

LISA-U2 series



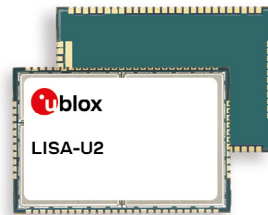
HSPA(+) modules with 2G fallback

Worldwide UMTS/HSPA(+) and GPRS/EDGE coverage

- HSDPA 21.1 Mbit/s, HSUPA 5.76 Mbit/s
- Easy migration between u-blox 2G, 3G and 4G modules
- Supports eCall, ERA GLONASS, CellLocate® indoor positioning, and GNSS / A-GNSS integration
- Extended temperature range of -40 °C to +85 °C



22.4 × 33.2 × 2.6 mm



Product description

With 6-band W-CDMA(UMTS) and quad-band GPRS/EDGE, the LISA-U2 modules are suited for networks worldwide. Features include data-rates of up to 21.1 Mbit/s (downlink), a rich set of internet protocols, very small footprint, very low power consumption and extended operating temperature range. LISA-U2 modules provide fully integrated access to u-blox positioning products. Antenna diversity permits the LISA-U2 modules to provide the highest data speeds.

LISA-U2 modules are ideal for consumer/industrial applications requiring high-speed data transmission, and machine-to-machine applications. They are the perfect choice for mobile internet terminals, tablets, in-car infotainment, connected navigation systems, security and surveillance systems, eCall, fleet management, metering, anti-theft systems, and other automotive applications.

The compact SMT package enables easy manufacturing, and migration from u-blox SARA, LEON, and other LISA modules is simple. This allows customers to take maximum advantage of their hardware and software investments, and provides very short time-to-market. An extensive set of national regulatory and operator certificates is available. RIL software for Android is available free of charge.

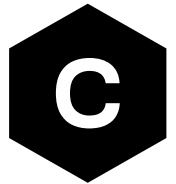
LISA-U2 modules are manufactured in ISO/TS 16949 certified sites. Each module is tested and inspected during production. The modules are qualified according to ISO 16750 - Environmental conditions and electrical testing for electrical and electronic equipment for road vehicles.

	LISA-U200	LISA-U201	LISA-U230
Grade			
Automotive		•	
Professional	•	•	
Standard			•
Regions			
	Global	Global	Global
Access Technology			
GSM/GPRS bands	Q	Q	Q
UMTS/HSPA [MHz]	800, 850, 900, 1700, 1900, 2100	800, 850, 900, 1900, 2100	800, 850, 900, 1700, 1900, 2100
Data rate	M	M	+
Positioning			
GNSS via modem §	•	•	•
AssistNow Software	•	•	•
CellLocate®	•	•	•
eCall / ERA GLONASS	•	•	
Interfaces			
UART	1	1	1
USB	1	1	1
DDC for u-blox GNSS	1	1	1
SPI	1	1	1
GPIO	14	14	14
Audio			
Digital audio	2	2	2
Features			
Antenna detection	•	•	•
Jamming detection	•	•	•
Embedded TCP/UDP	•	•	•
Embedded FTP/HTTP	•	•	•
Embedded SSL	•	•	•
FW update via serial	•	•	•
FOTA	•	•	
Rx diversity			•
Dual stack IPv4/IPv6	•	•	

M = 7.2 / 5.76 Mb/s down/up
+ = 21.1 / 5.76 Mb/s down/up

§ = external GNSS can be controlled via the modem

Q = Quadband



Features

UMTS/HSPA	800/850/900/1700/1900/2100 MHz (Bands VI, V, VIII, IV, II, I) 3GPP Release 7 5.76 Mbit/s uplink, 21.1 Mbit/s downlink or 5.76 Mbit/s uplink, 7.2 Mbit/s downlink
GSM	GSM 850 / 900 / 1800 / 1900 MHz 3GPP Release 7, PBCCH support
GPRS	Class 12, CS1-CS4 – up to 86.5 kbit/s
EDGE	Class 12, MCS1-9 – up to 236.8 kbit/s
CSD	GSM max 9.6 kbit/s UMTS max 64 kbit/s
SMS	MT/MO PDU / Text mode
Voice	HR/FR/EFR/AMR/AMR-WB

Software features

Protocols	Embedded TCP/IP, UDP/IP HTTP/FTP/SSL (Secure Socket Layer) SSL TLS 1.2 (for embedded TCP/IP) Ethernet over USB eSIM and Bearer-Independent-Protocol
Network	Jamming detection
GNSS Interfaces	Direct access to u-blox GNSS via LISA AssistNow software for fastest GNSS Time-to-First-Fix CellLocate® & Hybrid Positioning
Emergency calling	E911 (USA) European eCall, eMLPP
Other	Protect network from excessive signaling traffic Last gasp
Firmware upgrade	Via UART, USB, and SPI Via FOTA for 04B versions

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	

Interfaces

GPIO	Up to 14 GPIOs, configurable
(U)SIM	Supports 1.8 V and 3.0 V, SIM toolkit
Serial	1 UART, 1 SPI, DDC, 1 USB 2.0 (high-speed, 480 Mbit/s)
Audio	2 digital

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

76 pin LCC (Leadless Chip Carrier): 22.4 x 33.2 x 2.6 mm, < 7 g

Electrical data

Power supply	3.3 V to 4.4 V	
Power consumption	Power off	55 µA
	Idle (2G, DRX5)	1.3 mA
	Idle (3G, DRX7)	1.7 mA
	GSM voice	175 mA (bands II & III)
	UMTS voice	385 mA (band V)
	GPRS data	175 mA (1 Tx slot, bands II & III) 400 mA (4 Tx slots, bands II & III)
	HSPA	500 – 800 mA (depends on frequency band)

Certifications and approvals

RED (formerly known as R&TTE), ISED (formerly known as IC), PTCRB, GCF, FCC, Giteki (Japan), RCM (Australia), CCC (China), NCC (Taiwan), KCC (Korea), IDA (Singapore), ANATEL (Brazil), ICASA (S. Africa)

AT&T, DoCoMo, Softbank, SKT, Telstra (Australia), Vodafone, BellMobility, Telus, Rogers (Canada), ViVo (Brazil)

Support products

ADP-U200 / ADP-U201	Adapter boards for LISA-U2 series
RIL software	Android
USB driver	Embedded Windows 6.x, 7.x Windows XP, Vista, 7, Windows Mobile 6.5

Product variants

LISA-U200	UMTS/HSPA, quad-band GPRS/EDGE, 800/850/900/1700/1900/2100 MHz
LISA-U201	UMTS/HSPA, quad-band GPRS/EDGE, 800/850/900/1900/2100 MHz
LISA-U230	UMTS/HSPA+, quad-band GPRS/EDGE, 800/850/900/1700/1900/2100 MHz

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