Product Summary

SARA-G3 series

Dual and quad-band GSM/GPRS modules

Standard

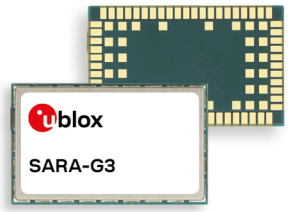
Professional

Automotive

Automotive-grade and ATEX-certified options

- Very small SARA LGA form factor for easy manufacturing
- Industry-leading, low power consumption (<0.90 mA standby)
- Separate power supply extends battery life
- Easy migration between u-blox 2G, 3G and 4G modules
- Supports eCall and ERA-GLONASS, CellLocate® indoor positioning and GNSS / A-GNSS integration

16.0 × 26.0 × 2.4 mm



Product description

The SARA-G3 series of GSM/GPRS modules feature extremely low power consumption and a miniature LGA form factor. SARA-G3 modules are interchangeable, and have been designed with the diverse needs of M2M customers in mind. Different functionalities and feature sets are available to meet different customer and application requirements.

SARA-G340/G350 are full-feature GSM/GPRS modules with a comprehensive feature set, including an extensive set of internet protocols (TCP, UDP, HTTP, FTP and SMTP). They have fully integrated access to u-blox GNSS positioning chips and modules, along with embedded A-GNSS (AssistNow Online and AssistNow Offline) functionality. SARA-G350 is the quad-band version for global connectivity and SARA-G340 (900/1800 MHz) is the dual-band version for cost-optimized use in Europe and Asia. Their rich feature set enables customers to easily develop a wide range of M2M devices with minimum software development on the host processor.

SARA-G340 ATEX and SARA-G350 ATEX are ATEX / IECEx certified variants that further complement the product series by offering the ideal solution for the development of smart devices deployed in potentially explosive environments.

u-blox cellular modules are certified and approved by the main regulatory bodies and operators. RIL software for Android is available free of charge. SARA-G3 modules are manufactured in ISO/TS 16949 certified sites. Each module is tested and inspected during production. The modules are qualified according to ISO 16750 – Environmental conditions and electrical testing for electrical and electronic equipment for road vehicles.

	SARA-G340 [A]	SARA-G350 [A]
Grade		
Automotive		•
Professional	•	•
Standard		
Regions		
	EU/APAC	Global
Access Technology		
GSM/GPRS bands	D1	Q
Data rate	85.6 kb/s	85.6 kb/s
Positioning		
GNSS via modem §	•	•
AssistNow Software	•	•
CellLocate®	•	•
eCall / ERA GLONASS	•	•
Interfaces		
UART	2	2
DDC for u-blox GNSS	1	1
GPIO	4	4
Audio		
Analog audio	1	1
Digital audio	1	1
Features		
Antenna detection	•	•
Jamming detection	•	•
Embedded TCP/UDP	•	•
Embedded FTP/HTTP	•	•
Embedded SSL	•	•
FW update via serial	•	•
Dual stack IPv4/IPv6	•	•

§ = external GNSS can be controlled via the modem
A = ATEX variant available

D1 = Dual-band 900/1800 MHz
Q = Quad-band

SARA-G3 series

Features

GSM	GSM 850/900/1800/1900 MHz [1] GSM 900 /1800 MHz [2] 3GPP Release 99
GPRS	GPRS Class 10, CS1-CS4 - up to 85.6 kbit/s PBCCH support
CSD	GSM max 9.6 kbit/s
AT Commands	3GPP 27.005, 3GPP 27.007 u-blox AT command extension 3GPP 27.010 MUX protocol
SMS	MT/MO Text/PDU mode
Firmware upgrade	Via UART
Voice	HR / FR / EFR / AMR Echo cancellation Noise reduction
Protocols	Embedded TCP/IP, UDP/IP, HTTP/FTP, SSL and TLS 1.2 support
Network	Jamming detection
GNSS Interfaces	Direct access to u-blox GNSS via module AssistNow software for faster acquisition CellLocate® & Hybrid Positioning
Special features	In-band modem Bearer Independent Protocol (BIP) IPv6 support over PPP eCall and ERA-GLONASS support

1 = SARA-G350
2 = SARA-G340

Electrical data

Power supply	3.00 V to 4.50 V (extended)	
Power consumption	Power Off:	< 40 μA
	Idle mode:	< 0.9 mA
	Idle mode:	< 5.0 mA
	Connected:	< 250 mA

Interfaces

Antenna	50 Ω SMT pad
Serial Port	1 UART for data and AT commands 1 UART for AT commands, tracing, and FW update
SIM	1.8 V and 3.0 V
GPIO	4, controllable over AT commands
GNSS serial	1 DDC (I^2C)
Audio	1 analog 1 digital (I^2S/PCM)

Package

96 pin LGA: 16.0 x 26.0 x 2.4* mm, < 3 g

* Module height is 2.4 mm from version 02 onwards (3 mm in version 01)

Environmental data, quality & reliability

Operating temperature	–40 °C to +85 °C (extended range)
RoHS compliant (lead-free)	
Qualification according to ISO 16750	
Manufactured in ISO/TS 16949 certified production sites	
ATEX / IECEx certification (SARA-G350 ATEX and SARA-G340 ATEX)	

Certifications and approvals

SARA-G3 modules offer a comprehensive set of regulatory certifications and approvals, including GCF, PTCRB, FCC, ICASA, RED (formerly known as R&TTE), ISED (formerly known as IC), NCC, and Anatel. Contact your closest u-blox representative for latest approvals.

Support products

EVK-G35	Evaluation Kit for SARA-G340/G350
RIL software	Android

Product variants

SARA-G340	Dual-band (900/1800 MHz) GSM/GPRS module
SARA-G340 ATEX	Dual-band (900/1800 MHz) GSM/GPRS module, ATEX/IECEx certified
SARA-G350	Quad-band GSM/GPRS module
SARA-G350 ATEX	Quad-band GSM/GPRS module, ATEX/IECEx certified

Further information

For contact information, see www.u-blox.com/contact-us.

For more product details and ordering information, see the product data sheet.