



**THE DATASHEET OF
MAX-6G-0-000**



MAX-6 series

Compact u-blox 6 GPS modules

Highlights

- Ultra miniature package
- UART and DDC (I²C compliant) interfaces
- RTC crystal for faster warm and hot starts
- 1.8 V and 3.0 V variants



MAX-6:
9.7 x 10.1 x 2.5 mm

Features

- u-blox 6 position engine:
 - Navigate down to -161 dBm and -148 dBm coldstart
 - Faster acquisition with AssistNow Autonomous
 - Configurable power management
 - Hybrid GPS/SBAS engine (WAAS, EGNOS, MSAS)
 - Anti-jamming technology
- Simple integration with u-blox wireless modules
- A-GPS: AssistNow Online and AssistNow Offline services, OMA SUPL compliant
- LCC package for reliable and cost effective manufacturing
- Compatible with u-blox GPS Solution for Android
- Manufactured in ISO/TS 16949 certified production sites
- Qualified according to ISO 16750

Product description

The MAX-6 module series brings the high performance of the u-blox6 position engine to the ultra miniature MAX form factor. u-blox6 has been designed with low power consumption and low costs in mind. Intelligent power management is a breakthrough for low-power applications. These receivers provide high performance and a high level of integration capability in a tiny package. This makes them perfectly suited for end products with strict size and cost requirements. The DDC interface provides connectivity and enables synergies with u-blox wireless modules.

All MAX-6 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

Model	Type	Supply	Interfaces	Features
	Standalone GPS Standalone GLONASS Timing & Raw Data Dead Reckoning	1.75 V - 2.0 V 2.7 V - 3.6 V	UART USB SPI DDC (I ² C compliant)	Programmable (Flash) FW update Oscillator RTC crystal Antenna supply and supervisor Configuration pins Timepulse External interrupt / Wakeup
MAX-6G	•	•	•	•
MAX-6Q	•	•	•	•

◦ = requires external components

T = TCXO

Receiver performance data

Receiver type	50-channel u-blox 6 engine GPS L1 C/A code SBAS: WAAS, EGNOS, MSAS	
Navigation update rate	up to 5 Hz	
Accuracy ¹	Position	2.5 m CEP
	SBAS	2.0 m CEP
Acquisition ¹	Cold starts:	26 s
	Aided starts ² :	1 s
	Hot starts:	1 s
Sensitivity ³	Tracking & navigation:	-161 dBm
	Cold starts:	-148 dBm

¹ All SV @ -130 dBm

² Dependent on aiding data connection speed and latency

³ Demonstrated with a good active antenna

Electrical data

Power supply	2.7 V – 3.6 V (MAX-6Q) 1.75 V – 2.0 V (MAX-6G)
Power consumption	41 mA (continuous) 12 mA Power Save Mode (1 Hz)
Backup power	1.4 V – 3.6 V, 22 µA
Supported antennas	Active and passive

Interfaces

Serial interfaces	1 UART 1 DDC (I ² C compliant)
Digital I/O	Configurable timepulse 1 EXTINT input for Wakeup
Serial and I/O	Voltages 2.7 – 3.6 V (MAX-6Q) 1.75 – 2.0 V (MAX-6G)
Timepulse	Configurable 0.25 Hz to 1 kHz
Protocols	NMEA, UBX binary, RTCM

Legal Notice

u-blox reserves all rights to this document and the information contained herein. Products, names, logos and designs described herein may in whole or in part be subject to intellectual property rights. Reproduction, use, modification or disclosure to third parties of this document or any part thereof without the express permission of u-blox is strictly prohibited.

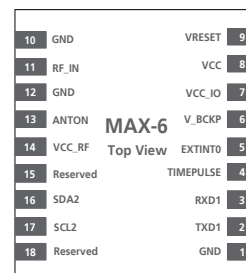
The information contained herein is provided "as is". No warranty of any kind, either express or implied, is made in relation to the accuracy, reliability, fitness for a particular purpose or content of this document. This document may be revised by u-blox at any time. For most recent documents, please visit www.u-blox.com.

Copyright © 2013, u-blox AG

Package

18 pin LCC (Leadless Chip Carrier): 9.7 x 10.1 x 2.5 mm

Pinout



Environmental data, quality & reliability

Operating temp. -40° C to 85° C

Storage temp. -40° C to 85° C

RoHS compliant (lead-free)

Qualification according to ISO 16750

Manufactured in ISO/TS 16949 certified production sites

Support products

u-blox 6 Evaluation Kits:

Easy-to-use kits to get familiar with u-blox 6 positioning technology, evaluate functionality, and visualize GPS performance.

EVK-6H: u-blox6 Evaluation Kit with TCXO

Ordering information

MAX-6G-0 u-blox 6 GPS Module, 1.8V, TCXO, 9.7x10.1 mm, 500 pcs/reel

MAX-6Q-0 u-blox 6 GPS Module, TCXO, 9.7x10.1 mm, 500 pcs/reel



Available as samples and tape on reel

Contact us

For contact information, see www.u-blox.com/contact-us.

Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

-  [View MAX-6G-0-000 on WIN SOURCE](#)
-  [U-blox Information](#)

Optimize Your Supply Chain with WIN SOURCE Solutions

-  Global Sourcing Solution
-  Obsolete Management
-  Cost Control Management
-  Shortage Management
-  Alternative Solution
-  Excess Inventory Management