



# GSM, UMTS, CDMA modules



**SARA-G3 and SARA-U2 series**  
GSM/GPRS and UMTS/HSPA modules  
16.0 x 26.0 x 3.0 mm  
*(2.4 mm for SARA-G3 version 02)*



**LISA-U2 series**  
UMTS/HSPA(+) modules  
22.4 x 33.2 x 2.6 mm



**LISA-C2 series**  
Dual-band CDMA2000 1xRTT  
22.4 x 33.2 x 2.7 mm

Model	Region	Access Technology				Positioning	Interfaces				Audio	Features								Grade									
		GSM/GPRS bands	UMTS/HSPA [MHz]	CDMA [MHz]	Band data rates		GNSS via Modem	AssistNow Software	Celllocate®	eCall / ERA-GLONASS		UART	SPI	USB	GPIO	DDC for u-blox GNSS	Analog audio	Digital audio	Antenna supervisor		Jamming detection	Embedded TCP/UDP	Embedded FTP/HTTP	Embedded SSL	FW update via serial	FOTA	Rx diversity	Dual stack IPx4/IPv6	
<b>GSM/GPRS modules</b>																													
SARA-G300	Europe / APAC	D1			L					2																			
SARA-G310	Global	Q			L					2																			
SARA-G340	Europe / APAC	D1			L	•	•	•	•	2	4	1	1	1	1	•	•	•	•	•	•	•	•	•	•	•	•	•	
SARA-G340 ATEX	Europe / APAC	D1			L	•	•	•	•	2	4	1	1	1	1	•	•	•	•	•	•	•	•	•	•	•	•	•	
SARA-G350	Global	Q			L	•	•	•	•	2	4	1	1	1	1	•	•	•	•	•	•	•	•	•	•	•	•	•	
SARA-G350 ATEX	Global	Q			L	•	•	•	•	2	4	1	1	1	1	•	•	•	•	•	•	•	•	•	•	•	•	•	
<b>UMTS/HSPA(+) and CDMA modules</b>																													
SARA-U201	Global	Q	800,850,900,1900,2100		M	•	•	•	•	1	1	9	1	1	1	•	•	•	•	•	•	•	•	•	•	•	•	•	
SARA-U201 ATEX	Global	Q	800,850,900,1900,2100		M	•	•	•	•	1	1	9	1	1	1	•	•	•	•	•	•	•	•	•	•	•	•	•	
SARA-U260	N. & S. America	D2	850,1900		M	•	•	•	•	1	1	9	1	1	1	•	•	•	•	•	•	•	•	•	•	•	•	•	
SARA-U270	Europe / APAC	D1	900,2100		M	•	•	•	•	1	1	9	1	1	1	•	•	•	•	•	•	•	•	•	•	•	•	•	
SARA-U270 ATEX	Europe / APAC	D1	900,2100		M	•	•	•	•	1	1	9	1	1	1	•	•	•	•	•	•	•	•	•	•	•	•	•	
SARA-U280	N. & S. America		850,1900		M	•	•	•	•	1	1	9	1	1	1	•	•	•	•	•	•	•	•	•	•	•	•	•	
LISA-U200	Global	Q	800,850,900,1700,1900,2100		M	•	•	•	•	1	1	1	14	1	2	•	•	•	•	•	•	•	•	•	•	•	F	•	
LISA-U201	Global	Q	800,850,900,1900,2100		M	•	•	•	•	1	1	1	14	1	2	•	•	•	•	•	•	•	•	•	•	•	F	•	
LISA-U230	Global	Q	800,850,900,1700,1900,2100		+	•	•	•	•	1	1	1	14	1	2	•	•	•	•	•	•	•	•	•	•	•	•	•	
LISA-U260	N. & S. America	Q	850,1900		M	•	•	•	•	1	1	1	14	1	2	•	•	•	•	•	•	•	•	•	•	•	•	•	
LISA-U270	Europe / APAC	Q	900,2100		M	•	•	•	•	1	1	1	14	1	2	•	•	•	•	•	•	•	•	•	•	•	•	•	
LISA-C200	N. America			800,1900	R	•	•	•	•	1	1	5		1	1	•	•	•	•	•	•	•	•	•	•	•	□	•	

D1 = Dual-band 900/1800 MHz  
D2 = Dual-band 850/1900 MHz

Q = Quad-band

L = GPRS (85.6 kb/s)  
R = 1xRTT (153 kb/s)

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

□ = Available in future firmware

F = FOTA version available



# LTE high-speed modules



**TOBY-L2 and TOBY-L4 series**  
LTE LGA modules  
24.8 x 35.6 x 2.6 mm



**MPCI-L2 series**  
LTE Mini PCIe modules  
30.0 x 51.0 x 3.7 mm

Model	Region	Access Technology				Positioning	Interfaces					Audio	Features										Grade													
		GSM/GPRS bands	UMTS/HSPA [MHz]	LTE FDD Bands	LTE TDD Bands		Band data rates	GNSS via Modem	AssistNow Software	CellLocate®	UART		USB	DDC (I <sup>2</sup> C)	SDIO (Master)	RGMI/RMI	GPIO	Analog audio	Digital audio	Network indication	Antenna supervisor	Jamming detection		Embedded TCP/UDP	Embedded FTP/HTTP	Embedded TLS 1.2	PW update via serial	FOTA	Rx diversity	Dual stack IPv4/IPv6	MIMO 2x2					
<b>LTE Cat 6 modules</b>																																				
TOBY-L4006	N. America	D2	850,1700,1900	2, 4, 5, 7, 12, 13, 29		C6	◇ ◇ ◇		4	1	2	1	1	8	1	2	• • • □ □ • • □ • • •																			
TOBY-L4106	EMEA	D1	900,2100	1, 3, 7, 8, 20	38	C6	◇ ◇ ◇		4	1	2	1	1	8	1	2	• • • □ □ • • □ • • •																			
TOBY-L4206	APAC / Brazil	Q	850,900,2100	1, 3, 5, 7, 8, 9, 19, 28		C6	◇ ◇ ◇		4	1	2	1	1	8	1	2	• • • □ □ • • □ • • •																			
TOBY-L4906	China	D1	900,2100	1, 3	39, 40, 41	C6	◇ ◇ ◇		4	1	2	1	1	8	1	2	• • • □ □ • • □ • • •																			
<b>LTE Cat 4 modules</b>																																				
TOBY-L200	N. America	Q	850,900,1700,1900,2100	2,4,5,7,17		C4			1	1	1	1		14	1		• • • • • • • • • • • • • • • •																			
TOBY-L201	N. America		850,1900	2,4,5,13,17		C4			1	1		1		14			• • • • • • • • • • • • • • • •																			
TOBY-L210	Europe / APAC	Q	850,900,1900,2100	1,3,5,7,8,20		C4			1	1	1	1		14	1		• • • • • • • • • • • • • • • •																			
TOBY-L220	Japan		850,900,2100	1,3,5,8,19		C4			1	1	1	1		14	1		• • • • • • • • • • • • • • • •																			
TOBY-L280	S. America / APAC	Q	850,900,1900,2100	1,3,5,7,8,28		C4			1	1	1	1		14	1		• • • • • • • • • • • • • • • •																			
MPCI-L200	N. America	Q	850,900,1700,1900,2100	2,4,5,7,17		C4											• • • • • • • • • • • • • • • •																			
MPCI-L201	N. America		850,1900	2,4,5,13,17		C4											• • • • • • • • • • • • • • • •																			
MPCI-L210	Europe / APAC	Q	850,900,1900,2100	1,3,5,7,8,20		C4											• • • • • • • • • • • • • • • •																			
MPCI-L220	Japan		850,900,2100	1,3,5,8,19		C4											• • • • • • • • • • • • • • • •																			
MPCI-L280	S. America / APAC	Q	850,900,1900,2100	1,3,5,7,8,28		C4											• • • • • • • • • • • • • • • •																			

Q = Quad-band

D1 = Dual-band 900/1800 MHz  
D2 = Dual-band 850/1900 MHz

C4 = LTE Cat 4 (150 Mb/s download, 50 Mb/s upload)  
C6 = LTE Cat 4 (300 Mb/s download, 50 Mb/s upload)

◇ = Available with uCPU, AT commands available in future firmware  
□ = Available in future firmware



# NB-IoT, RPMA, and LTE low speed modules



**LARA-R2/R3 series**  
LTE Cat 1 modules  
24.0 x 26.0 x 2.6 mm



**TOBY-R2 series**  
LTE Cat 1 modules  
24.8 x 35.6 x 2.6 mm



**SARA-R4/N2 series**  
LTE / NB-IoT modules  
16.0 x 26.0 x 2.5 mm  
*(2.3 mm for SARA-N2)*



**NANO-S100**  
RPMA module  
22.9 x 33.0 x 3.6 mm

Model	Region	Access Technology				Positioning	Interfaces					Audio	Features								Grade																		
		GSM/GPRS bands	UMTS/HSPA [MHz]	LTE bands	RPMA [GHz]		Band data rates	GNSS receiver	GNSS via Modem	AssistNow Software	CellLocate®		UART	USB	HSC	DDC (iPC)	SPI	7-wire SPI	SDIO (Master)	GPIO	Digital audio	VoLTE	Antenna supervisor	Jamming detection	Embedded TCP/UDP	Embedded FTP/HTTP	Embedded TLS 1.2	Power saving mode	eDRX	Deep sleep mode	FW update via serial	FOTA	Full hand-over	Global roaming	Rx diversity	Dual stack IPv4/IPv6	Standard	Professional	Automotive
<b>LTE Cat 1 modules</b>																																							
LARA-R3121	Europe			3,7,20		C1	•	□	•	•	1	1	□	1	1	□	9			•	□	•	•	•	•		•	•		•	•	•							
LARA-R202	N. America (AT&T)		850,1900	2,4,5,12		C1	□	□	□	1	1	1	1	1	1	9	1	1	•	•	□	•	•	•	•		•	•		•	•								
LARA-R203	N. America (AT&T)			2, 4, 12		C1	□	□	□	1	1	1	1	1	1	9	1	1	•	•	□	•	•	•	•		•	•		•	•								
LARA-R204	N. America (VZW)			4,13		C1	□	□	□	1	1	1	1	1	1	9	1	1	□	•	□	•	•	•	•		•	•		•	•								
LARA-R211	Europe	D1		3,7,20		C1	□	□	□	1	1	1	1	1	1	9	1	1	•	•	□	•	•	•	•		•	•		•	•								
TOBY-R200	N. America	Q	850,900,1900,2100	2,4,5,12		C1	□	□	□	1	1	1	1	□	9	1	1	1	•	•	□	•	•	•	•		•	•		•	•								
TOBY-R202	N. America		850,1900	2,4,5,12		C1	□	□	□	1	1	1	1	□	9	1	1	1	•	•	□	•	•	•	•		•	•		•	•								
<b>LTE Cat M1 modules</b>																																							
SARA-R404M	N. America (VZW)			13		M1	□	□	□	1	1	□	□	□	6	□	□	□	□	•	□	•	•	•	•		•	□		•									
<b>NB-IoT modules</b>																																							
SARA-N200	Europe / APAC			8		NB	□			2	□	□	□						□	u		•	•	•	•		□												
SARA-N201	APAC			5		NB	□			2	□	□	□						□	u		•	•	•	•		□												
SARA-N210	Europe			20		NB	□			2	□	□	□						□	u		•	•	•	•		□												
SARA-N211	Europe			8, 20		NB	□			2	□	□	□						□	u		•	•	•	•		□												
SARA-N280	S. America / APAC			28		NB	□			2	□	□	□						□	u		•	•	•	•		□												
<b>RPMA modules</b>																																							
SARA-S200	Global			2.4	RP																	•																	
NANO-S100	Global			2.4	RP																	•																	

D1 = Dual-band 900/1800 MHz  
Q = Quad-band

C1 = LTE Cat 1 (10 Mb/s download, 5 Mb/s upload)  
M1 = LTE Cat M1 (375 kb/s download and upload)

NB = NB-IoT Cat NB1 (<27.2 kb/s download, <62.5 kb/s upload)  
RP = up to 100 kb per day

□ = Available in future firmware  
\* = Configurable with multiple bands

u = Only UDP/IP supported