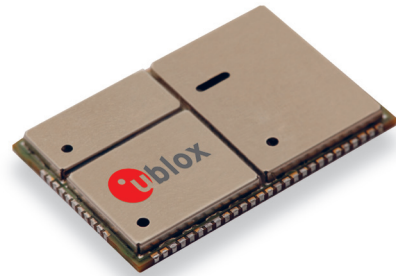


# LISA-U2 series

## 3.75G UMTS/HSPA+ module

### Highlights

- Worldwide WCDMA(UMTS) and GPRS/EDGE coverage
- HSDPA 21.1 Mb/s, HSUPA 5.76 Mb/s
- SMT form factor, small foot-print
- Easy migration from u-blox GSM/GPRS modules
- Low idle mode current: 1.5 mA
- Extended temperature range: -40 to +85°C
- Simple integration of u-blox GPS and A-GPS
- CellLocate™: location based on cellular network
- Manufactured in ISO/TS 16949 certified production sites



LISA-U2 series:  
22.4 x 33.2 x 2.6 mm

### Product description

With 6-band WCDMA(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 modules provide fully integrated access to u-blox GPS receivers. Antenna diversity permits LISA-U2 modules to provide the highest data speeds.

LISA modules are ideal for consumer and industrial applications requiring high-speed data transmission rates, 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 LEON GSM/GPRS and LISA-U1 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

Module	Technology		Bands		Interface					Audio	Functions												
	HSUPA [Mb/s]	HSDPA [Mb/s]	UMTS/HSPA [MHz]	GPRS/EDGE quad-band	UART	SPI	USB	DDC for u-blox GPS	GPIO	Analog Audio	Digital Audio	Network indication	Antenna Supervisor	Jamming Detection	Embedded TCP/UDP	HTTP, FTP, SSL	GPS via Modem	AssistNow software	FW update via serial	FOTA	In-band modem	Rx diversity	CellLocate
LISA-U200	5.76	7.2	800/850/900/1700/1900/2100	•	1	1	1	1	14		2	•	•	•	•	•	•	•	•		R	•	
LISA-U230	5.76	21.1	800/850/900/1700/1900/2100	•	1	1	1	1	14		2	•	•	•	•	•	•	•	•		R	•	•
LISA-U260	5.76	7.2	850/1900	•	1	1	1	1	14		2	•	•	•	•	•	•	•	•				•
LISA-U270	5.76	7.2	900/2100	•	1	1	1	1	14		2	•	•	•	•	•	•	•	•				•

R = Available upon request.

## 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)
Network	Jamming detection
GPS Interfaces	Direct access to u-blox GPS via LISA AssistNow software for fastest GPS Time- to-First-Fix CellLocate & Hybrid Positioning
Firmware upgrade	Via UART and USB

## Electrical data

Power supply	3.3 V to 4.4 V
Power consumption	
Power Off	50 µA
Idle (2G, DRX5)	1.5 mA
Idle (3G, DRX7)	1.6 mA
GSM Voice	190 mA (Bands II & III)
UMTS Voice	460 mA (Band V)
GPRS Data	190 mA (1 Tx slot, Bands II & III) 450 mA (4 Tx slots, Bands II & III)
HSDPA (cat 8)	580 mA (Band V)
HSPA	460 mA (Band V)

## Interfaces

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

## Certifications and approvals

GCF, R&TTE, PTCRB, FCC, IC, JATE/TELEC (Japan), A-tic (Australia), AT&T, DoCoMo, Telstra, Vodafone.

### Legal Notice

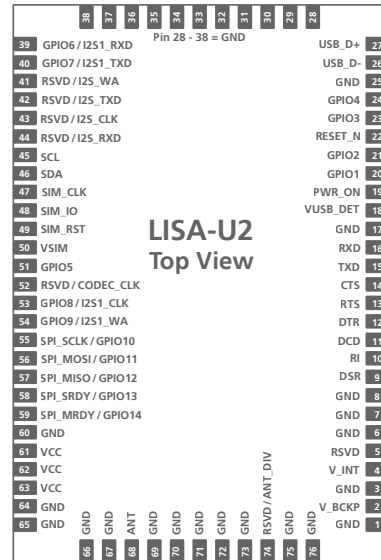
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## Package

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



## 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

## Support products

EVK-U20 / EVK-U23	Evaluation Kits for LISA-U2 series
RIL software	Android 2.3 & 4.0, 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

## Ordering information

LISA-U200-xxS <sup>3</sup>	UMTS/HSPA, 800/850/900/1700/1900/2100 MHz, quad-band GPRS/EDGE
LISA-U230-xxS <sup>3</sup>	UMTS/HSPA+, 800/850/900/1700/1900/2100 MHz, quad-band GPRS/EDGE
LISA-U260-xxS <sup>3</sup>	UMTS/HSPA, 850/1900, quad-band GPRS/EDGE
LISA-U270-xxS <sup>3</sup>	UMTS/HSPA, 900/2100, quad-band GPRS/EDGE

<sup>3</sup> xx refers to firmware version.

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