



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

- Optimize your loads
- Prevent overloading

Pilot web and device application

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

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What is Smart Construction 3D Machine Guidance?

Make your conventional excavators intelligent with aftermarket kits designed to improve grading performance while giving you more time- and cost-management tools. Smart Construction 3D Machine Guidance gives your operators access to 3D advantages that can help drive improved fleet performance.

Affordable technology upgrade

Lower the startup costs of bringing technology to your operations — or expanding it — with compact and modular kits that are field-installed and fit most sizes of excavator models.

3D guidance

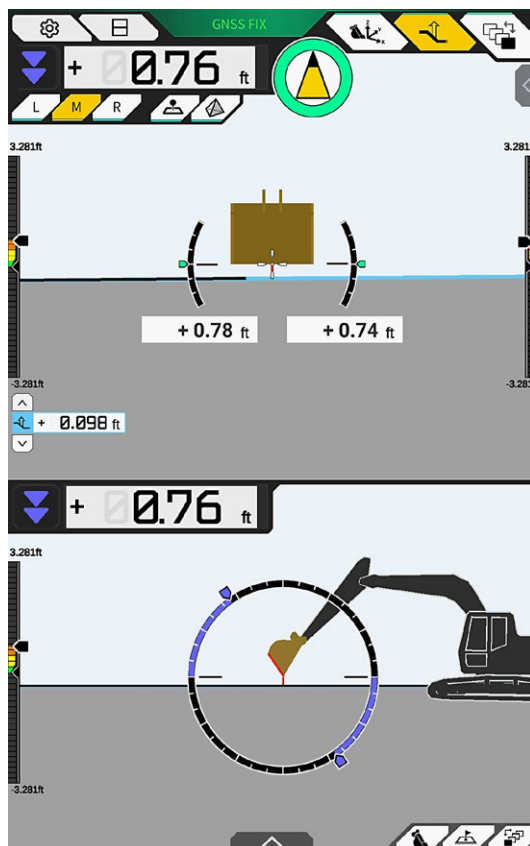
No more setting up a laser or bench every time the machine moves. With global navigation satellite system (GNSS), a machine can determine where it is on the job site and what the target grade is.

Progress tracking

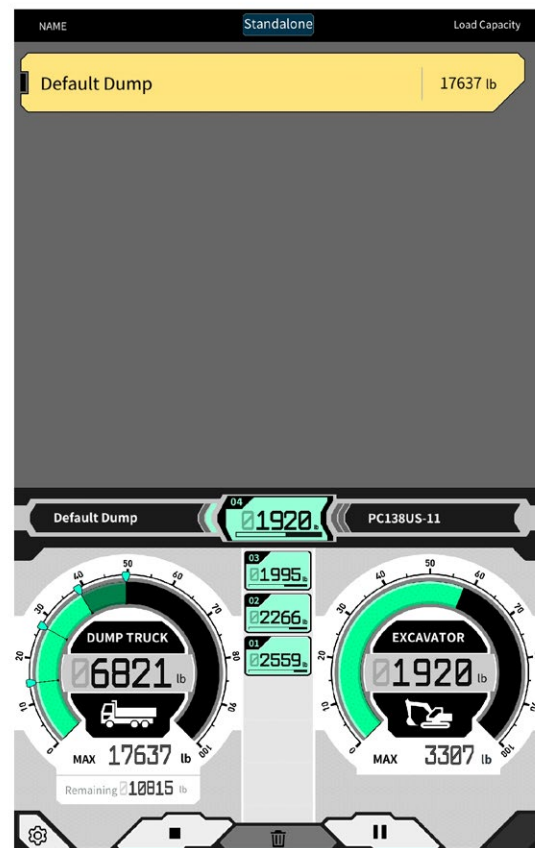
Monitor machine production from the office, including how much material the machine can move. Collect as-built information that can be used for reports to customers and data-driven plans.

Payload monitoring

Promote proper loading weights for on- and off-road vehicles with a payload meter designed to help prevent overloaded trucks.



Smart Construction Pilot GPS



Smart Construction Pilot payload

3DMG and pilot tablet features

- 3D machine guidance solution
- Komatsu supported
- 3D machine guidance
- Multi GNSS
- Display 3D design data
- Design offset
- Create simple in-field design data (flat, slope, dual slope)
- Cloud file transfer
- Network RTK correction
- Projection geoid and localization
- Heatmap of design cut/fill
- Extend grade of surface
- USB/SD card file transfer

Benefits

- Accurately construct to design
- Real-time cut/fill mapping
- Easy-to-use user interface
- Eliminate re-work
- Minimize the need for in-field survey
- Option to connect to Smart Construction suite of products, like Smart Construction dashboard for project visualization with as-constructed data collection direct from machine
- Increase safety and save time
- Save on fuel and reduce carbon emission
- Achieve high position accuracy with multi-constellation GNSS, even in harsh environments
- New designs can be implemented remotely, immediately
- Overnight design file sending feature — no need for the machine to be connected
- Remotely access your machine with Smart Construction Remote
- Deliver files to machines when not on a connected project

Payload features

- Payload solution
- Komatsu supported
- Truck and payload history
- Accurate dynamic loading
- Tip off feature — maximize payload optimization
- Use payload by itself or combine with 3DMG on the same user interface
- Display truck list

Benefits

- Assist with chain of responsibility by accurate loads on and off site
- Optimise truck loading with accurate weights
- Alerts of over loading
- Smooth continuous operating
- Keep working, no need to stop and weigh each bucket
- Productivity insight
- Calibration done in a matter of minutes, no need for complicated process or resources
- Avoid double handling and reloading or site tip offs
- Track tonnes moved and load counts

Pilot web and device app features

- Create projects
- Register machines and attachments
- Acquire as-constructed machine data
- Transfer 3D design data multiple formats (xml, tp3, tn3, gc3, dxf, ttm, svd, dsz, svl, cal)
- Remote access to RFK device
- User-friendly operator-user interface
- Cloud backup of machine and bucket files
- Manage 3DMG machines
- Automatically connects to Ntrip RTK corrections
- Download 3DMG topo points and recorded
- Monitor operator daily bench check
- Monitor hardware health

Benefits

- Never misplace important files again
- Download any specific as-constructed data at any time
- Smart Construction Pilot will convert files and make them compatible
- Save time by sending and implementing a new design immediately
- Confirm operator calibrations
- Confirm machine status (online /offline)

NOTE: Cellular service is required for all reporting and file transfer. Cellular connectivity is not provided with solution.

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Expand the possibilities with more Smart Construction solutions (*currently in development*)

Add Smart Construction Fleet to:

- Manage mixed-fleet load counts on your mobile device
- Automatically track load counts without driver input
- Create customized reports for data that can drive efficiencies.
- Automatically calculate cycle times on all your trucks
- Monitor truck activity in real time

Add Smart Construction Dashboard to:

- Integrate data from multiple sources into one comprehensive picture
- Combine 3D design data with aerial mapping and intelligent machine data
- Upload drone-flight data
- Document a site before, during and after construction



Standard options

Standard options — hardware

- Multi-constellation GNSS receiver
- 2 x multi-constellation GNSS antennas
- 4 x IMU (inertial measuring unit)
- 2 x payload sensors

Standard options — software

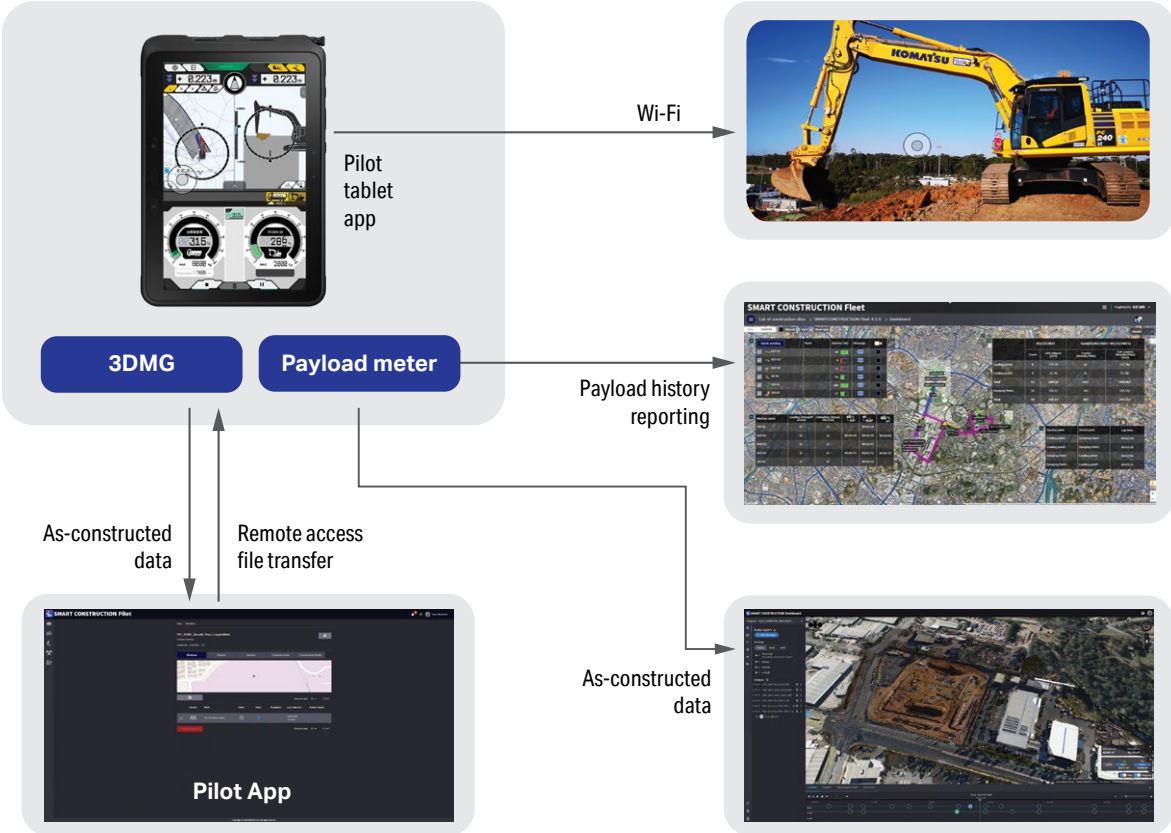
- Smart Construction Pilot web application access
- Smart Construction Pilot Android application
- Smart Construction remote setup
- Cloud data hosting
- 3DMG and payload simultaneously display

Standard, SaaS and access options

- Network RTK correction capable*
- 1 x SC remote device activation license

Additional options

- Network correction license
- Smart Construction Fleet — material tracking and payload reporting (*in development*)
- Smart Construction Dashboard — as constructed and project progress tracking (*in development*)
- Additional Smart Construction Remote device activation licenses
- Network correction license not included - please talk with your Komatsu representative
- Advanced geofencing features under development



Smart Construction

Looking for a one-stop solution for all your training needs?

Whether it's operator training to get the most out of your intelligent machines, or project managers supporting you on your digital transformation, we care about your success. Komatsu technology solution experts are available on the phone, online or at your job site to make sure you get the most out of your investments.



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