



L76K GNSS Module for Seeed Studio XIAO

SKU: 109100021

Datasheet

V1.0

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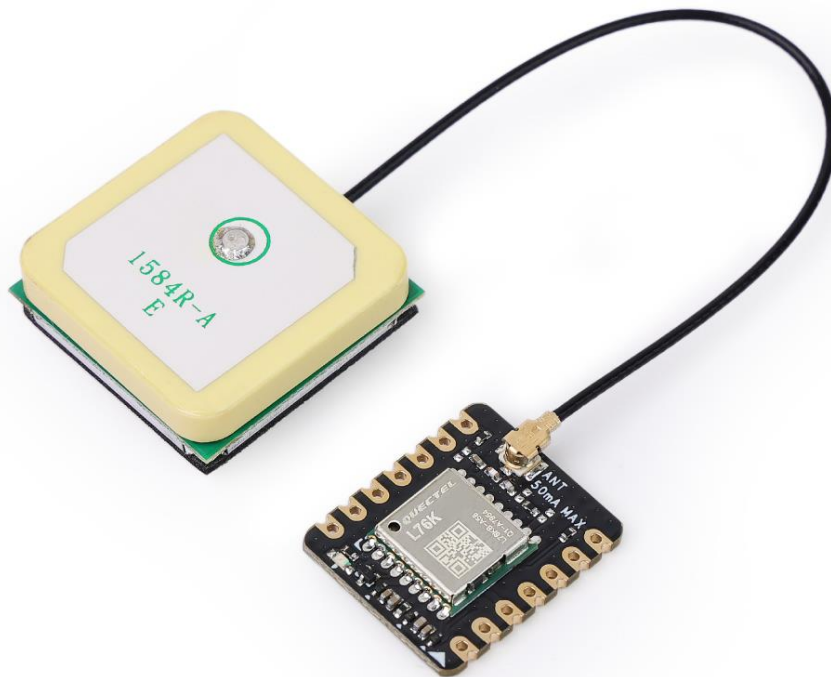
Revision history

Date	Version	Description
January 11, 2024	V1.0	Initial release.

Introduction

L76K GNSS Module for SeeedStudio XIAO is a Multi-GNSS (Global Navigation Satellite System) module compatible with all XIAO development boards, supports GPS, BeiDou (BDS), GLONASS and QZSS systems, allows multi-system combined or single-system independent positioning. It also supports AGNSS function, built-in low-noise amplifier and sound surface filter, and provides a good positioning experience of fast, accurate, high-performance.

The module comes with a high-performance active GNSS antenna intended to cover GPS L1 C/A, BeiDou B1 and GLONASS L1 bands. The design also has a tiny bright green LED for indicating the 1PPS output on fix.



What's included

- 1x L76K GNSS Module for Seeed Studio XIAO
- 1x High-performance active GNSS antenna
- 2x 1*7 PIN 2.54mm Header Socket

Features

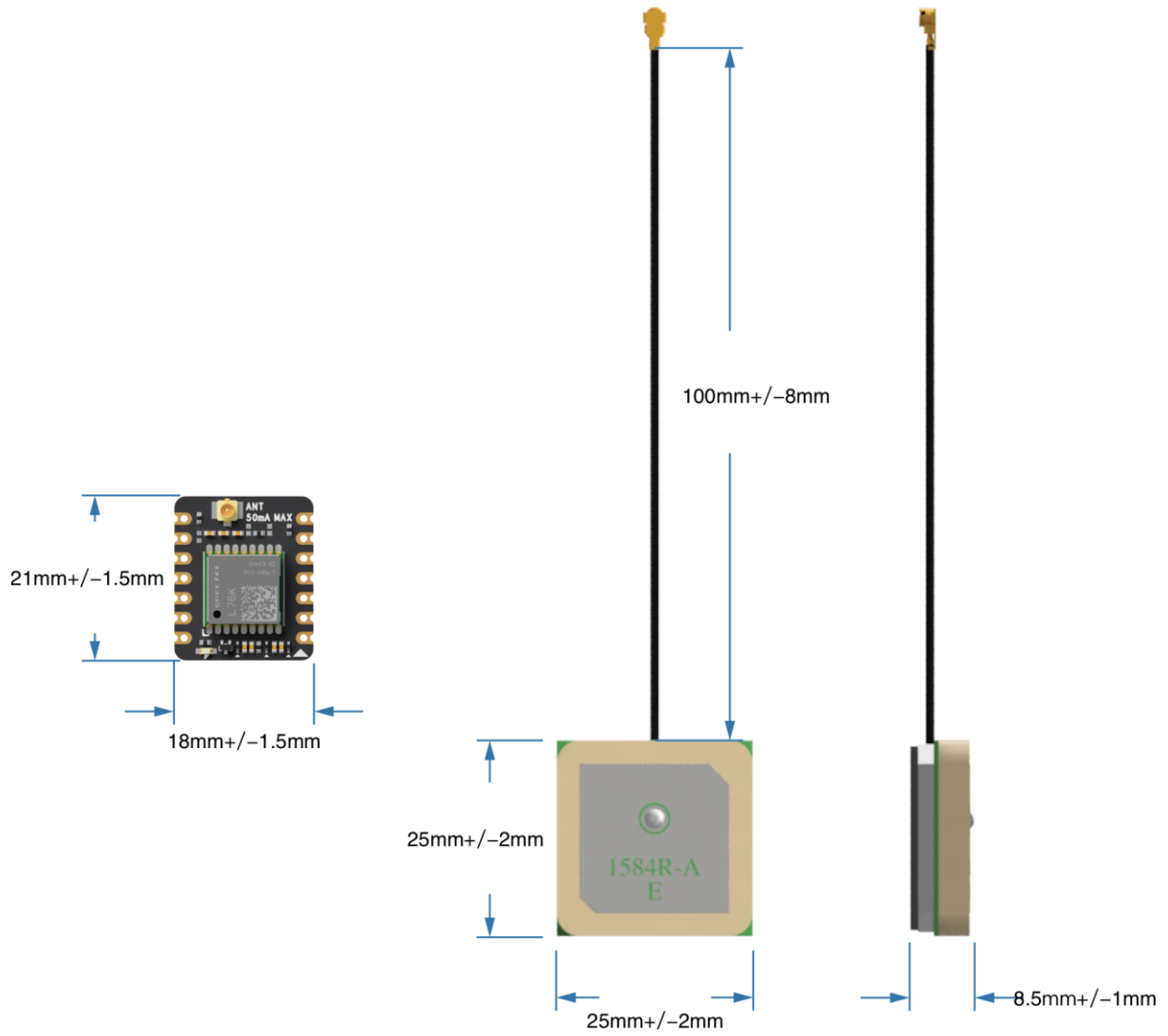
- **Support Multi-GNSS Systems:** Built around Quectel L76K, supporting GPS, BeiDou (BDS), GLONASS and QZSS
- **High Compatibility:** Highly compatible with all XIAO series products, easily integrated into your current projects
- **Support external active antenna:** Comes with a U.FL receptacle for high-performance active GNSS antenna
- **Thumb-sized Design:** 18 x 21mm, Seeed Studio XIAO series classic form-factor, suitable for small devices
- **Perfect for Production:** Breadboard-friendly & SMD design, no components on the back

Specifications

Item	Detail
GNSS bands	● GPS L1 C/A: 1575.42MHz ● GLONASS L1: 1602MHz ● BeiDou B1: 1561.098MHz
Channels	32 tracking ch/72 acquisition ch
TTFF (Time To First Fix)	● Cold Starts: 30s(w/o AGNSS), 5.5s(w/ GNSS) ● Hot Starts: 5.5s(w/o AGNSS), 2s(w/ AGNSS)
Sensitivity	● Auto-aquisition: -148dBm ● Tracking: -162dBm ● Re-acquisition: -160dBm
Accuracy	● Position: 2.0m CEP ● Velocity: 0.1m/s ● Acceleration: 0.1m/s² ● Timing: 30ns
UART Interface	● Baud Rate: 9600~115200bps(9600bps default) ● Update Rate: 1Hz(default), 5Hz(Max.) ● Protocol: NMEA 0183, CASIC proprietary protocol
Antenna	● Type: Active Antenna ● Operating Frequency: 1559–1606MHz ● Coaxial Cable: RF1.13 Length=10cm ● Cable Connector: U.FL Plug RA
Current consumption(w/ active antenna)	● Auto-aquisition: 41mA ● Tracking: 41mA ● Standby: 360uA

Dimension	18mm x 21mm
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Mechanical dimensions



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