TRASNA

Lara-R6

Compact LTE Cat 1
multi-mode module

A product born from

u blox

Upgrade your IoT future with Trasna

Trasna supports over 250 leading brands across 80+ countries with end-to-end IoT connectivity hardware and software solutions for SIM, eSIM, iSIM/SoC, cellular IoT modules, and device management. We deliver the full mobile IoT value chain from chip to cloud with unmatched control, efficiency and innovation. By partnering with us, clients gain maximum value and a strong competitive edge.

Complete control

Enjoy end-to-end security. Everything starts and finishes with us, so you always have complete visibility and accountability at every stage

Complete efficiency

Our end-to-end solutions are designed to deliver optimal efficiency at every stage, reducing costs, time, and resources whilst ensuring fast, easy implementation

Complete innovation

We deliver cutting-edge, scalable technology, future-proofing your business with solutions that drive rapid growth and capitalise on emerging opportunities

u-blox cellular IoT is now Trasna

In March 2025, Trasna acquired u-blox's cellular IoT modules enabling it to strengthen its IoT connectivity chip-to-cloud offering in the OEM sector. This moved included u-blox's cellular module technology IP, product portfolio, and engineering team. This strengthened Trasna's position as a comprehensive cellular IoT solutions provider, offering end-to-end capabilities spanning semiconductor chip design, SIM and eSIM manufacturing, and cloud-based remote SIM and device management services.

Chip design   (e)SIM   Device mgmt   Cellular IoT modules

Trasna
in numbers

Top
02
in cellular modules
Excl. China

20bn
secure connections
without breach

250+
clients
in 80 countries

25+
years'
in cellular IoT

Lara-R6

Lara-R6 is a compact LTE Cat 1 module offering global and regional variants with single- or multi-mode connectivity, 2G/3G fallback, and VoLTE support. Designed for consistent voice and data performance in demanding environments, it features receive diversity, advanced security, and full regulatory certification making it ideal for reliable, medium-speed IoT applications across a range of verticals.

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Same great cellular products and team, now powered by Trasna
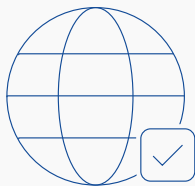
Standard

Professional

Automotive

24 × 26 × 2.6 mm

Benefits

Universal connectivity
Supports LTE Cat 1 with regional and global variants, including fallback to 3G/2G, enabling truly global roaming and simplified logistics
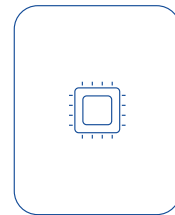
Certified variants for every market
Three SKUs tailored for global, North American, and EMEA/APAC/Japan/LATAM deployments, each with full regulatory and MNO approvals

Compact design with receive-diversity
Industry's smallest LTE Cat 1 module with dual-antenna support to enhance performance in low-coverage environments
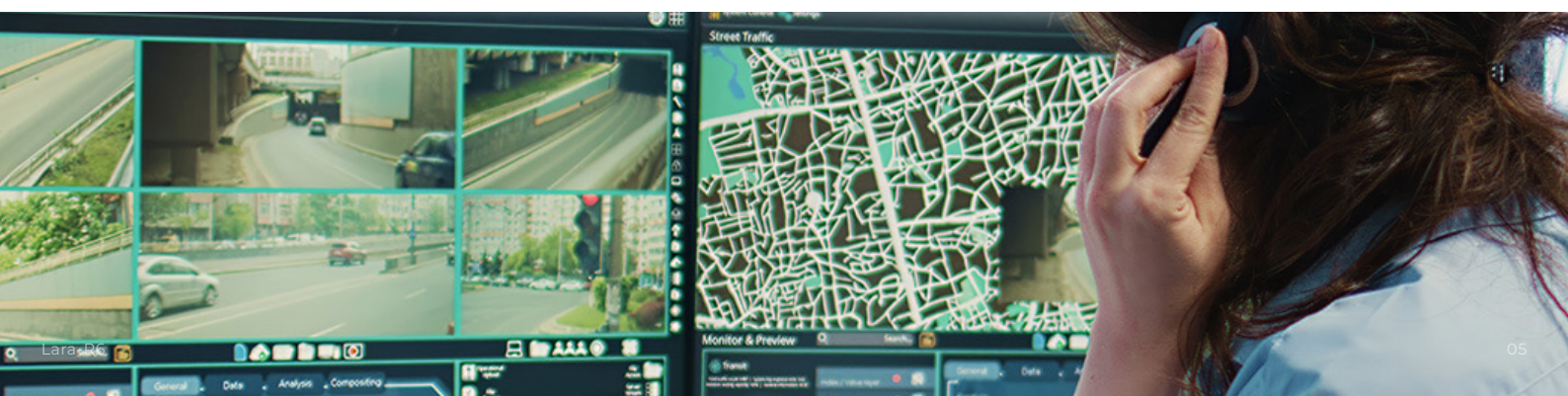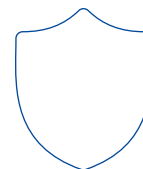
Voice-ready over LTE
Enables high-quality voice services via VoLTE, supporting devices with telephony or voice-based applications

Secure by design
Includes secure boot, secure updates, and regular security patching aligned to ETSI EN 303 645 for ongoing protection

Highlights

Global and regional variants
Includes Lara-R6001 (global with 2G/3G fallback), Lara-R6401 (North America), and Lara-R6801 (EMEA/APAC/Japan/LATAM), each with relevant certifications

Reliable LTE Cat 1 connectivity
Supports medium-speed LTE with strong band coverage, low latency, and receive-diversity for robust network performance

Multi-mode support
Lara-R6001 enables fallback to 3G and 2G for seamless operation where LTE is unavailable

Compact size for embedded designs
24 x 26 x 2.6 mm form factor delivers global connectivity, optimised for integration into space-constrained applications

VoLTE functionality
Supports Voice over LTE for devices requiring reliable, high-quality voice communication

Secure architecture
Features secure boot, encrypted updates, and ongoing security maintenance compliant with ETSI EN 645 303
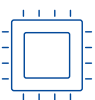
Flexible interfaces
Offers UART, USB, GPIO, and other standard interfaces for broad system compatibility

Lifecycle efficiency
Reduces time-to-market and BOM complexity with fewer SKUs and reuse of design across regions

Use cases

- Voice-enabled IoT and low-latency applications
- Alarm systems and remote monitoring
- Point-of-sale terminals and kiosks
- Connected healthcare and video surveillance
- Telematics and fleet management
- Asset tracking and logistics

Product features

		Lara-R6001 Lara-R6001D*	Lara-R6401 Lara-R6401D*	Lara-R6801 Lara-R6801D*
Grade	Automotive			
	Professional	•	•	•
	Standard			
Regions		Global	North America	Multi-region: EMEA, APAC, Japan, LATAM
Access technology	LTE FDD bands	1, 2, 3, 4, 5, 7, 8, 12, 13, 18, 19, 20, 26, 28	2, 4, 5, 12, 13, 14, 66, 71	1, 2, 3, 4, 5, 7, 8, 18, 19, 20, 26, 28
	LTE TDD bands	38, 39, 40, 41		
	UMTS/HSPA bands	850, 900, 1900, 2100		850, 900, 1900, 2100
	GSM/GPRS bands	Q		Q
	Data rate	Cat 1	Cat 1	Cat 1
Positioning	GNSS via modem	•	•	•
Compatible Trasna services	AssistNow™	•	•	•
	CellLocate®	•	•	•
Interfaces	UART	2	2	2
	USB	1	1	1
	I2C	1	1	1
	I2S	1	1	1
	GPIO	9	9	9
Features	MQTT / MQTT-SN	•	•	•
	Power save mode	•	•	•
	TCP/IP, UDP/IP, HTTP/ FTP	•	•	•
	TLS / DTLS	•	•	•
	eDRX	•	•	•
	Secure boot / update	•	•	•
	RxDiversity	•	•	•
	Dual stack IPv4/IPv6	•	•	•
	FW update via serial (FOAT)	•	•	•
	FOTA/uFOTA	•	•	•
	LwM2M	•	•	•
	Last gasp	•	•	•
	Jamming detection	•	•	•
	Antenna and SIM detection	•	•	•
	Antenna dynamic tuning	•	•	•
	VoLTE/CSFB (not for data-only variants)	•	VoLTE only	•

Cat 1= 10 Mbit/s DL, 5 Mbit/s UL   * = Data-only module variant

Q = Quad-band   * = Available in future FW

Features	LTE	LTE Cat 1 (10 Mbit/s DL, 5 Mbit/s UL) 3GPP Release 10 – Lara-R6001 (Global) – Lara-R6401 (North America) – Lara-R6801 (Multi-region) Power saving features: – Rel 12 LTE power save mode , PSM – Rel 13 eDRX
	UMTS	HSDPA category 8, HSUPA category 6 Bands (in MHz): – Lara-R6001: 850/900/1900/2100 – Lara-R6801: 850/900/1900/2100
	GSM	GPRS/EDGE multi-slot class 33 Bands (in MHz): – Lara-R6001: 850/900/1800/1900 – Lara-R6801: 850/900/1800/1900
	SMS	MT/MO PDU / Text mode SMS over IMS and via SMS-C
	Voice	VoLTE or CSFB Codec: HR/FR/EFR/AMR/AMR-WB Echo cancellation and noise reduction
Software features	Protocols	Dual stack IPv4 and IPv6 Embedded TCP/IP, UDP/IP, FTP, HTTP Embedded MQTT and MQTT-SN Embedded LwM2M eSIM and Bearer Independent Protocol
	Device mgmt.	OMA LwM2M
	GNSS Interfaces	Direct access to u-blox GNSS via module
	Firmware upgrade	Via UART (FOAT) and USB (FOAT and EasyFlash) FOTA / server solution (Firmware upgrade Over the Air)
Compatible Trasna services	Location	AssistNow & CellLocate
Electrical data	Power supply	3.8 V nominal, range 3.3 V to 4.5 V Extended range 3.1 V to 4.5 V
	Power consumption	Active Idle Mode: ~1.1 mA
Interfaces	Serial	2 UART 1 USB 2.0 (high-speed, 480 Mbit/s) 1 I2C 1 I2S
	GPIO	Up to 9 GPIOs, configurable
	(U)SIM	Supports 1.8 V and 3.0 V, SIM toolkit
	Audio	1 digital
Package	100 pin LGA (Land Grid Array)	24.0 x 26.0 x 2.6 mm, < 4 g
Environmental data, quality & reliability	Operating temperature	−40 °C to +85 °C
	RoHS compliant	Lead-free
	Trasna qualification policy	Based on AEC-Q104 standard
	Manufactured	ISO 9001 / 14001 certified production site
Certifications and approvals[1]	Lara-R6001	PTCRB, GCF, FCC, ISED, RED, UKCA, NCC, RCM, Giteki, Anatel
	Lara-R6001D	PTCRB, GCF, FCC, ISED, RED, UKCA, NCC, RCM, Giteki, Anatel, KC, AT&T, Verizon, T-Mobile,Deutsche Telekom, Telefonica, NTT DoCoMo, SBM, KDDI, Telstra
	Lara-R6401	PTCRB, GCF, FCC, ISED, AT&T, Verizon, FirstNet, T-Mobile
	Lara-R6401D	PTCRB, GCF, FCC, ISED, AT&T, Verizon, FirstNet, T-Mobile
	Lara-R6801	GCF, RED, UKCA, NCC, RCM, Giteki
	Lara-R6801D	GCF, RED, UKCA, NCC, RCM, Giteki, NTT DoCoMo, SBM, KDDI
	All Lara-R6 variants	RED cybersecurity requirements ETSI EN 303 645
	1 = Contact u-blox for a list of achieved certification approvals	
Support products	EVK-R6	Evaluation kits for Lara-R6 series RIL software available for Android 13.0 and previous versions
Product variants	Lara-R6001 Lara-R6001D (data-only variant)	Global LTE Cat 1 module LTE FDD bands: 1, 2, 3, 4, 5, 7, 8, 12, 13, 18, 19, 20, 26, 28 LTE TDD bands: 38, 39, 40, 41 3G bands: 1, 2, 5, 8 2G bands: Quad-band
	Lara-R6001 Lara-R6001D (data-only variant)	LTE Cat 1 module for North America LTE FDD bands: 2, 4, 5, 12, 13, 14, 66, 71
	Lara-R6801 Lara-R6801D (data-only variant)	LTE module for multi-regional use LTE FDD bands:1, 2, 3, 4, 5, 7, 8, 18, 19, 20, 26, 28 3G bands: 1, 2, 5, 8 2G bands: Quad-band

Take the next step

Grow your business with Trasna Lara-R6.
Contact your account manager to learn more.

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