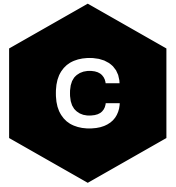


SARA-G450 module



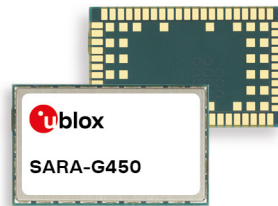
Quad-band GSM/GPRS module

Ideal for cost-optimized solutions

- Industry proven SARA form factor
- Easy migration between u-blox 2G, 3G, LPWA (LTE-M and NB-IoT), LTE Cat 4 and LTE Cat 6 modules
- Simple integration with embedded Internet suite
- Optimized power consumption for IoT applications



16.0 × 26.0 × 2.4 mm



SARA-G450

Product description

The SARA-G450 GSM/GPRS module features class 12 GSM/GPRS connectivity in the popular u-blox SARA form factor.

The SARA-G450 module is an ideal solution for cost and space-sensitive applications. It offers an excellent price-to-performance ratio for all M2M applications where environmental conditions (temperature, EMC and mechanical stresses) are within standard levels.

Its rich feature set – including GSM/GPRS class 12 and simple integration – enable customers to easily integrate the module and develop a wide range of M2M devices.

Thanks to its pin compatibility with the u-blox modules SARA-G3 (GSM), SARA-U2 (HSPA), SARA-R5/SARA-R4 (LTE-M/NB-IoT), SARA-N3 (NB-IoT), TOBY-L4 (LTE Cat 6) TOBY-L2 (LTE Cat 4) and TOBY-R2/LARA-R2/LARA-R3121 (LTE Cat 1), the SARA-G450 allows customers to utilize the same PCB design, thus targeting various environmental requirements and different cellular technologies.

u-blox cellular modules are certified and approved by the main regulatory bodies and operators.

	SARA-G450
Grade	
Automotive	
Professional	
Standard	•
Regions	
	Global
Access technology	
GSM/GPRS bands	Q
Data rate	85.6 kb/s *
Positioning	
GNSS via modem §	•
AssistNow software	•
CellLocate®	•
Interfaces	
UART	3
DDC for u-blox GNSS	•
GPIO	4
Audio	
Analog audio	•
Digital audio	
Features	
Antenna detection	•
Jamming detection	•
Embedded TCP/UDP	•
Embedded FTP/HTTP	•
Embedded SSL	•
FW update via serial	•
Dual stack IPv4/IPv6	•

§ = Control of external GNSS via the modem * = GPRS class 12 (downgradeable to class 10 via AT command)
Q = Quad-band

SARA-G450 module



Features

GSM	GSM 850/900/1800/1900 MHz 3GPP Release 99
GPRS	GPRS class 12 (downgradeable to class 10 with AT command) CS1-CS4 - up to 85.6 kbit/s PBCCH support
AT Commands	3GPP TS 27.005, 3GPP TS 27.007 u-blox AT command extension 3GPP 27.010 MUX protocol
SMS	MT/MO Text/PDU mode
Firmware upgrade	Via UART
Voice	Codec: HR / FR / EFR / AMR
Protocols	Embedded TCP/IP, UDP/IP, HTTP, FTP, SSL and TLS 1.2 support
GNSS Interfaces	Direct access to u-blox GNSS via module CellLocate® & Hybrid Positioning
Special features	IPv6 support over PPP

Electrical data

Power supply	3.40 V to 4.20 V
Digital I/O voltage level	1.8 V / 2.8 V to 3.0 V (selectable)
Power consumption	Power Off: < 100 µA Idle mode: < 1.5 mA Connected: < 230 mA

Interfaces

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

Further information

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

For more product details and ordering information, see the [product data sheet](#).

Package

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

Environmental data, quality & reliability

Operating temperature -40 °C to +85 °C (extended range)

RoHS compliant (lead-free)

Certifications and approvals

SARA-G450 modules offer a comprehensive set of regulatory certifications and approvals, including RED, ICASA, SRRC/CCC, GCF, and Anatel.

Contact your closest u-blox representative for the latest approvals.

Support products

EVK-G45 Evaluation Kit for SARA-G450

Product variants

SARA-G450 Quad-band GSM/GPRS module

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