

STARSIM[®] Cards

Solutions for a wireless world



Giesecke & Devrient



STARSIM® – Empower your network

STARSIM® is G&D's 2G SIM product family for the rapid introduction of SIM Application Toolkit (SAT) services in 2G networks. Regardless of which implementation you prefer (Java™ or native card) or which mobile network you are operating (GSM, CDMA or TDMA) STARSIM® is always the right platform, providing you with the competitive advantage you need to create cutting-edge value-added services with a short time-to-market. At the same time, STARSIM® enables you to reduce cost while maximising ARPU and customer satisfaction.

Based on a modular product concept, STARSIM® gives you the flexibility to configure your specific, tailor-made wireless solution very easily.

In addition to a wide range of customisable SIM components, G&D offers numerous off-the-shelf applications combined with a comprehensive tool chain, supporting the specific requirements of your SIM-based solution.

Please find below an extract from the complete STARSIM® offering:

- Flexible memory configuration
- Over-the-air (OTA) download
- Remote file and application management (RFM/RAM)
- Different micro-browser technologies (WIB™, S@T)
- WIM functionality for secure WAP™
- Symmetric and asymmetric cryptography

The modular concept of STARSIM® and STARSIM® Java™

Application	<ul style="list-style-type: none"> • mBanking • mBrokerage 	<ul style="list-style-type: none"> • Location-based services 	<ul style="list-style-type: none"> • mInfo • mGambling
Tools	STARSIM® Designer STARSIM® Analyser UniverSIM® Master Browser Suite Profiler	STARSIM® Designer Java™ Mobile Application Designer (JMAD) Java™ Professional Application Kit (JPAK) JLoad STARSIM® Analyser UniverSIM® Master Browser Suite Profiler	Java™ Mobile Application Designer (JMAD) Java™ Professional Application Kit (JPAK) JLoad STARSIM® Analyser UniverSIM® Master Browser Suite Profiler
Browser modules	SmartTrust WIB™: STARSIM®browser	SIMalliance™ S@T: STARS@Tbrowser	3GPPTM: USAT Interpreter
OTA module	OTASS®	OTASS®	OTASS®
Network modules (CDMA/TDMA)	R-UIM for CDMA GAIT for TDMA	R-UIM for CDMA GAIT for TDMA	
WIM module	STARWIM®	STARWIM®	STARWIM®
Card platform	STARSIM®	STARSIM® STARSIM® Java™	STARSIM® Java™

Security

With the use of dedicated smart card ICs and by combining the latest innovative hardware and software security features, we are able to offer the level of security your services require. Whether you are looking for secure authentication, symmetric cryptography in a closed secure environment or advanced high-end security with digital signatures in a PKI, G&D as the leader in security solutions is the right partner for you.

OTASS® (Over-the-air SIM Services)

OTASS® offers fully standard compliant (03.48) download of applications onto a SIM as well as remote configuration of individual data fields on the SIM. In combination with Remote File Management (RFM) and Remote Application Management (RAM), OTASS® leads the way towards a flexible administration of all future advanced value-added mobile services.

Tools

In addition to the SIM, the quality of a service platform is determined by the combination of well suited components – not only at the time of card issuance. G&D offers a comprehensive tool chain to support you in every phase of the SIM card lifecycle. From the profiling phase, through the design phase of the application, up to the update of services and applications in the field, G&D has the ideal solution.



Benefits of STARSIM®

Reliable platform

With STARSIM®, G&D's native operating system-based SIM card, you can rely on a high-performance card with efficient usage of resources and top-level security. Based on our long-term experience, STARSIM® is our product line for developing and implementing SIM Application Toolkit (SAT) services. A wide range of components and various tools for application development enable you to devise a SIM-based solution that precisely matches your needs. For years, STARSIM® has been the trusted SIM platform with numerous implementations world-wide.

Long-term experience in application development

G&D has been successfully developing and implementing service applications for mobile telecommunications for over twelve years. Our application portfolio for STARSIM® allows you to realise mobile value-added services quickly and flexibly. This enables you to cut development costs and offer your customers new services within the shortest possible time. With G&D's applications, you can choose any state-of-the-art application. Just decide according to your specific needs!

Variety and flexibility of use

The STARSIM® product line is designed to fit your needs. It does not matter whether you plan to launch a prepaid service on an entry 16kB SIM or a combination of advanced value-added services on a high-end 64kB or 128kB card – STARSIM® is always the right choice. With its wide range of different silicon platforms and memory sizes, multiple SIM components and support for GSM as well as CDMA and TDMA, STARSIM® is the ideal platform for every imaginable use case – always offering the best possible value.



	Entry		Standard		Professional	
	STARSIM® Pluto	STARSIM® Neptune	STARSIM® Saturn	STARSIM® Mars	STARSIM® Vega	STARSIM® Uranus
Memory	16kB EEPROM	16kB EEPROM	32kB EEPROM	64kB EEPROM	64kB Flash	128kB Flash
Features	<ul style="list-style-type: none"> • SAT platform • OTA support 	<p>GSM:</p> <ul style="list-style-type: none"> • SAT platform • OTA support • RFM <p>CDMA:</p> <ul style="list-style-type: none"> • UIM Toolkit (UTK) • OTASP (Over-the-air service provisioning) • OTAPA (Over-the-air parameter administration) 	<ul style="list-style-type: none"> • SAT platform • OTA support 	<ul style="list-style-type: none"> • SAT platform • OTA support • Extended WIB plug-ins 	<ul style="list-style-type: none"> • SAT platform • OTA support 	<ul style="list-style-type: none"> • SAT platform • OTA support • Extended WIB plug-ins
Available SIM components	<ul style="list-style-type: none"> • WIB™ 1.1 • OTASS® 3.5 	<ul style="list-style-type: none"> • WIB™ 1.1 • R-UIM 	<ul style="list-style-type: none"> • WIB™ 1.3 • S@T 2001 • OTASS® 3.5 	<ul style="list-style-type: none"> • WIB™ 1.2 • OTASS® 3.5 	<ul style="list-style-type: none"> • WIB™ 1.3 • S@T 2001 • WIM 2.0 (optional) • OTASS® 4.1 	<ul style="list-style-type: none"> • WIB™ 1.2 • OTASS® 3.5
Security	DES, 3-DES COMP128-1/2/3 (*)	DES, 3-DES COMP128-1/2/3 CAVE (*)	DES, 3-DES COMP128-1/2/3 (*)	DES, 3-DES COMP128-1/2/3 (*)	DES, 3-DES RSA 1.024 (optional) COMP128-1/2/3/4 Milenage (*)	DES, 3-DES COMP128-1/2/3 (*)
Standard compliance	<p>GSM:</p> <p>TS 51.011 TS 51.014 TS 23.048</p> <p>Browser:</p> <p>SmartTrust WIB™ 1.1</p>	<p>GSM:</p> <p>TS 51.011 TS 51.014 TS 23.048</p> <p>CDMA(R-UIM):</p> <p>TIA/EIA/IS-820 TIA/EIA/IS-683-4</p> <p>Browser:</p> <p>SmartTrust WIB™ 1.1</p>	<p>GSM:</p> <p>TS 51.011 TS 51.014 TS 23.048</p> <p>Browser:</p> <p>SmartTrust WIB™ 1.1 SIMalliance™ S@T 2001</p>	<p>GSM:</p> <p>TS 51.011 TS 51.014 TS 23.048</p> <p>Browser:</p> <p>SmartTrust WIB™ 1.2</p>	<p>GSM:</p> <p>TS 51.011 TS 51.014 TS 23.048</p> <p>WIM:</p> <p>WAP™ 2.0 PKCS#15</p> <p>Browser:</p> <p>SmartTrust WIB™ 1.3 SIMalliance™ S@T 2001</p>	<p>GSM:</p> <p>TS 51.011 TS 51.014 TS 23.048</p> <p>Browser:</p> <p>SmartTrust WIB™ 1.2</p>

(*) Customer-specific algorithms available on request

Proven interoperability of STARSIM® Java™

As an active member of the SIMalliance™ Java™ Interoperability working group, our objective is to push and assure interoperability between all Java™ SIMs on the market. By collaborating with other SIM manufacturers on the easy interchange of Java Card™ applets, we ensure the maximised interoperability of STARSIM® Java™ SIMs.

Maximised functionality

STARSIM® Java™ combines multiple product features in one product line. Integrating SAT, OTA, Java Card™, WIB™, WIM and OP together with common and customer-specific authentication algorithms, customer-specific functionality and on-card key generation, STARSIM® Java™ provides a maximum of flexibility and free memory space to offer you an innovative platform for every mobile service you can imagine.

Memory management

As the dynamic usage is key to the optimisation of EEPROM requirements during the SIM lifecycle, STARSIM® Java™ supports all advanced memory management mechanisms:

- File Deletion
- Applet Deletion
- Object Deletion
- Smart Defragmentation



	EEPROM				Flash	
	STARSIM® Mercury32	STARSIM® Mercury64	STARSIM® Jupiter	STARSIM® Andromeda	STARSIM® Venus	STARSIM® Pegasus
Memory	32kB EEPROM	64kB EEPROM	64kB EEPROM	128kB EEPROM	320kB Flash	400kB Flash
Features	<ul style="list-style-type: none"> • SAT platform • OTA support • Remote application management (RAM) • Advanced memory management 	<ul style="list-style-type: none"> • SAT platform • OTA support • Remote application management (RAM) • Advanced memory management 	<ul style="list-style-type: none"> • SAT platform • OTA support • Remote application management (RAM) • Advanced memory management • UICC support 	<ul style="list-style-type: none"> • SAT platform • OTA support • Remote application management (RAM) • Advanced memory management 	<ul style="list-style-type: none"> • SAT platform • OTA support • Remote application management (RAM) • Advanced memory management • Flexible memory configuration • UICC support 	<ul style="list-style-type: none"> • SAT platform • OTA support • Remote application management (RAM) • Advanced memory management • Flexible memory configuration • UICC support
Available SIM components	WIB™ 1.2 OTASS® 4.1	WIB™ 1.2 OTASS® 4.1	WIB™ 1.3 OTASS® 4.1	WIB™ 1.3 WIM 2.0 (optional) OTASS® 4.1	WIB™ 1.2 WIM 2.0 (optional) OTASS® 4.1	WIB™ 1.3 WIM 2.0 (optional) OTASS® 4.1
Security	DES, 3-DES RSA 1.024 (optional) COMP128-1/2/3 (*)	DES, 3-DES RSA 1.024 COMP128-1/2/3 (*)	DES, 3-DES RSA 1.024 COMP128-1/2/3/4 Milenage (*)	DES, 3-DES RSA 2.048 COMP128-1/2/3/4 Milenage (*)	DES, 3-DES RSA 1.024 COMP128-1/2/3 (*)	DES, 3-DES RSA 2.048 COMP128-1/2/3/4 Milenage (*)
Standard compliance	GSM: TS 51.011 TS 51.014 TS 43.019 TS 23.048 Java Card™ 2.1.2 Global Platform OP 2.0.1/2.1 Browser: SmartTrust WIB™ 1.2	GSM: TS 51.011 TS 51.014 TS 43.019 TS 23.048 Java Card™ 2.1.2 Global Platform OP 2.0.1/2.1 Browser: SmartTrust WIB™ 1.2	GSM: TS 51.011 TS 51.014 TS 43.019 TS 23.048 Java Card™ 2.2 Global Platform OP 2.0.1/2.1 Browser: SmartTrust WIB™ 1.3	GSM: TS 51.011 TS 51.014 TS 43.019 TS 23.048 Java Card™ 2.2 Global Platform OP 2.0.1/2.1 WIM: WAPT™ 2.0 PKCS#15 Browser: SmartTrust WIB™ 1.3	GSM: TS 51.011 TS 51.014 TS 43.019 TS 23.048 Java Card™ 2.1.2 Global Platform OP 2.0.1/2.1 WIM: WAPT™ 2.0 PKCS#15 Browser: SmartTrust WIB™ 1.2	GSM: TS 51.011 TS 51.014 TS 43.019 TS 23.048 Java Card™ 2.2 Global Platform OP 2.0.1/2.1 WIM: WAPT™ 2.0 PKCS#15 Browser: SmartTrust WIB™ 1.3

(*) Customer-specific algorithms available on request

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