED BAND CLASSES:

- LTE (4G) - BC 4, 7, 12, 13, 14, 17, 25, 26, TDD41 (Additional bands tbd)
- UTRAN (3G) - FDD I, II, IV, V, VI, VIII [HSDPA(R5), HSUPA(R6), HSPA + (R7), DC-HSPA(R8)]
- GERAN (2G) - 850/900/1800/1900 MHz
- CDMA (1XRTT and EVDO) - BC 0, 1, 3, 4, 5, 6, 10, 14, 15

SUPPORTED CERTIFICATIONS AND APPROVALS:

- GCF and PTCRB
- CCF
- CTIA: OTA, Bluetooth, CWG and Battery
- FCC, IC, SAR, HAC, CE
- Various Type Approvals

WHAT CAN SGS DO FOR M2M?

SGS IS YOUR ONE STOP SHOP FOR M2M CERTIFICATION FOR VARIOUS NETWORK OPERATORS INCLUDING VERIZON, SPRINT, AT&T AND T-MOBILE.

SGS has expertise in testing industry leading 2G/3G/4G modules which get incorporated in M2M and connected devices. We have tested a variety of M2M and connected devices ranging from Security, Vending, Industrial, Transportation to Utilities, Healthcare, Smart Grid, Wireless Routers and Modems.

Please ask our Sales/Account Managers for M2M details.



SGS WIRELESS TEST PLATFORM CAPABILITIES - LTE (4G)

TECHNOLOGY		EQUIPMENT
TS 36.521	LTE RF	Spirent E2010 LTE RF Test System (TP 95)
		Rhode and Schwartz LTE RF Test System
		Anritsu 7873L (TP 104)
		Agilent GS-8891 (TP 101)
TS 36.521-3	LTE RRM	Anritsu 7873L (TP 104)
		Agilent T4020S (TP 112) + Rel 9
		R&S CMW (TP 96)
TS 36.523	LTE Protocol	Anritsu 7832L (TP 103)
		AT4 Wireless T4020 LTE RRM Tester (TP 112)
		Rhode and Schwartz LTE RRM and Protocol Test System
		Spirent E2010 LTE Protocol Test System (TP 94)
		Agilent N6070A (TP 108)
		Anite 9000 FDD + TDD (TP 113 & 116)

SGS WIRELESS TEST PLATFORM CAPABILITIES - OTA AND REGULATORY

TECHNOLOGY		EQUIPMENT	
OTA	CTIA OTA	Wi-Fi	ETS Lindgren
		GSM UMTS	ETS Lindgren
			Satimo Stargate 24
			Satimo Stargate 64
		CDMA	Satimo Stargate 64
		aGPS	Satimo Stargate 64
	GCF	GSM UMTS	ETS Lindgren
			Satimo Stargate 24
			Satimo Stargate 64
	Verizon Sprint	aGPS	Satimo Stargate 64
LTE OTA		Satimo Stargate 64	

SGS WIRELESS TEST PLATFORM CAPABILITIES - CDMA (1XRTT + EVDO)

TECHNOLOGY		EQUIPMENT
CCF	C.S0011	Spirent Taskit/C2K (SP_B8)
		WTS TestCon2000 (WT_A3)
	C.S0033-0	Spirent Test Drive EV-DO (SP_G13)
		WTS TestCon2000 (WT_A2)
	C.S0033-A	Spirent Test Drive EV-DO (SP_G13)
	C.S0031	Aeroflex (AE_A2)
		Aeroflex (AE_A3)
		Spirent Taskit/C2K (SP_B5)
	C.S0036	Spirent Taskit/PLTS (SP_A8)
	C.S0037	Aeroflex (AE_C2)
		Spirent (SP_C3)
	C.S0038-B	Aeroflex (AE_L1)
		Spirent TDII (SP_F3)
	C.S0043	Aeroflex (AE_F4)
		Spirent Test Drive SC (SP_F6)
		Spirent TDII (SP_F8)
	C.S0056	B&K Pulse System (BK_A1)
	C.S0059	Spirent Taskit/PLTS (SP_A8)
	C.S0060	Spirent TDII (SP_F8)
		Aeroflex (AE_E3)
		Spirent Test Drive SC (SP_F6)
	C.S0061	Spirent TDII (SP_F8)
		Spirent Test Drive SC (SP_F6)
	C.S0062	Spirent TDII (SP_F8)
C.S0073	Aeroflex (AE_M1)	
	Spirent TDII (SP_F8)	
C.S0094	Spirent TDII (SP_H3 & SP_H4)	

SGS WIRELESS TEST PLATFORM CAPABILITIES - WCDMA (3G)

TECHNOLOGY		EQUIPMENT
TS 34.121	RF/RRM	Anritsu 7873F
		Agilent 8800Plus
		R&S TS8950W
TS 34.123	Protocol	Aeroflex 6401 / 6103 - 263
		Anite SAT8 (UE)
		R&S CRTU-W
		R&S CRTU 2G3
		Anritsu 8480C / 7832A
TS 102.230	USIM Electrical	Comprion
TS 31.121	USIM Protocol	Aeroflex 6401 + IT3
		CRTU-W + IT3
		IT3 + Anite SAT
TS 31.124	USIM Application Toolkit	Aspect USAT
		Interlab USAT
TS 26.132	Audio	R&S UPV
TS 34.121	aGPS Protocol	Spirent ULTS
TS 34.171	aGPS RF	Spirent ULTS

SGS WIRELESS TEST PLATFORM CAPABILITIES - GSM (2G)

TECHNOLOGY		EQUIPMENT
TS 51.010	RF	R&S TS8950G + 8950 G/W
		MiNT 1140
		Agilent 8800 Plus (DARP)
	Protocol	Aeroflex 6103
		Comprion IT3 (SIM Protocol / Electrical)
		Anite SAT8
		R&S CRTU-G
	Audio	R&S UPV
	aGPS Protocol	Spirent ULTS
	Application	Setcom (MMS 1.3)
		Comprion IT3 (SIM Application Toolkit)
		Spirent (SUPL 1.0 / 2.0)
		R&S CRTU (ATE Test Tool)

CONTACT US

For more information about Carrier Acceptance Testing or general wireless testing (LTE, GSM/UMTS, CDMA, Bluetooth, WiFi, FCC, SAR, HAC or Battery), contact us anytime.

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WHEN YOU NEED TO BE SURE

SGS