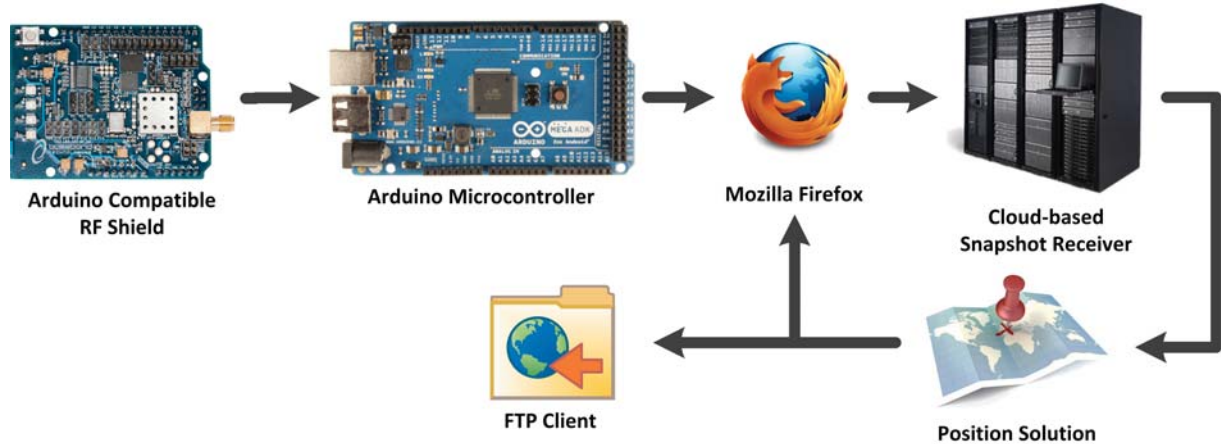# Snapshot Positioning

## Evaluation Kit & Rapid Prototyping Platform

The Snapshot Receiver Evaluation Kit includes an Arduino compatible RF front-end, software drivers, and a browser based Graphical User Interface (GUI) to allow easy access to our innovative cloud-based Snapshot Positioning GNSS Receiver.



Arduino Compatible RF Shield → Arduino Microcontroller → Mozilla Firefox → Cloud-based Snapshot Receiver → Position Solution → FTP Client

This evaluation kit is a self-contained GNSS RF front-end that allows anyone to quickly capture GNSS signal data for evaluating our cloud-based snapshot positioning receiver. With hundreds of readily available Arduino compatible add-on boards, a user can easily build prototypes that integrate WiFi, Bluetooth, Ethernet, cellular modem, MEMS sensors, memory, and LCD using freely available open source code to quickly test and validate new product concepts. A prototype that typically takes months to build in the past can now be done within hours.

The patent pending techniques that power our snapshot positioning solutions can also be applied to conventional GNSS receivers. Although this requires the GNSS receiver to perform all the signal processing functionality on hardware, a conventional GNSS receiver can benefit greatly by reducing the time required to compute a position and quickly return to an idle state when operating in snapshot type applications.

For customers that would like to incorporate our snapshot positioning solution into silicon, proprietary target platforms, or operating systems, we can provide collaborative engineering support to assist in integration. Please contact us for details.

## Features and Benefits

**Ultra-fast GNSS data captures** requiring as little as 2 ms of signal data.

Take advantage of the large number of **existing connectivity options already on the market for Arduino**.

**Patent pending** snapshot positioning technologies can be readily licensed and implemented in conventional GNSS receivers.

The browser based graphical user interface provides an **intuitive means to access receiver information**.

**Open source firmware and drivers** allows for rapid integration on real-world devices.

**Complement WiFi geolocation and Cell-ID** positioning services.

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Preliminary

# Technical Specifications[i,ii]

| Features | Specifications |
|---|---|
| **Included Hardware Components** | Arduino compatible RF Shield |
| **Included Software Components** | Open source Arduino firmware<br>Open source Windows compatible driver |
| **Compatible Arduino Hardware** | Arduino Mega 2560<br>Arduino Mega ADK |
| **Captured Data Size** | 2 - 40 kByte |
| **Captured Data Duration** | 2 - 20 ms |
| **Time to First Position (Cold-start)[iii]** | ~ 100 ms |
| **Acquisition Sensitivity (Cold-start)[iii]** | - 141 dBm |
| **Positioning Accuracy[iii]** | 5 - 10 m CEP |
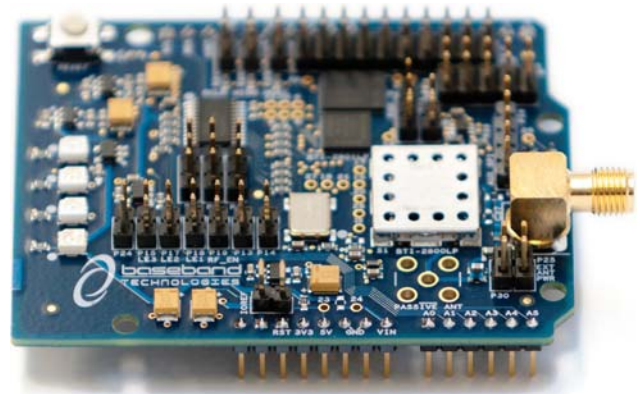
(i) Specifications are subject to change without notice
(ii) Subject to export restrictions
(iii) Subject to operating conditions

# Applications

- Personal fitness trackers
- Mobile phones
- Digital cameras
- Sports watches
- M2M asset tracking devices
- Personal locator beacons
- Personal navigation devices

For more information on our snapshot positioning GNSS receiver, please visit www.basebandtech.com

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