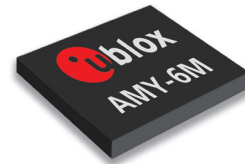


AMY-6M

Small, low-cost u-blox 6 GPS module

Highlights

- Smallest GPS module
- No host integration required
- Basic GPS functionality for cost-sensitive applications
- Operates at 1.8 V and 3.0 V



AMY-6M:
6.5 x 8.0 x 1.1 mm

Features

- u-blox 6 position engine:
 - Navigate down to -159 dBm and -146 dBm coldstart
 - Faster acquisition with AssistNow Autonomous
 - 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
- Backward compatible (hardware and firmware); easy migration from AMY-5M
- LGA package for cost effective manufacturing

Product description

AMY-6M is the world's smallest standalone GPS module dedicated to consumer applications. It has been specifically developed to provide basic GPS functionality required by high-volume, portable products. It is a fully integrated, autonomous GPS solution requiring no host integration resulting in fast time-to-market.

AMY-6M offers four different serial interfaces. This module features an integrated GPS crystal, providing fast acquisition and excellent tracking performance at a competitive price. In addition, AMY-6M can be assembled on a 2-layer PCB, which saves production costs. AMY-6M is so small that it can be integrated into the smallest portable devices. Advanced interference suppression mechanisms and innovative RF architecture ensure maximum performance even in hostile signal environments.

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
AMY-6M	•	• •	• • • •	C ○ ○ 2 1 •

○ = requires external components

C = Crystal

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:	27 s
	Aided starts ² :	4 s
	Hot starts:	1 s
Sensitivity ³	Tracking:	-159 dBm
	Cold starts:	-147 dBm
	Hot starts:	-156 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	1.75 V – 2.0 V 2.5 V – 3.6 V
Power consumption ⁴	67 mW @ 1.8 V (Eco Mode)
Backup power	1.4 V – 3.6 V, 22 µA
RTC input	32.768 kHz (optional)
Internal clock	26.0 MHz crystal
Antenna supervision	Short and open circuit detection supported with external circuit
Supported antennas	Active and passive with LNA

⁴ Based on FW 7

Interfaces

Serial interfaces	1 UART 1 USB V2.0 full speed 12 Mbit/s 1 DDC (I ² C compliant) 1 SPI
Digital I/O	Configurable timepulse 2 EXTINT interrupt inputs for Wakeup 2 configuration pins
Serial and I/O	Voltages 2.7 V – 3.6 V 1.75 V – 2.0 V
Protocols	NMEA, UBX binary

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 © 2012, u-blox AG

Specification applies to FW 7

Package

50 pin LGA: 8.0 x 6.5 x 1.1 mm, 0.14 g

Environmental data, quality & reliability

Operating temp.	-40° C to 85° C
Storage temp.	-40° C to 85° C
RoHS compliant (lead-free)	

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-6A: u-blox6 Evaluation Kit for AMY-6M
For ordering information contact u-blox.

Ordering information

AMY-6M-0	u-blox 6 GPS Module, 8.0 x 6.5 mm, 2000 pcs/reel
----------	---

Available as samples and tape on reel

Contact us

HQ Switzerland
+41 44 722 7444
info@u-blox.com

EMEA
+41 44 722 7444
info@u-blox.com

Americas
+1 703 483 3180
info_us@u-blox.com

APAC – Singapore
+65 6734 3811
info_ap@u-blox.com

China
+86 10 68 133 545
info_cn@u-blox.com

Japan
+81 3 5775 3850
info_jp@u-blox.com

Korea
+82 2 542 0861
info_kr@u-blox.com

Taiwan
+886 2 2657 1090
info_tw@u-blox.com