



UBX-M8230-CT
UBX-M8030-CT
2.99 x 3.21 x 0.36 mm



UBX-M8030-KT/KA
UBX-G7020-KT/KA
5.00 x 5.00 x 0.59 mm



UBX-G8020-KT
5.00 x 5.00 x 0.59 mm



UBX-G7020-CT
3.40 x 3.00 x 0.36 mm

Model	Package	Category	GNSS					Interfaces				Features					Grade							
			Standard Precision GNSS	High Precision GNSS	Dead Reckoning	Trimming	GPS / QZSS	GLONASS	Galileo	BeiDou	Number of Concurrent GNSS	UART	USB	SPI	DDC (I ² C compliant)	Programmable (Flash)	Data logging	Data batching	RTC crystal	Oscillator	Antenna supply and supervisor	Timepulse	Standard	Professional
Standard Precision GNSS chips																								
UBX-M8230-CT	WL-CSP47	•	•	•	c	•	•	•	•	•	•	•	•	•	S	•	S	T						
UBX-M8030-CT	WL-CSP47	•	•	•	•	•	•	•	•	•	•	•	•	S	S	S	C/T	S	2					
UBX-M8030-KT	QFN40	•	•	•	•	•	•	•	•	•	•	•	•	S	S	S	C/T	S	2					
UBX-M8030-KA*	QFN40	•	•	•	•	•	•	•	•	•	•	•	•	S	S	S	C/T	S	2					
UBX-G8020-KT	QFN40	•	•	•	•	•	•	•	•	•	•	•	•	S	S	S	C/T	S	2					
UBX-G7020-CT	WL-CSP50	•	•	•	•	•	•	•	•	•	•	•	•	S	S	S	C/T	S	2					
UBX-G7020-KT	QFN40	•	•	•	•	•	•	•	•	•	•	•	•	S	S	S	C/T	S	2					
UBX-G7020-KA	QFN40	•	•	•	•	•	•	•	•	•	•	•	•	S	S	S	C/T	S	2					
Dead Reckoning chips																								
UBX-M8030-KT-DR	QFN40	ADR, E	•	•	•	•	•	•	•	•	•	•	•	•	•	•	S	C/T	S	2				
UBX-M8030-KA-DR*	QFN40	ADR, E	•	•	•	•	•	•	•	•	•	•	•	•	•	•	S	C/T	S	2				

* = Operating temperature -40° C to +105° C

ADR = Automotive Dead Reckoning
E = External Flash required

c = only supported in continuous mode
S = supported, may require ext. components

T = TCXO supported

C/T = Crystal and TCXO supported



Parameter	Specification	u-blox M8 (except UBX-M8230-CT)		u-blox 8	
Receiver type	Channels Signals	72 GPS/QZSS L1 C/A, GLONASS L1OF BeiDou B1I SBAS L1 C/A: WAAS, EGNOS, MSAS, GAGAN Galileo E1 B/C up to 3		72 GPS/QZSS L1 C/A, GLONASS L1OF SBAS L1 C/A: WAAS, EGNOS, MSAS	
	Number of concurrent GNSS	up to 3		1	
Configuration	Timepulse Navigation update rate	0.25 Hz...10 MHz up to 18 Hz (single GNSS, ROM) up to 10 Hz (2 concurrent GNSS, ROM)		0.25 ... 10 MHz up to 18 Hz	
Time-To-First-Fix		TCXO (Concurrent*)	Crystal (Concurrent*)	TCXO (GPS)	Crystal (GPS)
	Cold start	26 s	26 s	29 s	30 s
	Aided start	2 s	3 s	2 s	3 s
	Hot start	1 s	1 s	1 s	1 s
GNSS sensitivity		TCXO (Concurrent*)	Crystal (Concurrent*)	TCXO (GPS)	Crystal (GPS)
	Tracking & navigation	-167 dBm	-164 dBm	-166 dBm	-164 dBm
	Reacquisition	-160 dBm	-160 dBm	-160 dBm	-159 dBm
	Cold start	-148 dBm	-148 dBm	-148 dBm	-147 dBm
Accuracy	Horizontal position	2.5 m * 2.0 m SBAS *		2.5 m (GPS) / 4.0 m (GLONASS) 2.0 m SBAS (GPS)	
	Timepulse signal	30 ns RMS *		30 ns RMS (GPS)	
Power consumption	Continuous mode	21 mA @ 3.0 V *		16 mA @ 3.0 V	
	Power Save mode (1 Hz)	5.3 mA @ 3.0 V *		3.7 mA @ 3.0 V	

* = For default mode: GPS/SBAS/QZSS + GLONASS