

Information note

Topic u-blox M10 platform offers up to 25 Hz navigation update rate
 UBX-23006557 C1-Public

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1 Affected products

| Product name | Ordering code | Type number | Firmware | Remarks |
|---------------|----------------------|----------------------|--------------|---------|
| UBX-M10050-KB | UBX-M10050-KB-A0100A | UBX-M10050-KB-A0100A | ROM SPG 5.10 | |
| UBX-M10050-KB | UBX-M10050-KB-A0103A | UBX-M10050-KB-A0103A | ROM SPG 5.10 | |
| MAX-M10M | MAX-M10M-00B | MAX-M10M-00B-01 | ROM SPG 5.10 | |
| MAX-M10S | MAX-M10S-00B | MAX-M10S-00B-01 | ROM SPG 5.10 | |
| MIA-M10Q | MIA-M10Q-00B | MIA-M10Q-00B-01 | ROM SPG 5.10 | |
| SAM-M10Q | SAM-M10Q-00B | SAM-M10Q-00B-01 | ROM SPG 5.10 | |
| EVK-M101 | EVK-M101-00 | EVK-M101-00-02 | ROM SPG 5.10 | |
| EVK-M101C | EVK-M101C-00 | EVK-M101C-00-02 | ROM SPG 5.10 | |
| EVK-M10QSAM | EVK-M10QSAM-00 | EVK-M10QSAM-00-01 | ROM SPG 5.10 | |

2 Type

- | | |
|--|--|
| <input type="checkbox"/> Product status change | <input checked="" type="checkbox"/> Documentation update |
| <input type="checkbox"/> Hardware/component change | <input type="checkbox"/> Certification information |
| <input type="checkbox"/> Firmware/software update | <input type="checkbox"/> Security advisory |
| <input type="checkbox"/> Label change | <input type="checkbox"/> Other |

3 Description

The high position update rate is a key requirement for use cases with fast moving objects. Car crash recorders or drones/UAV need position update rates of 10 Hz or more.

Depending on the region of the world, the number of available GNSS signals to be used for navigation varies. Besides higher position availability, using more signals improves the reported position accuracy with the drawback of a reduced maximum navigation update rate.

u-blox M10, the ultra-low-power GNSS receiver for high-performance asset-tracking devices now offers a new setting to achieve higher navigation update rates of up to 25 Hz.

| Max navigation update rate datasheet figure | Single constellations i.e., GPS only | 2 concurrent GNSS i.e., GPS+GAL | 3 concurrent GNSS i.e., GPS+GAL+GLO | 4 concurrent GNSS GPS+GAL+GLO+BDS |
|---|--------------------------------------|---------------------------------|-------------------------------------|-----------------------------------|
| Previously | 18 Hz | 10 Hz | 10 Hz | 5 Hz |
| Now | 25 Hz | 20 Hz | 16 Hz | 10 Hz |

No firmware update is needed to benefit from the new setting; the products can be easily configured through UBX messages. Please refer to the Integration manual of the respective product for details.

All u-blox M10 products benefit from the new setting, including already delivered products.

Related documentation is published on u-blox.com or is available upon request under NDA.

4 Schedule

All affected products are available from stock.

5 Related documentation

- [1] u-blox M10 ultra low power platform, u-blox.com/M10
- [2] u-blox-M10 SPG5.10 Interface description, [UBX-21035062](#)
- [3] u-blox-M10 SPG5.10 interface description, UBX-21035061, NDA required
- [4] u-blox UBX-M10050-KB Data sheet, UBX-20043795, NDA required
- [5] u-blox UBX-M10050-KB Integration manual, UBX-20049918, NDA required
- [6] u-blox MAX-M10M Data sheet, [UBX-22028884](#)
- [7] u-blox MAX-M10M Integration manual, [UBX-22038241](#)
- [8] u-blox MAX-M10S Data sheet, [UBX-20035208](#)
- [9] u-blox MAX-M10S Integration manual, [UBX-21028173](#)
- [10] u-blox MIA-M10Q Data sheet, [UBX-22015849](#)
- [11] u-blox MIA-M10Q Integration manual, [UBX-21028173](#)
- [12] u-blox SAM-M10Q Data sheet, [UBX-22013293](#)
- [13] u-blox SAM-M10Q Integration manual, [UBX-22020019](#)