



Smart Construction 3D Machine Guidance



3DMG and pilot tablet

- 3D machine guidance
- Multi-constellation GNSS
- Display cut/fill of 3D design data
- Create simple in-field design data

Payload meter

- Optimise your loads
- Prevent overloading

Smart Construction dashboard

- Create projects
- Register machines and attachments
- Acquire as-constructed machine data
- Transfer 3D design data from multiple formats
- Remote access to RTK devices
- User friendly operator interface

What is Smart Construction 3D Machine Guidance?

3D Machine Guidance is an operator guidance tool that transforms a standard excavator or dozer into a smart, high accuracy production machine. Operators receive real time, in cab guidance with a live view of cut, fill and slope as they work.

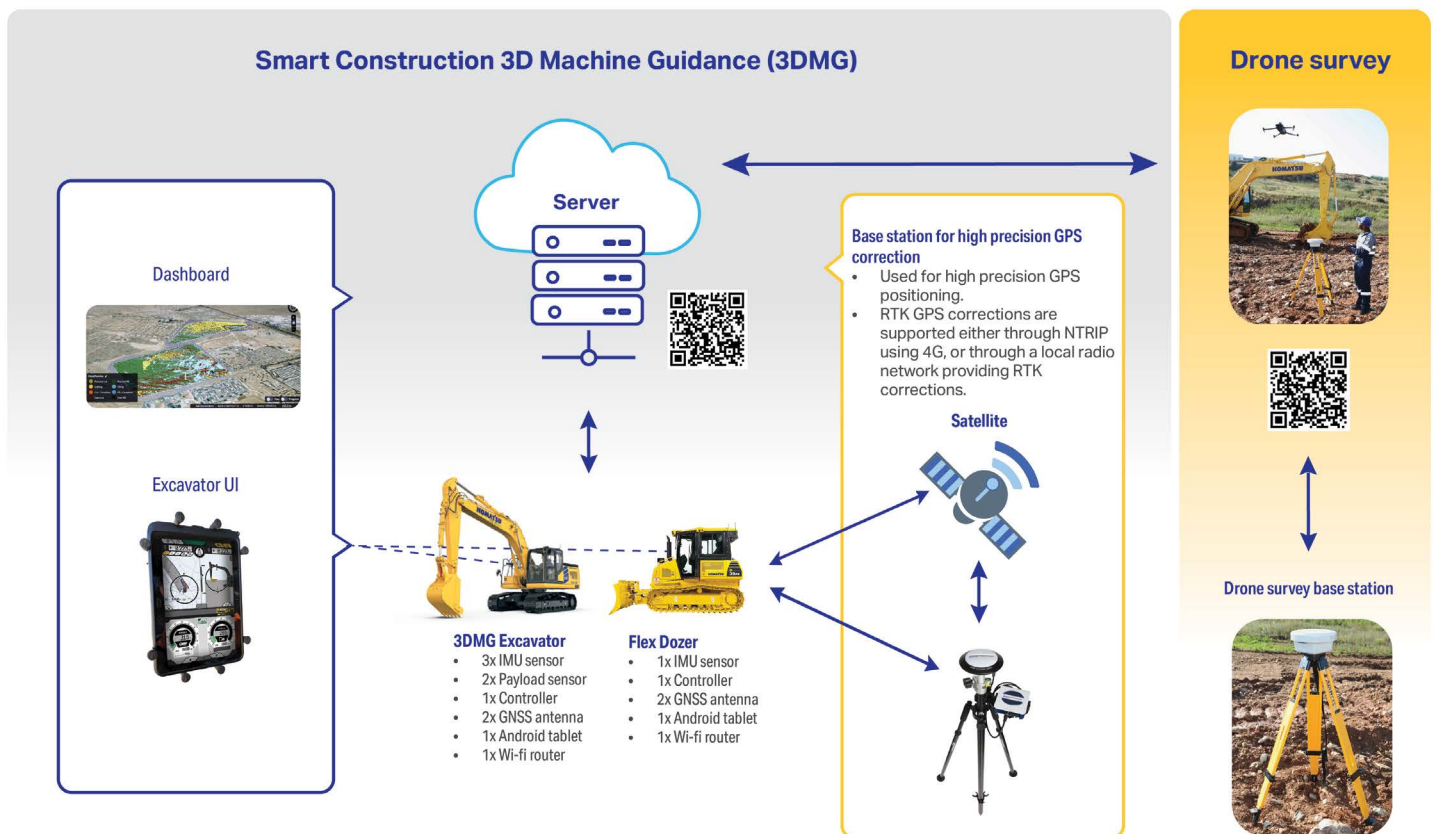
This guidance helps operators work to design more efficiently, resulting in more material moved per shift, reduced rework and projects delivered on time and on budget.

What functions are included?

3D Machine Guidance: This function uses GNSS to precisely track the machine's position while displaying a customisable cut and fill heat map that clearly shows the difference between the target design surface and the as-built terrain.

Payload meter: This function measures the weight of soil loaded in the bucket of the excavator as it fills the truck.

3D Construction data collection: While operating on a project using a 3D digital design, as-built data is collected by the machine. This can be visualised by the site manager in the Smart Construction Dashboard. Changes in the topography can be visualised on the cabin mounted 3DMG screen using the Smart Construction Pilot Application.



Key technologies to enable Smart Construction on your site

Smart Construction Dashboard

Smart Construction Dashboard software provides a 3D digital twin of your site, enabling you to visualise and quantify project progress. It's driven by as-built data collection from the 3DMG and/or drone surveys.

Smart Construction Remote

Smart Construction Remote enables you to send 3D design files to your machines, troubleshoot issues and view real-time machine information - remotely, from almost anywhere.





Smart Construction Rover

Smart Construction Rover functions as an RTK base station or RTK rover for collecting data, staking and measuring points.

Smart Construction

Intelligent machine control → iMC coming soon to RSA

intelligent Machine Control (iMC), factory fitted into specific Komatsu dozers and excavators, delivers automated blade control and tracking as-built data.



Smart Construction Edge

Capturing drone survey topography and converting to a 3D surface model.

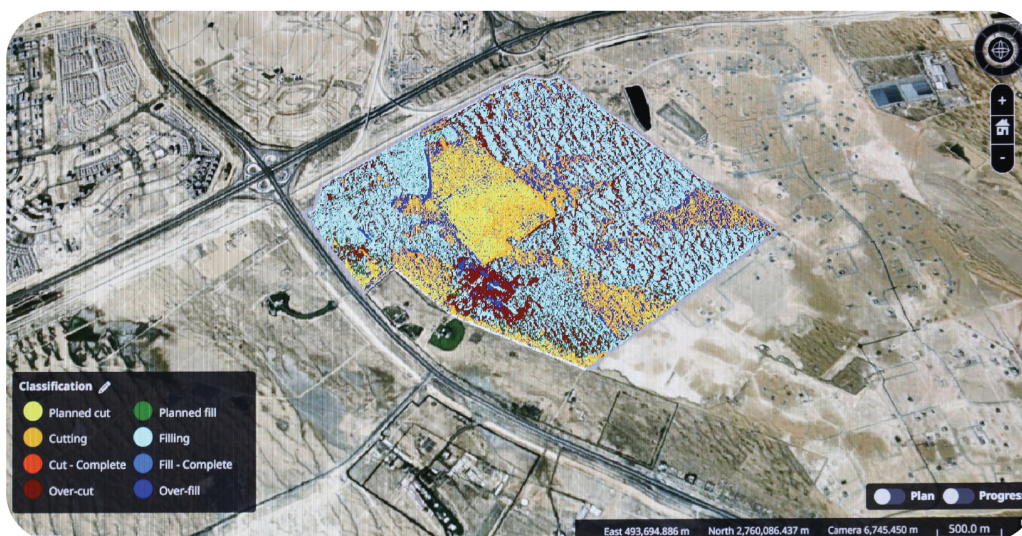


Smart Construction Rover

Acquisition of localisation data required for 3D construction.



Smart Construction Dashboard



3D design data and construction data viewer.
Total visualisation of construction project.

3D Machine Guidance & Pilot

Guidance for excavators



Smart Construction 3D Machine Guidance

Smart Construction 3D Machine Guidance adds 3D design guidance, as-built data collection and more to new and legacy excavators via GNSS antenna and in-cab mounted tablet installed by Komatsu.

Drive accuracy

The system helps guide operators to dig precisely to the target design surface, for less time working and reworking. Enabling you to redeploy grade checkers and surveyors to more productive tasks.

Collect data

As you dig, the system tracks key information such as as-built data, load counts and payload volumes – info that can help you create reports and plans to assist you in making informed decisions.



Guidance for nearly any machine



Smart Construction 3D Machine Guidance Flex

Smart Construction 3D Machine Guidance Flex adds GNSS features to almost any site machine, such as a scraper, loader or pickup truck. The system - affordable and installed in about one day by Komatsu - measures terrain at ground contact (wheels, tracks).

Inform operators

An in-cabin mounted tablet provides the operator with a better understanding of the current jobsite, with elevation to cut/fill values, heat maps and 3D design surface data. This is especially valuable in bulk material pushing and grading done by dozers.

Gather as-built

As the machine traverses the job site, it constantly maps the terrain, which is adding to 3D visualisation in the Smart Construction Dashboard – so you know exactly how much work has been done and how it compares to the target design.





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[komatsu.com](https://www.komatsu.com)

+27 11 923 1000

