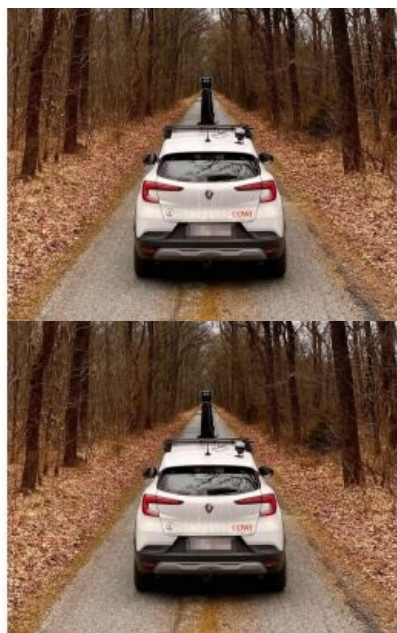


# Mosaic Integrates Mobile Mapping Camera with External GNSS to Achieve RTK



The Mosaic 51, a 360-degree mobile mapping camera, is now fully integrated with external GNSS to easily achieve real-time kinematic (RTK). Thanks to these extended capabilities, Mosaic's solution offers centimetre-level accuracy for customers with a high demand for precise position data.

It also helps with gathering position with absolute accuracy in challenging

conditions like urban canyons – which can pose a huge challenge for standard GNSS positioning systems.

In its three years in production, the Mosaic 51 has already gained recognition as the go-to mobile mapping solution for street-level truth with its best-in-class ground level imagery, thanks to its 72MP resolution with 6x12MP image sensors, granting full 360-degree image capture. It is among the highest resolution mobile mapping cameras available.

The [Mosaic 51](#) is a single unit mobile mapping camera, with an embedded computer, so that users do not need a dedicated computer within the vehicle to operate and capture data. The idea is that this makes it more functional and mobile than traditional mobile mapping systems which are larger, heavy, and require additional pieces of equipment. The stand-alone unit currently possesses a built-in GNSS receiver with an accuracy of about 1.5 metres. However, capitalizing on the power of RTK, a specialized form of differential GPS, users can achieve 100 times greater accuracy over standard GPS.



With the Mosaic 51 integrated with the Emlid Reach RS2 RTK receiver, extreme resolution and extreme position precision can be achieved.

## Mosaic 51 Integrated External GNSS Use Cases

This latest update gives Mosaic customers the highest image resolution as well as high position data precision. The Mosaic 51 integration enables RTK for GNSS positioning of the captured image data, which mapping and surveying companies, as well as infrastructure and utility companies, can use later to pair with highly precise geographic coordinates.

The camera came to be from the demand in the mobile mapping and GIS surveying markets for higher image quality. This imagery has a multitude of applications, such as road surveying and maintenance, infrastructure and cadastral surveying, CAD/BIM, GIS surveying, public safety and utility and telecom companies.

Now the Mosaic team has ensured that in addition to having the clearest image possible for a mobile mapping device, it also has some of the highest precision with centimetre-level accuracy.

Not only can the camera now capture cracks in the road but, “you can see when the vehicle is changing lanes,” said Rostislav Lisovy, co-founder and vice president engineering of [Mosaic](#).

## Multi-band RTK GNSS Receiver

The GNSS chosen for the integration is the [Emlid Reach RS2](#) a multi-band RTK GNSS receiver with centimetre precision. This was due to several factors including functionalities as well as its price point. This makes it more accessible and scalable to more companies. The durability of the Reach RS2 compliments the robustness of the Mosaic cameras. For example, the M51 is built to operate for a full day and in less-than-ideal weather and road conditions.

The Mosaic integration is being extended to the newly released Mosaic X as well. Both current and future Mosaic customers can now benefit from this integration.



Mosaic 51, a robust 360-degree mobile mapping camera, now is fully integrated with external GNSS to easily achieve RTK.

---

<https://www.gim-international.com/content/news/mosaic-integrates-mobile-mapping-camera-with-external-gnss-to-achieve-rtk>

---