

### Retro Fit Kit (RFK) and Pilot



**3DMG & 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  
Accurate Dynamic Loading  
Payload History Reporting



**Pilot WEB & Device Application**  
Create Projects  
Register Machines & Attachments  
Acquire As-Constructed Machine Data  
Transfer 3D Design Data from Multiple Formats  
Remote Access to RFK Device  
User friendly operator user interface

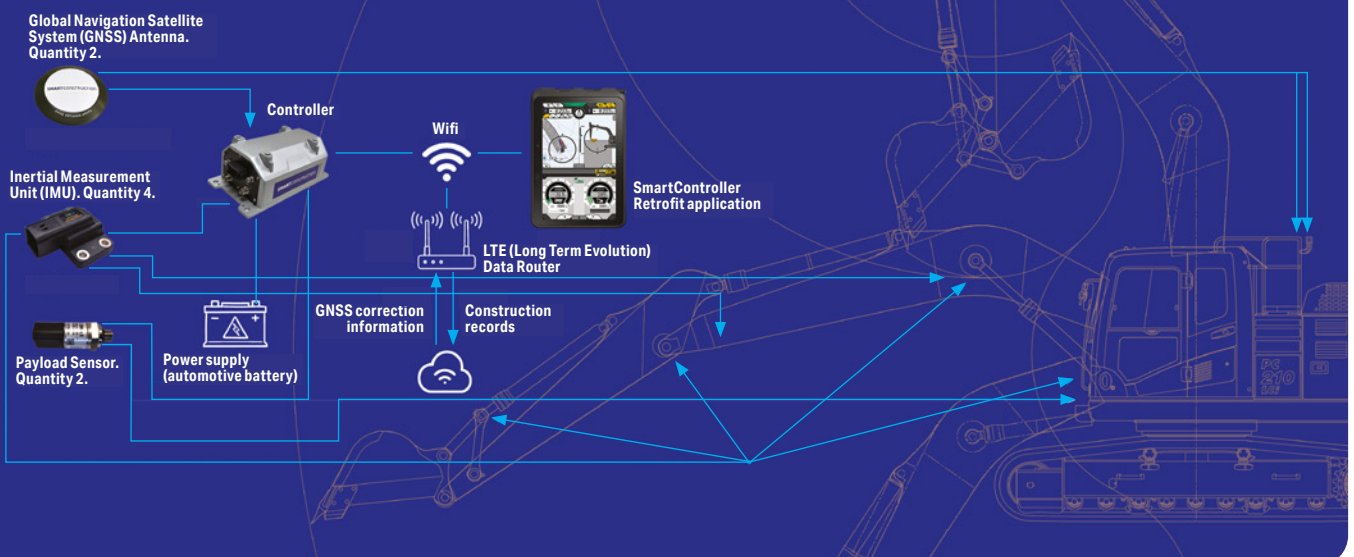
# What is Smart Construction Retrofit Kit?

A 3D machine guidance Retrofit Kit allows ICT functionality to an existing hydraulic excavator. Once equipped with retrofit kit allows the use of the following functions, enabling conventional machines to perform digital construction.

### What functions are included?

- **3D machine guidance** is a function to acquire the machine location information by GNSS and provide a cab tablet device with the difference between design data of the construction area and location of the bucket edge.
- **Payload Meter** is a function to measure the weight of soil loaded in the bucket of the hydraulic excavator.
- **Acquire 3D construction data:** while operating on a project using 3D digital design, as constructed information is collected from the machine. Which can be visualised in Smart Construction Dashboard, allowing automatic updating of the design surface. Change in topography can also be visualised on the in cabin RFK screen using SC Pilot application.

## SMART CONSTRUCTION Retrofit



## Features and Benefits

### 3DMG & Pilot Tablet Feature

- Komatsu factory 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 & localisation
- Heatmap of design cut/fill
- Extend grade of surface
- USB/SD card file transfer

### Benefits of 3DMG

- Accurately construct to design
- Real-time cut/fill mapping
- Simple easy to use UI
- Eliminate re-work
- Minimise the need for in-field survey
- "Option to connect to SC suite of products, like - SC Dashboard for project visualisation 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 until work commences
- Remotely access your machine with SC Remote
- Deliver files to machines when not on a connected project

### Payload Feature

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

### Benefit of Payload

- 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 & Device app Feature

- Create projects
- Register machines & 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

### Benefit Pilot web and device

- Never misplace important files again
- Download any specific As-Constructed data at any time
- SC Pilot will convert files and make them compatible
- Save time by sending & implementing a new design immediately
- Confirm operator calibrations
- Confirm machine status (Online /Offline)

## Digital Connectivity to other Smart Construction Applications

### Connection to Smart Construction Fleet







- Detailed Reporting
- Alerts and Safety
- Traffic Management and more...

### Connection to Smart Construction Dashboard

- Connect the machine to project visualisation softwares
- Site progress updates direct from cutting edge
- **Speak with your Komatsu representative for more details on SC Fleet and SC Dashboard Application**

# Retro Fit Kit (RFK) and Pilot



KOMATSU PRODUCTS		KOMATSU	
Model	Model Series	3DMG + Payload	
PC130-PC138	 STD / LC	✓	
PC160-PC170	 STD / LC	✓	
PC200-PC210	 STD / LC	✓	
PC220-PC240	 STD / LC	✓	
PC270-PC290	 STD / LC	✓	
PC300-PC360	 STD / LC	✓	

**\*Note:** For installation and information on other OEM RFK and Payload opportunities please contact your Komatsu representative

# Standard and Options

## Standard options – Hardware

- Multi-Constellation GNSS receiver
- 2 x Multi-Constellation GNSS antennas
- 4 x IMU (Inertial Measuring Unit)
- 2 x Payload Sensors
- Android device mounting bracket
- Ruggedised Android device 10.1"
- WiFi router 12-months (Data & Sim included)
- UHF Radio (RTK Correction)

## Standard options – Software

- SC Pilot web application access
- SC Pilot Android application
- SC Remote setup
- Cloud data hosting
- 3DMG & Payload simultaneously display

## Standard, SaaS & Access Options

- Network RTK Correction Capable\*
- 1 x SC Remote Device Activation License
- 12 Months Remote, Phone and Email Support
- Operator Training
- SC Pilot & Software training

## Optional Extras

Network correction license

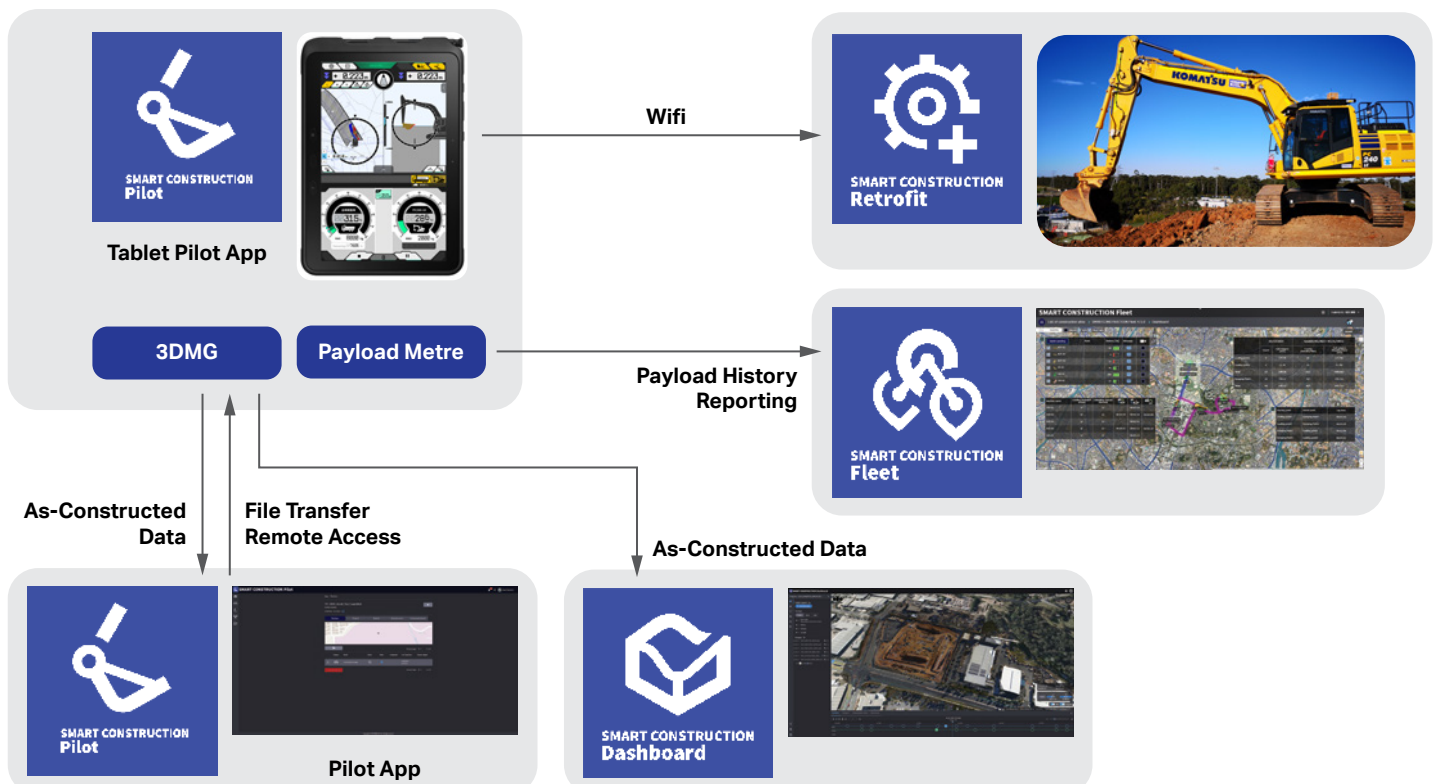
SC Fleet – Material tracking and payload reporting

SC Dashboard – As constructed and project progress tracking

Additional SC Remote device activation licenses

**\* Network correction license not included please talk with your Komatsu representative**

**\*\* Advanced Geofencing features under development**





**Learn more about Smart Construction by contacting your local Komatsu representative or visit:**  
<https://www.komatsu.co.nz/innovation/smart-construction/Retrofit-Kit-and-Pilot>

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