

LISA-U2 series

Standard Professional Automotive

CELLULAR

UMTS/HSPA(+) modules

Highlights

- Worldwide W-CDMA(UMTS) and GPRS/EDGE coverage
- HSDPA 21.1 Mb/s, HSUPA 5.76 Mb/s
- SMT form factor, small foot-print
- Easy migration to u-blox GSM/GPRS, CDMA and LTE modules
- Low idle mode current: 1.3 mA
- Extended temperature range: -40 to +85°C
- Simple integration of u-blox GNSS and A-GNSS
- CellLocate[®]: location based on cellular network



LISA-U2 series:
22.4 x 33.2 x 2.6 mm

Product description

With 6-band W-CDMA(UMTS) and quad-band GPRS/EDGE, LISA-U2 modules are suited for networks worldwide. Features include data-rates of up to 21.1 Mb/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 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 and Embedded Windows 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.

Product selector

Model	Technology		Bands	Interfaces				Audio	Functions										Grade									
	HSUPA [Mb/s]	HSDPA [Mb/s]	UMTS/HSPA [MHz]	GPRS/EDGE	quad-band	UART	SPI	USB	GPIO	DDC for u-blox GNSS	Analog Audio	Digital Audio	Network indication	Antenna Supervisor	Jamming Detection	Embedded TCP/UDP	Embedded HTTP, FTP	Embedded SSL	AssistNow software	CellLocate [®]	FOTA	FW update via serial	eCall / ERA-GLONASS	Rx diversity	GNSS via Modem	Standard	Professional	Automotive
LISA-U200	5.76	7.2	800/850/900/1700/1900/2100	•		1	1	1	14	1		2	•	•	•	•	•	•	•	•	•	•	•	•	•			
LISA-U201	5.76	7.2	800/850/900/1900/2100	•		1	1	1	14	1		2	•	•	•	•	•	•	•	•	•	•	•	•	•			
LISA-U230	5.76	21.1	800/850/900/1700/1900/2100	•		1	1	1	14	1		2	•	•	•	•	•	•	•	•	•	•	•	•	•			
LISA-U260	5.76	7.2	850/1900	•		1	1	1	14	1		2	•	•	•	•	•	•	•	•	•	•	•	•	•			
LISA-U270	5.76	7.2	900/2100	•		1	1	1	14	1		2	•	•	•	•	•	•	•	•	•	•	•	•	•			
LISA-U200 FOTA	5.76	7.2	800/850/900/1700/1900/2100	•		1	1	1	14	1		2	•	•	•	•	•	•	•	•	•	•	•	•	•			

Features

UMTS/HSPA	800/850/900/1700/1900/2100 MHz (Bands VI, V, VIII, IV, II, I) 3GPP Release 7 5.76 Mb/s uplink, 21.1 Mb/s downlink or 5.76 Mb/s uplink, 7.2 Mb/s downlink
GSM	GSM 850 / 900 / 1800 / 1900 MHz 3GPP Release 7, PBCCH support
GPRS	Class 12, CS1-CS4 - up to 86.5 kb/s
EDGE	Class 12, MCS1-9 - up to 236.8 kb/s
CSD	GSM max 9.6 kb/s UMTS max 64 kb/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
Firmware upgrade	Via UART, USB, and SPI

Environmental data, quality & reliability

Operating temperature	-40 to +85°C (extended range)
RoHS compliant (lead-free)	
Qualification according to ISO 16750	
Manufactured in ISO/TS 16949 certified production sites	

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)

Interfaces

GPIO	Up to 14 GPIOs, configurable
(U)SIM	Supports 1.8 V and 3 V, SIM toolkit
Serial	1 UART, 1 SPI, 1 USB 2.0 (high-speed, 480 Mb/s)
Audio	2 digital

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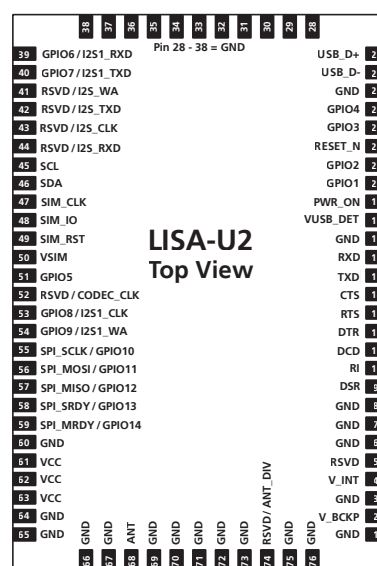
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Package

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

Pinout



Certifications and approvals

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

AT&T, DoCoMo, Softbank, SKT, KT (S.Korea), Telstra (Australia), Vodafone, BellMobility, Telus, Rogers (Canada), Vivo (Brazil)

Support products

EVK-U20 / EVK-U23	Evaluation Kits for LISA-U2 series
RIL software	Android Embedded Windows 6.x, 7.x Windows Mobile 6.5
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
LISA-U260	UMTS/HSPA, quad-band GPRS/EDGE, 850/1900 MHz
LISA-U270	UMTS/HSPA, quad-band GPRS/EDGE, 900/2100 MHz
LISA-U200-83S	FOTA, UMTS/HSPA, quad-band GPRS/EDGE, 800/850/900/1700/1900/2100 MHz

Further information

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

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