

		Linx	STMicroelectronics	Telit					Würth Elektronik	u-blox			Lantronix	GNS Electronics	
		GM Series	Teseo-LIV3F	SL869-V3	SL869	SL871L	SL869L-V2	SL876Q5-A	Erinome II	MAX-8C	SAM-M8Q	NEO-M8Q-01A	A5100-A	GNS1301	
Chipset		MediaTek MT3333	STMicroelectronics Teseo III	STMicroelectronics Teseo III	STMicroelectronics Teseo II	MediaTek MT3333	MediaTek MT3333	Qualcomm SiRFstar 5e	Qualcomm SiRFstar 5e	u-bloc UBX-G8020-8C	u-blox UBX-M8030		Qualcomm SiRFstar 5e	MediaTek MT3333	
Automotive Qualification		no	tbc	AEC-Q100	no	no	no	no	no	opt	no	AEC-Q100	no	no	
Supported GNSS constellations	GPS	x	x	x	x	x	x	x	x	x	x	x	x	x	
	Galileo	x	x	x	x	x	x	x	x	-	x	x	-	x	
	Glonass	x	x	x	x	x	x	x	x	x	x	x	x	x	
	BeiDou	x	x	x	x	x	x	x	x	-	x	-	-	-	
support for concurrent tracking ? (***)		yes	yes	yes	yes	yes	yes	yes	yes	no	yes	yes	yes	yes	
Data Ports	UART	x	x	x	x	x	x	x	x	x	x	x	x	x	
	SPI	-	-	-	-	-	-	x	-	-	-	x	x	x	
	USB	-	-	-	x	-	-	-	-	-	-	x	-	-	
	I ² C	-	x	x	x	x	-	x	x	x	x	x	x	-	
	1PPS	x	x	x	x	x	x	x	x	x	x	x	x	x	
integrated RTC ?		yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes	
integrated antenna ?			no	no	no	no	no	yes	no	no	yes	no	no	no	
integrated LNA ?		yes	no	yes	yes	yes	yes	yes	no	yes	yes	yes	yes	yes	
Flash Memory			16Mbit	16Mbit				8Mbit	16Mbit				4Mbit	128kB	
embedded functions (****)	data logger		yes											yes	
	geofencing		yes	yes						yes	yes	yes		opt	
	odometer		yes			yes				yes	yes	yes		opt	
Electrical Characteristics	Power Supply	min (V)	3,0	2,1	3,0	3,0	2,8	2,8	1,71	1,71	1,65	2,70	2,70	3,0	3,0
		max (V)	4,3	4,3	3,6	3,6	4,3	4,3	1,89	1,89	3,60	3,60	3,60	3,6	4,3
	Operating Temperatur	min (°C)	-40	-40	-40	-40	-40	-40	-40	-40	-40	-40	-40	-40	-40
		max (°C)	+85	+85	+85	+85	+85	+85	+85	+85	+85	+105	+105	+85	+85
	Power Consumption	Acquisition, typ. (mW)	79	90 ⁽¹⁾	171 ⁽¹⁾	67 ⁽¹⁾	93 ⁽¹⁾	86 ⁽¹⁾	85 ⁽¹⁾	44 ⁽¹⁾	18 ⁽¹⁾	19 ⁽¹⁾	19 ⁽¹⁾	37	115
		Navigation, Tracking, typ. (mW)	52,8		147 ⁽¹⁾	42 ⁽¹⁾	76 ⁽¹⁾	80 ⁽¹⁾	83 ⁽¹⁾	43 ⁽¹⁾	16 ⁽¹⁾	17 ⁽¹⁾	17 ⁽¹⁾	31	72
Low Power Mode (mA)		1,2			23 ⁽¹⁾		23 ⁽¹⁾	24-56	0,2	3,8 ⁽¹⁾	5,8 ⁽¹⁾	5,8 ⁽¹⁾	0,3		
	Vbatt only, typ. (µW)	23,1	29	25	73	50 ⁽¹⁾	50 ⁽¹⁾	50 ⁽¹⁾	30	105	20	20	60	45	
GNSS Performance (*)	Position Accuracy CEP (m)	Autonomous	<3	<1,5-1,8	<1,5	<1,5	<2,5 ⁽¹⁾	<2,5 ⁽¹⁾	<1,5 ⁽¹⁾	<1,5 ⁽²⁾	<2,5 ⁽¹⁾	<2,5 ⁽¹⁾	<2,5 ⁽¹⁾	<2,5	3 typ.
		SBAS	<2,5	<1,5							<2,0 ⁽¹⁾			<2,0	2,5 typ.
		SBAS Support	yes	yes	yes		yes	yes	yes	yes	yes	yes	yes	yes	yes
		OZSS Support	yes	yes	yes		yes	yes	yes	yes	yes	yes	yes	yes	yes
		DGPS Support		yes	yes	yes								yes	yes
	Time to First Fix	Hot	<1s	<1,5s ⁽¹⁾	1,9s	1s	<1s ⁽¹⁾	<1s ⁽¹⁾	<1,1s ⁽¹⁾	<1s ⁽²⁾	<1s ⁽¹⁾	<1s ⁽²⁾	<1s ⁽²⁾	<1s	<1s
		Warm		<25s ⁽¹⁾	25s		<28s ⁽¹⁾	<24s ⁽¹⁾	<23s ⁽¹⁾	<27,5s ⁽²⁾				<30s	
		Cold	<33s	<32s ⁽¹⁾	34s	<35s	<31s ⁽¹⁾	<27s ⁽¹⁾	<27s ⁽¹⁾	<28s ⁽²⁾				<33s	
		Assisted		yes	PGPS, PGLO	yes	yes	yes	SGEE		AssistNow	AssistNow	AssistNow	SGEE	yes
	Augmented GNSS Services	Autonomous Prediction	yes	ST-AGPS, Dead Reckoning	ST-AGPS	yes, Dead Reckoning	yes, Dead Reckoning		CGEE, Dead Reckoning, etc.		AssistNow Autonomous	AssistNow Autonomous	AssistNow Autonomous	CGEE	EASY
		Tracking	-161	-163 ⁽²⁾	-159	-162	-165 ⁽¹⁾	-165 ⁽¹⁾	-165 ⁽¹⁾	-167 ⁽¹⁾	-164 ⁽¹⁾	-165 ⁽²⁾	-167 ⁽²⁾	-165 ⁽¹⁾	-165
	Sensitivity (dBm)	Navigation	-158 ⁽²⁾	-158 ⁽²⁾	-158	-158	-163 ⁽¹⁾	-163 ⁽¹⁾	-163 ⁽¹⁾	-161 ⁽¹⁾	-164 ⁽¹⁾	-165 ⁽²⁾	-167 ⁽²⁾	-160 ⁽¹⁾	-160
Acquisition (Cold Start)		-143	-147 ⁽²⁾	-146	-146	-148 ⁽¹⁾	-148 ⁽¹⁾	-148 ⁽¹⁾	-147 ⁽¹⁾	-147 ⁽¹⁾	-146 ⁽²⁾	-148 ⁽²⁾	-147 ⁽¹⁾	-148	
	Notes		1. for GPS & Glonass	1. for GPS & Glonass	1. for GPS & Glonass	1. for GPS & Glonass	1. for GPS & Glonass	1. for GPS & Glonass	1. for GPS only 2. GPS & Glonass	1. for GPS	1. for GPS only 2. GPS & Glonass	1. for GPS only 2. GPS & Glonass	1. for GPS & Glonass		
Package		20-pin SMD package	LCC-18 10,1 x 9,7 x 2,2 mm	LCC-24 16 x 12,2 x 2,4 mm	LCC-24 16 x 12,2 x 2,4 mm	LCC-18-10,1 x 9,7 x 2,4 mm	LCC-24 16,0 x 12,2 x 2,4 mm	LCC-24 11,0 x 11,9 x 2,15 mm	20-pin SMD 7,0 x 7,0 x 1,6 mm	LCC-18-10,1 x 9,7 x 2,5 mm	LGA-20 15,5 x 15,5 x 6,3 mm	LCC-24 16,0 x 12,2 x 2,4 mm	22-pin SMD 15,0 x 10,2 x 2,5 mm	16-pin SMD 13,0 x 11,4 x 2,1 mm	
Online Support		none	create support case, public discussion board (forum)			none			Comprehensive user manual and design-in guide, support request, webinars		create support case, public discussion board (forum)		submit support request	submit support request	
Price Indication (**)		△	▽	◇	◇	▽	◇	◇	△	▽	◇	◇	◇	◇	

* All data originated from respective manufacturer, but each of them might have applied different measurement criteria and conditions, so please refer to each product datasheet for clarification and additional info.

** Please refer to article text for explanation of used symbols.

*** Please refer to manufacturer documentation which combinations are supported, e.g. GPS + Galileo.

**** Listed functions are mentioned in datasheet, others might be available. Please contact manufacturer.

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