

- when it has to be **right**



Leica Captivate v10.00_Beta Testers

Software Release Notes

Product	Leica Captivate Field Controllers: CS20, CS30, CS35, CC180, CC200 Total Stations: TS10, TS13, TS16, TS60, TM60, MS60 GNSS Sensors: GS18 T, GS18 I, GS18, GS05
Release date	Q4 2025
Maintenance date	----
Available in myWorld	Q4 2025



Available via: <https://myworld-portal.leica-geosystems.com/>

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1 Leica Captivate v10.00 Release Notes - Introduction

These Release Notes contain important information about new features and bugfixes.

General information	<p>There is a Leica Captivate v9.10 release for the following hardware:</p> <ul style="list-style-type: none">• Field Controllers: CS20, CS30, CS35, CC180, CC200• Total Stations: TS10, TS13, TS16, TS60, MS60, TM60• GNSS Sensors: GS18 T, GS18 I, GS18, GS05
Customer Care Product (CCP) dates	<p>The Leica Captivate software version 10.00 can be loaded onto all CS Field Controllers, GS18 and GS05 GNSS Sensors and TS/MS Total Stations with a CCP valid until at least -----.</p>
Jobs, Coordinate Systems, Working Styles, RTK Profiles and other objects	<p>All Leica Captivate “objects” (such as Jobs, Coordinate Systems, Working Styles, RTK profiles etc.) created or used within previous Leica Captivate versions can be used in Leica Captivate v10.00.</p> <p>Due to the introduction of the eSIM on the GS05, the RTK Rover wizard has needed to be adapted. In Leica Captivate v9.00 and onwards, RTK Rover profiles created with a CS/GS modem configuration will not be compatible with versions prior to v9.00. RTK profiles created in previous versions of Leica Captivate remain fully compatible with v9.00 and onwards.</p>
Compatibility between Leica Captivate versions	<p>Compatibility between Leica Captivate versions is guaranteed if the instruments run the same major version.</p> <p>This means, for example, when using a version 10.x on a Leica Captivate GS Sensor or TS Total Station, the CS20 Controller or CS30/CS35/CC180/CC200 Tablet must also run an 10.x version to be compatible.</p> <p>For the new Leica Captivate v10.00, all Leica Captivate GS Sensors and TS/MS Total Stations must be updated to a version 10.x to be compatible with a CS20 Controller or CS30/CS35/CC200 Tablets running v10.00 and vice versa.</p>

**Compatibility
between Leica
Captivate and
SmartWorx Viva
versions**

The table below shows the compatibility between Leica Captivate and SmartWorx Viva versions.

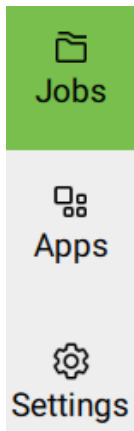
		CS20, CS3x, CC180, CC200			
		Leica Captivate v1.x	...	Leica Captivate v9.x	Leica Captivate v10.x
TS MS GS	All versions prior to SmartWorx Viva v6.0 and higher than v5.60	Fully compatible		Not compatible	Not compatible
	...				
	SmartWorx Viva v8.x	Not compatible		Not compatible	Not compatible
	SmartWorx Viva v9.x	Not compatible		Compatible for Viva TS	Compatible for Viva TS
GS	SmartWorx Viva v13.x	Not compatible		Fully compatible	Not compatible
	SmartWorx Viva v14.x	Not compatible		Not compatible	Fully compatible

❖ For Windows Tablets, from Leica Captivate v9.00 onwards the following Microsoft® Windows™ operating system editions are supported:

- ◆ Windows 10
- ◆ Windows 11

2 Leica Captivate - New Software Features

New Leica Captivate home screen

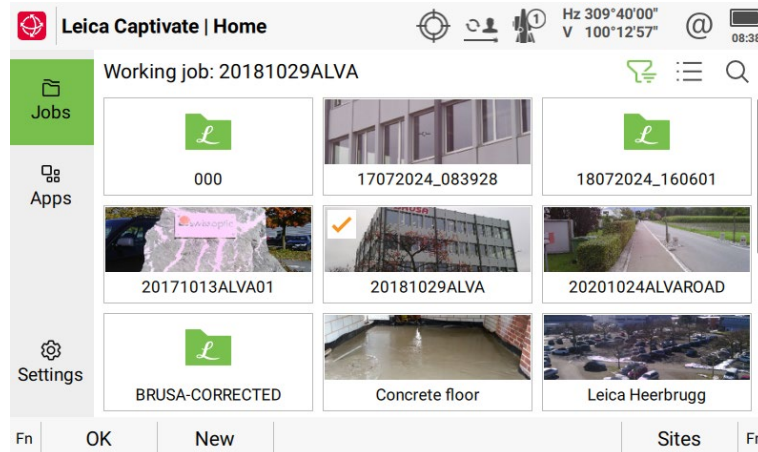


Since the first Leica Captivate release, the home panel allowed to select any working job or app by interacting with the two main carousels. Over the time, different functionalities were added to the home panel in some Leica Captivate releases, but the user interface and experience barely change since then.

The carousel approach allowed to show only three to five jobs and five apps for the CS20 or TS displays, forcing the user to scroll through the carousels till the needed job or app was found. Additionally, Leica Captivate home panel did not offer a clear visual indication in which carousel the focus was.

Besides, the **Settings** tile and the option to define the **design data** were both at the very first positions of the carousels, forcing to scroll all the way to the left whenever any of them were to be used. Another example of not direct access was the **Sites** panel. It was not directly in the home panel and required several clicks to reach its configuration.

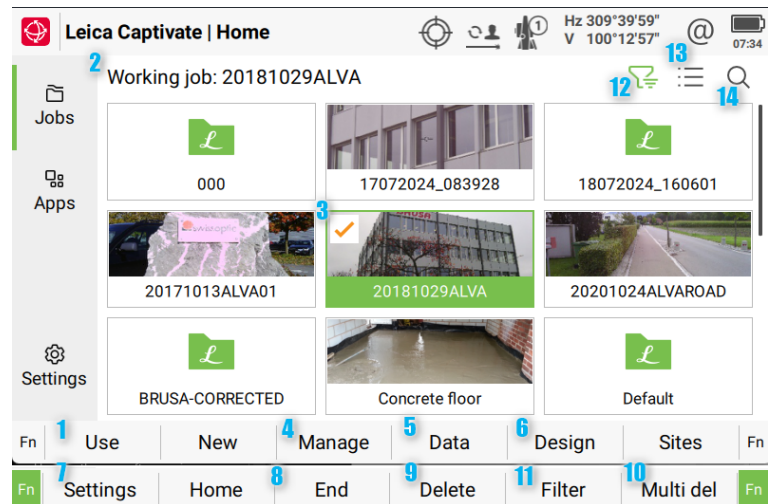
In Leica Captivate v10.00, the home panel has been completely refurbished. Even though at a first glance it all looks new, the main functionality and options are still available, but the new home panel improves many of the received recommendations and known impediments.



The new home panel is divided in three main areas. There is a vertical bar, on the left, that offers three tiles for a quick access to the **Jobs**, **Apps** or **Settings**. The biggest area to the right of the display, shows all the available jobs, apps or settings, depending on selected tile from the previously mentioned vertical bar. This main area is topped by a horizontal thin bar that displays different types of information. The third and last area, is the well-known function keys bar, that has been completely adapted for a better access to different functionality.

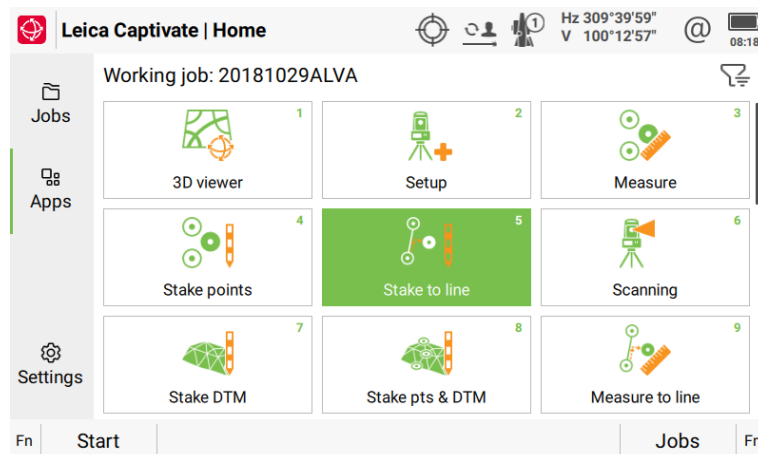
As seen in the screenshot above, the function keys bar offers three options. **OK** (F1) confirms the selection of the tile from the vertical bar and puts the focus on the main area. **New** (F2) opens the **New Job** panel. **Sites** (F6) allows to directly go to the sites' definition and selection.

Once the focus is on one of the listed jobs, many more buttons appear in the function keys bar:



- **Set/Use** (F1) (1) **Set**, defines the highlighted job as the working job. This can also be done by double tapping on the job itself. Once the working job is selected, its name is shown in the left part of the top horizontal bar (2). Besides, an orange tick (3) appears within the selected job tile to give a better visual indication of which working job is selected. When the focus is on the selected working job, **Use**, allows going to the app section.
- **Manage** (F3) (4) defines the highlighted job as the working job and opens the context menu of the job. Single tap on the working job's tile opens the context menu too.
- **Data** (F4) (5) defines the highlighted job as the working job and opens the data management panel of the job.
- **Design** (F5) (6) opens the **Design Data** panel.
- **Settings** (Fn+F1) (7) opens the **Job Settings** panel.
- **Home** (Fn+F2) (8) & **End** (Fn+F3) (8) allows to move the focus to either the top or the bottom of the shown jobs.
- **Delete** (Fn+F4) (9) triggers the delete of the selected job.
- **Multi del** (Fn+F6) (10) offers a multi-deletion option. When pressing the button, all the job tiles show a check box. **Select** (F1) button ticks the job tile where the focus is. **All** (F6) allows the selection of all the jobs. When at least one job is selected, **None** (F6) allows the deselection of these jobs. Once the jobs to be deleted are ticked, the **Delete** (F4) button needs to be pressed to confirm the deletion.
- **Filter** (Fn+F5) (11) gives access to the **Sort & Filter** panel. This panel can also be accessed by tapping on the filter icon located on the right of the top horizontal bar (12).
- The view type icon (13) allows switching from an icon grid to a detailed job list.
- Jobs can be searched by typing directly or tapping on the magnifying glass icon (14).

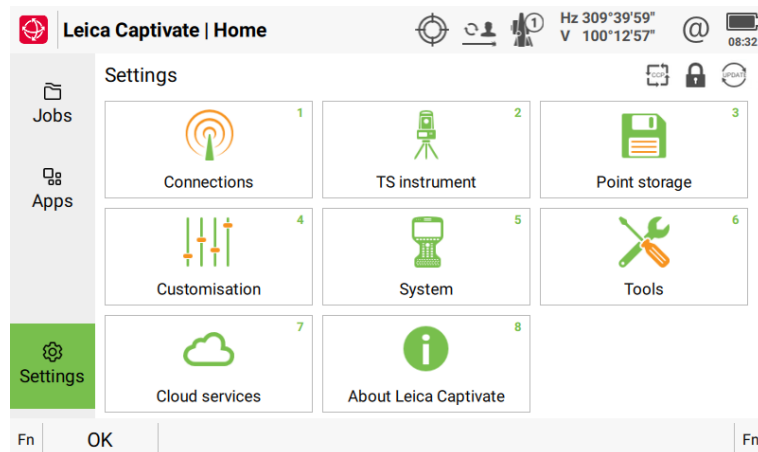
The Apps area allows the selection of the app to start the work.



- **Start** (F1) opens the selected app.
- **Jobs** (F6) goes back to the **Jobs** area.
- **Filter** (Fn+F5) opens the **App Visibility** panel.

There are no changes in the **Settings** panel. Tapping on the **Settings** tile allows the access to the different settings tiles. The right part of the horizontal bar can show three, different icons for informing about already known situations.:

- CCP icon is displayed when there is no maintenance license available.
- Lock icon is shown when the restrict access setting is activated.
- Update icon is shown when there is a new Leica Captivate version available in myWorld.



The Leica Captivate home screen, with its brand-new design and latest modifications, ensures a smoother way from the definition of the jobs to use, through the selection of which app to enter, to the starting point of the surveying daily task to accomplish.

COGO – map view integration

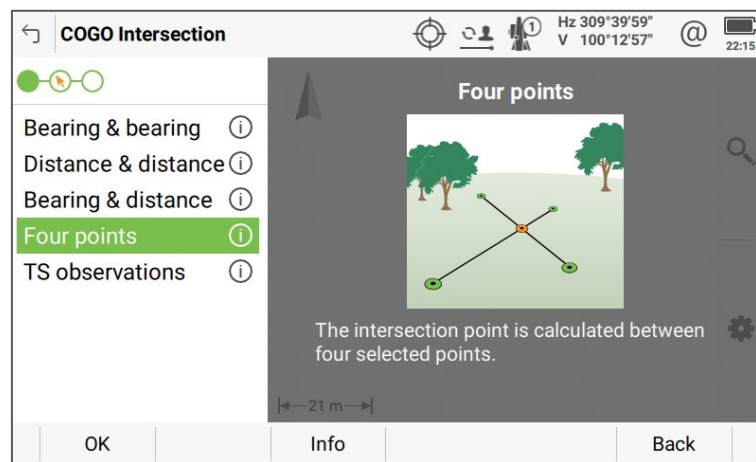


In previous versions of Leica Captivate, none of the methods available within the **COGO** app offered a clear indication of at which step the process was, nor visual support while defining the geometries to use or description of what each method does.

With Leica Captivate v10.00, the interaction and processes within the **COGO** app and how to accomplish the new geometry calculation have been refurbished.

COGO panel stays the same, offering the same methods available in previous Leica Captivate versions. The updates come when selecting one of existing methods.

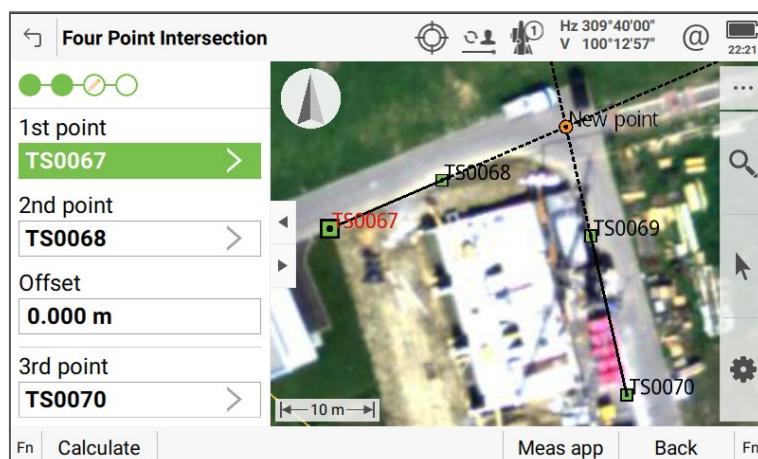
When entering the panel of the selected method, the screen is divided into two areas. One, on the right, shows the map view. The other, on the left, offers a small horizontal bar and below it, the different sub-methods that can be used.



The horizontal bar is an indication, within the whole process, of in which step Leica Captivate is. When a step of this process is done, the circle icon belonging to it, will be filled with green colour. Is possible to move back and forth over the different steps of the process.

All the available sub-methods are then listed and can be selected. There is a new information icon shown to the right of each available sub-method. It can be triggered by tapping on the icon itself or pressing **Info** (F3) button in the function keys bar.

Once a sub-method is selected, the following panel offers a combined view of the map and the geometries definition areas.



Orange bars displayed in the upper left corner of the screen guide through the geometry selection to accomplish the COGO calculation. At the same time, the map view is updated to reflect the selected geometries, ensuring the calculation is done with the right entities.

Once the selection is confirmed, the COGO calculation offers the results and by accessing the last panel of the process, these just need to be stored in the working job.

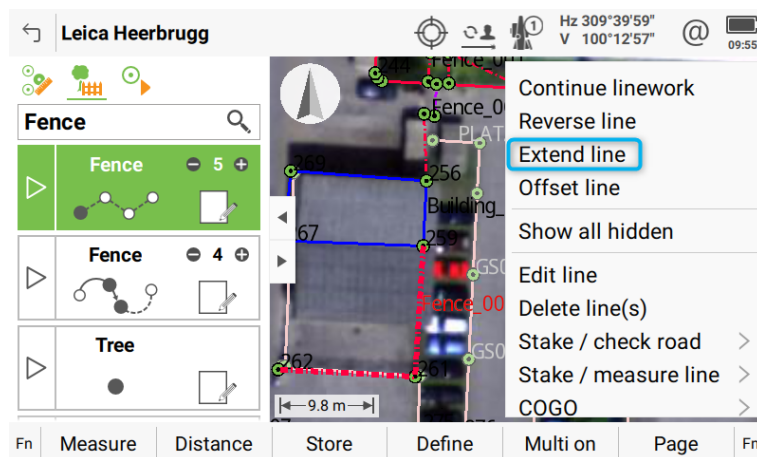
The new COGO adaptations allow to understand what the sub-methods do and helps deciding which of them fulfils the surveyor's needs. Besides, having the map view and the geometry selection in the same panel, ensures a quick confirmation that the chosen geometries are the expected ones and reduces the chances to get unexpected results, saving potentially time in the field.

Linework – Extend & jog existing line

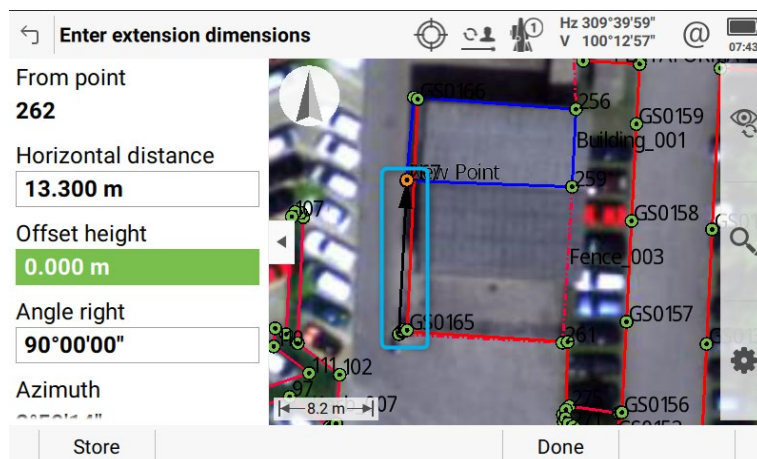


When measuring linework in the field is quite common to find locations that cannot be accessed or are not visible to the equipment being used. In these situations, a line that was being measured could not be completed or a part of it could not be measured.

Leica Captivate v10.00 offers a new option to extend and jog an existing measured line. When selecting a line geometry in the **Measure** app, that does not contain curves or splines, the context menu shows a new **Extend line** entry.



The last point taken for defining the selected line geometry is used as the start point in the **Enter Extension Dimension** panel.



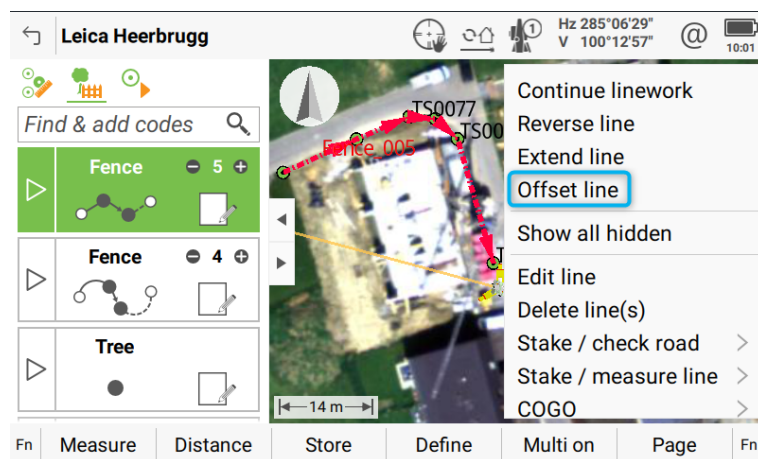
The horizontal distance, offset height and direction of the new point to create can be defined. By pressing **Store** (F1), the point is added to the data base and to the selected line, becoming the last point of its geometry. Additional points can be added within this panel, to keep defining the line.

Linework – Offset existing line

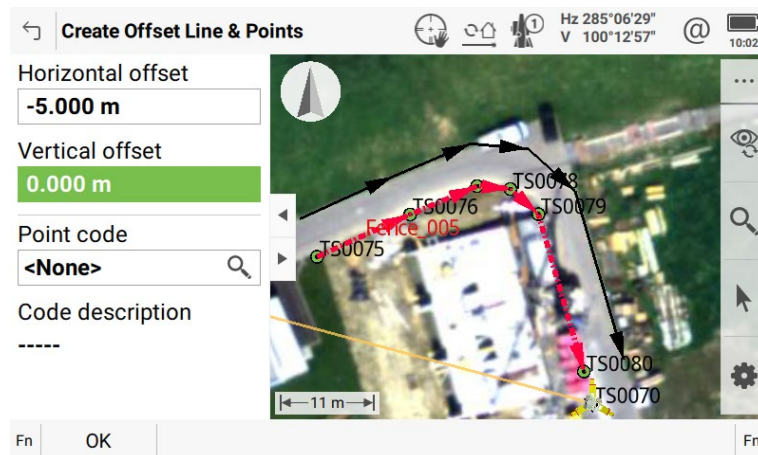


In previous versions of Leica Captivate, the **Create pts & lines** app allowed to create a new line as an offset of an existing one. The drawback of this was that the new line could not be created while measuring or staking points and the currently used app needed to be closed to proceed creating the new line.

Leica Captivate v10.00 offers a new option to offset a line. The entry is found in the **Measure** app's context menu when selecting an existing line, that does not contain curves or splines.



When tapping on this new entry, the Create Offset Line & Points panel offers the option to define the horizontal & vertical offset values and the point code to assign to the points forming the new line.



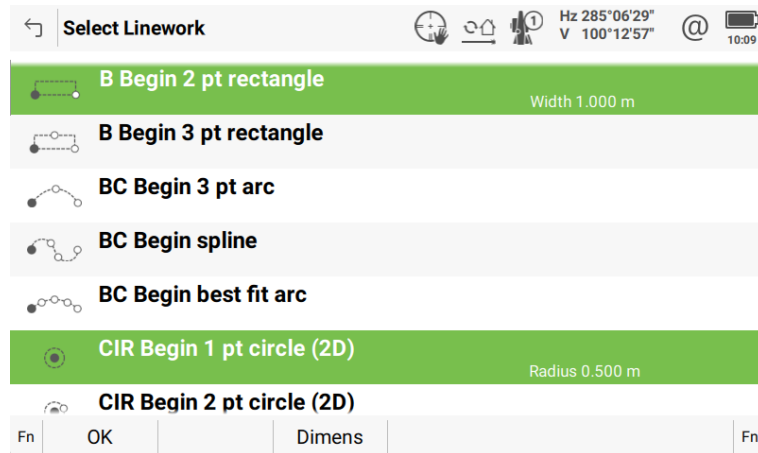
Linework – Shape size dimension



Previous versions of Leica Captivate did not offer the option to create a circle with one point or a rectangle with 2 points. The only available options allowed to create circles with 2 or 3 points and rectangles with 3 points. When measuring these two geometries with fix and constant same dimensions, more points than the ones required were measured, needing extra time to complete the surveying task.

Leica Captivate v10.00 offers two new linework options to offer a quicker way to create circles or rectangles when their dimensions are known and fixed: **1 pt circle (2D)** and **2 pt rectangle**.

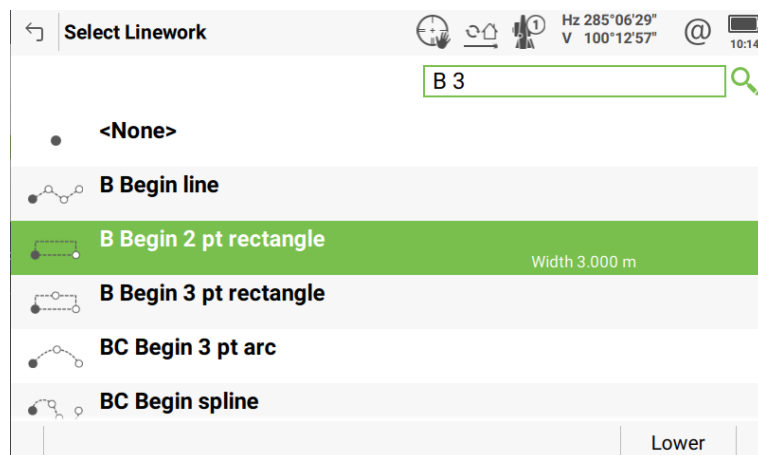
Within any app that offers the option to create linework, the **Select Linework** panel offers the option to define the linework to use. This panel lists the two new linework options. Both new lineworks show a metadata info field on the bottom right part of their rows, showing the value that will be used for creating the geometry when the needed points are measured.



When putting the focus on any of these two new rows, a new button **Dimens** (F3) appears. Tapping on it allows to define the width of the rectangle or the radius of the circle.

For a quicker definition of which linework and dimension to use, the search field allows typing the key info and proceeding with the selection. To define the 1-point circle, type CIR followed by the dimension you want to use: **CIR 1.356**. This will create a circle with a radius of 1.356, based on your regional settings distance configuration.

To define a 2-point rectangle, type B followed by the dimension you want to use: **B 3**. This will create a rectangle with a width of 3, based on your regional settings distance configuration.



Regional Configurator tool – Support online help files



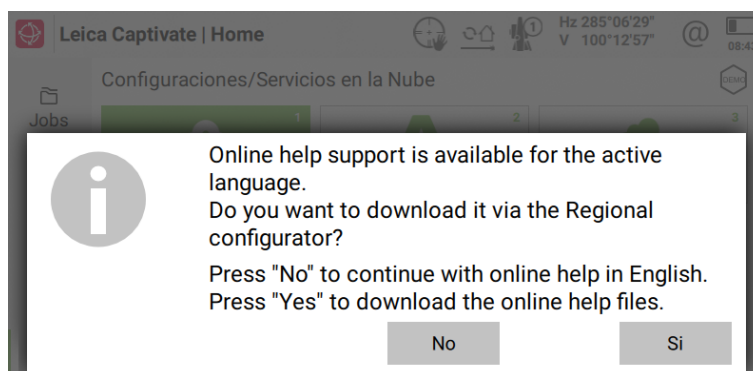
The Online Help feature have been available since the first release of Leica Captivate. It provides quick access, onboard any device with display, to the technical reference document where the Leica Captivate functionalities and different panels are collected and explained.

In each Leica Captivate new release, additional features and bug fixes were released. All these new additions were based on code changes that increased the firmware size. The last Leica Captivate release firmware size was over 600 Mb, needing more than 35 minutes to upgrade the equipment. Many devices have 1 GB of internal memory and having Leica Captivate firmware file weighting more than 600 Mb implied that these devices could not make use of the internal memory quite early and required an external storage device usage.

In Leica Captivate v10.00 all the online help files, except English, have been removed from the firmware file. The file size of the new version goes slightly over 420 Mb, and the installation time has been reduced to less than 25 minutes.

This removal does not mean that the languages different to English, that until now have offered the online help, won't be available anymore. Leica Captivate **Regional Configurator** tool offers now the online help files so that they can be downloaded and automatically loaded into the device.

When using any of these languages (French, German, Italian, Polish, Russian or Spanish), that offer the Online Help support, if the Online Help is triggered after tapping on the battery bubble, a message (@beta testers. The message is not translated yet. This comes before the final release version) pops up informing about the existence of the online help file for the active language.

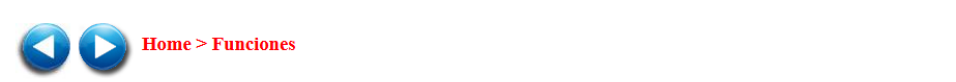


By pressing to the message, the **Regional Configurator** tool is accessed directly showing the **Online Help files** panel, where all the languages mentioned above are listed.

.../Online Help files			
<input type="checkbox"/>	Tipo Language	Tamaño 37.552 MB	Formato .sen
<input type="checkbox"/>	French_v9.37	Tamaño 42.605 MB	Formato .sfr
<input type="checkbox"/>	German_v9.37	Tamaño 33.468 MB	Formato .sde
<input type="checkbox"/>	Italian_v9.37	Tamaño 7.290 MB	Formato .sit
<input type="checkbox"/>	Polish_v9.37	Tamaño 38.619 MB	Formato .spl
<input type="checkbox"/>	Russian_v9.37	Tamaño 36.915 MB	Formato .sru
<input checked="" type="checkbox"/>	Spanish_v9.37	Tamaño 42.660 MB	Formato .ses
Fn		Estado	Más Descarga Fn

After selecting the needed online help file and tapping on **Download** (F6), Leica Captivate will start the download and installation, informing once the process is finished.

Then the online help file support for the downloaded language will be available.



2.1 Funciones

Leica Captivate - Inicio

a. Salir

b. Carrusel de trabajos

c. Barra de iconos

d. Carrusel de aplicaciones

e. Teclas

Tecla	Descripción
OK	Para acceder y salir del menú de trabajo
Trabajos	Para acceder a la pantalla Gestor de Trabajos Consultar 2.3 Gestión de trabajos .
Fn Equipo	Para cambiar entre el modo GS y TS.
Fn Nuevo	Para crear un trabajo nuevo.
Fn Bloquear o Fn Desbloq	Para bloquear y desbloquear el trabajo seleccionado. Cuando un trabajo está bloqueado, no es posible seleccionar otro trabajo de la selección de trabajos. El trabajo permanece resaltado. Las teclas izquierda y derecha en el teclado también están bloqueadas. La búsqueda de trabajos está deshabilitada. En caso de crear un trabajo nuevo, el nuevo trabajo queda resaltado y el trabajo anterior se desbloquea.
Fn Salir	Para cerrar el programa.

Regional Configurator tool – Support local apps

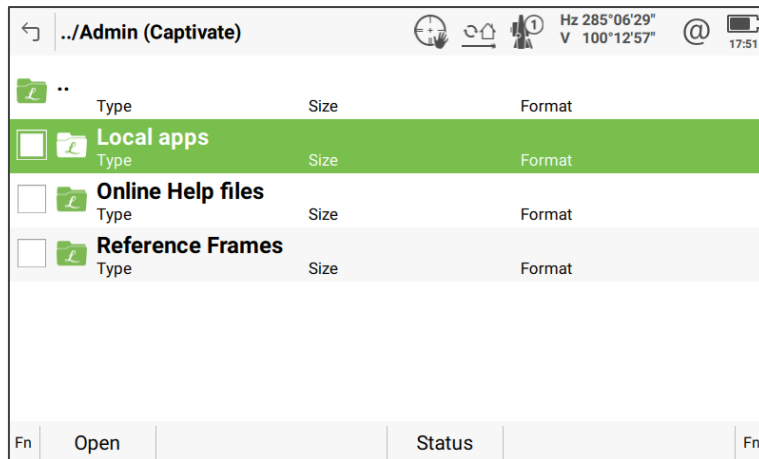


The local apps are plugins that can be loaded to Leica Captivate but are not included within the Leica Captivate firmware. They are developed by the regional Software Development Centers to fulfil specific surveying workflows. Until now, the only way to get these apps was via a manual download from myWorld.

From Leica Captivate v10.00 onwards, the **Regional Configurator** tool support the local apps for CS20, total stations and Windows tablets (*.axx & *.dxx). There is a new folder available at the regions level with the name **Admin (Captivate)**. This folder's main purpose is to share common Leica Captivate objects that can be used worldwide.



Within this folder a new **Local Apps** folder will contain the local apps.



Multiple apps can be selected and downloaded simultaneously. When the selected apps are downloaded, a message offers the option to go to the Software Update panel to proceed with the manual installation, as the installation cannot be automated since the Legal Agreement terms need to be accepted before proceeding.

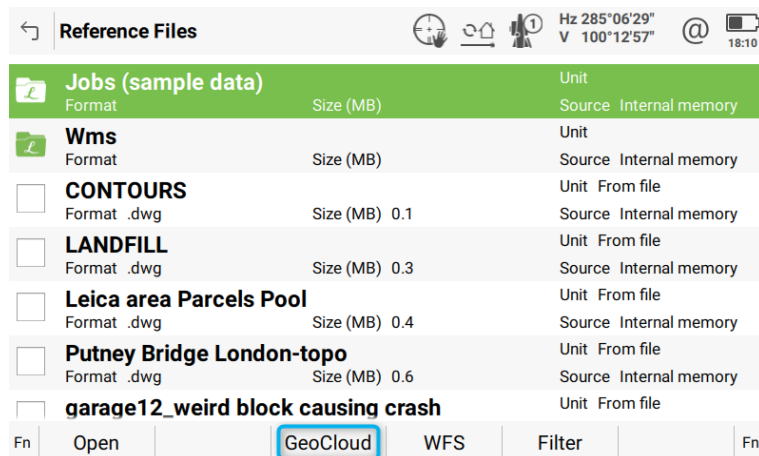
GeoCloud Drive – New access point



GeoCloud Drive was released with Leica Captivate v8.10 and helped to keep the office projects connected with the field workflows and tasks by offering a seamless way to share content in both directions.

Each of the following Leica Captivate releases added different improvements to the Hexagon's cloud service but the access points remained the same one since the first release.

When a new reference file, that is not available in the internal memory or an external storage device, needs to be attached to the working job, the existing workflow did not allow to select the file while creating a new job or editing an existing one. Accessing the cloud service was required first, to then download the needed file and finally attach it to the desired job.



Leica Captivate v10.00 offers a direct option to access **GeoCloud Drive** service from the **Reference Files** panel when creating a new job or editing an existing one.

GeoCloud Drive – Additional enhancements

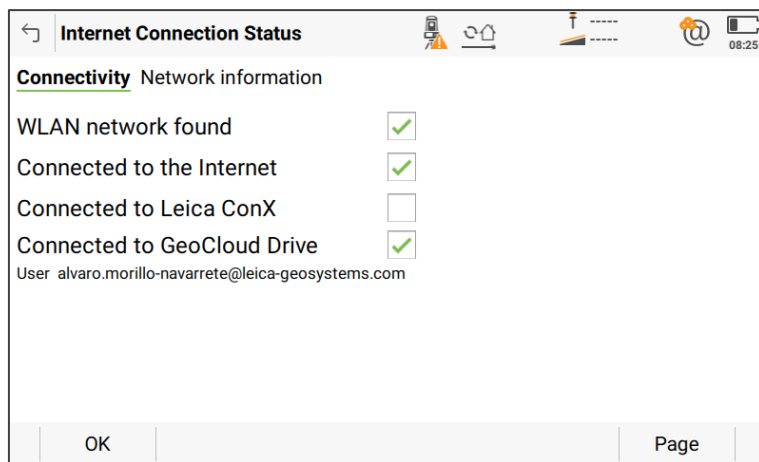


Since the first release of GeoCloud Drive, when a device was connected to the cloud service, there was no visual indication of it and it was not possible to know which user was logged in.

Leica Captivate v10.00 shows now, in the status bar on the top of the screen, an indication that the device is connected to **GeoCloud Drive**.



Besides, in the **Internet Connection Status** panel, a new prompt states whether the connection to **GeoCloud Drive** is active or not. If connected to the cloud service, a line beneath shows which user is connected.



This helps companies with a lot of equipment, used by different fleets, or companies renting equipment to customers, to always be aware who is connected to **GeoCloud Drive**.

Another enhancement that has been introduced in this new version of Leica Captivate is to include, within the job being uploaded to the **GeoCloud Drive**, any file that was exported and stored in the working job. Previous Leica Captivate versions did not contain the exported files and therefore, the uploaded job was not completed. Now a new sub-folder, **Exported data**, is created within the working job, containing all the exported files.

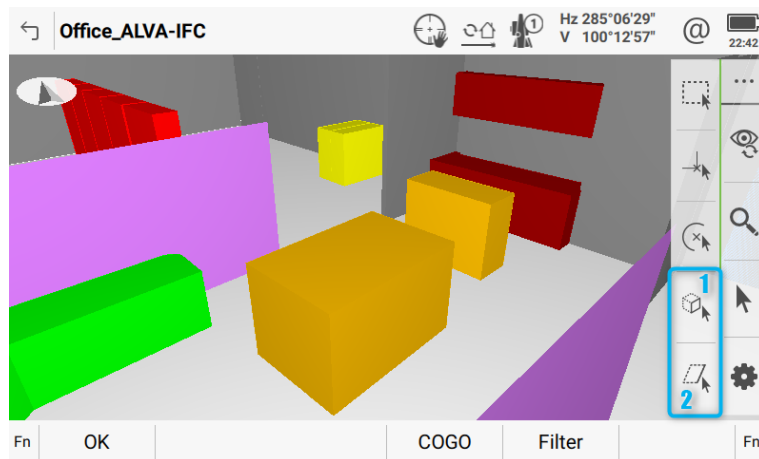
In the same direction, previous Leica Captivate versions did not upload to **GeoCloud Drive** the folders containing images or scans from XML or DXF files. Now, Leica Captivate v10.00 ensures that any XML or DXF file that requires a folder with additional information (images or scans) is fully uploaded to the cloud service.

Finally, Leica Captivate v10.00 does not compress the Codelist into a ZIP file, before uploading it to the **GeoCloud Drive**. This avoids future problems when downloading that same ZIP file from the cloud into other Leica Captivate devices.

Map view – Snapping to faces and edges of objects

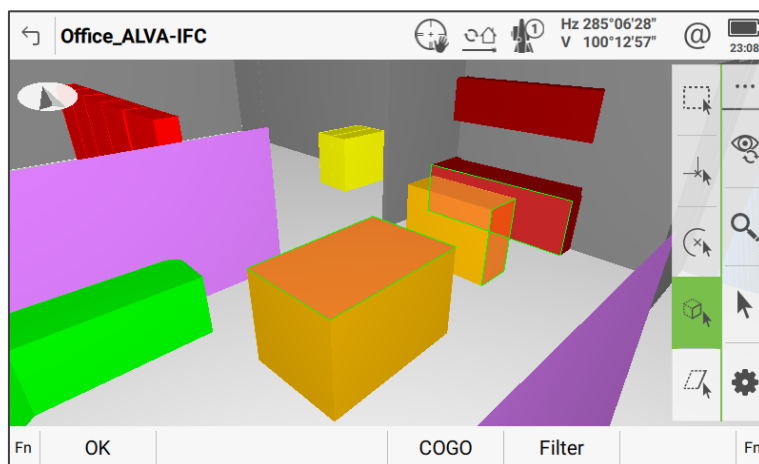


In Leica Captivate v8.50, the snapping tool was introduced to allow specific points of interest to be easily extracted from attached reference files. Within the map view, the required snapping tool could be activated from the new selection toolbar. Then, by tapping near to a point of interest on a reference object, a temporary snap marker was automatically created at the correct location. That first release allowed snapping to end/corner points and arc/circle centre points.

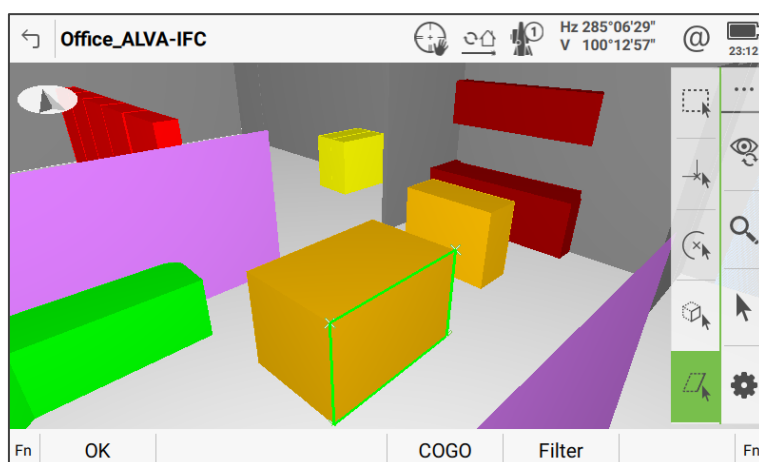


Leica Captivate v10.00 offers two new snapping functionality: Face of objects (1) and edges of objects (2).

When selecting the option to snap to faces of objects and tapping into the available geometries in the map view, the faces of the object selected are shown darker and surrounded with a green line.

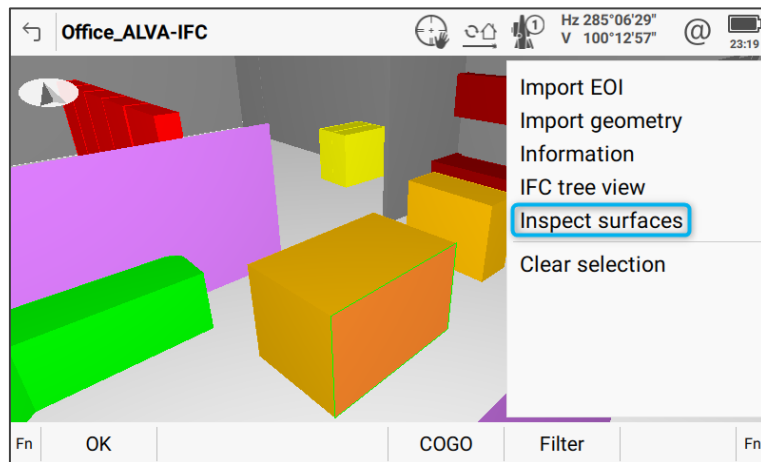


If the snap to edges is chosen, the lines that are tapped are shown with a thick green colour.



In both cases, once all the needed geometries are selected, the context menu of the map view allows importing these geometries.

Additionally in Leica Captivate v10.00, when a face of an object is selected, the context menu offers a new option to import the chosen geometry into the **Inspect Surfaces** local app.

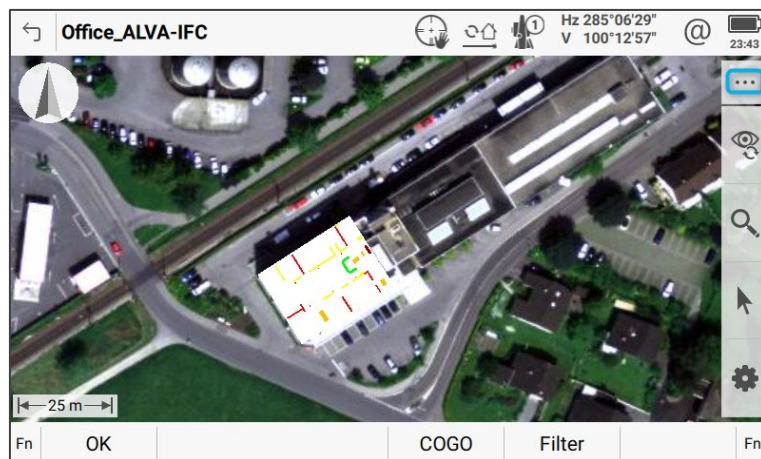


Map view – Context menu access point



The context menu is a tool that is available in the map views and, depending on the selected geometries, offers different options and functionalities. Since the first Leica Captivate release, the only option to trigger the context menu was by long pressing any empty area of the map view. When the map view is packed with lot of geometries and measured points or lines, it could be hard to find an empty area to trigger the context menu.

Leica Captivate v10.00 offers a new option to trigger the context menu by just tapping on a new icon shown on top of the right vertical tool bar.



3 Leica Captivate New Features – GS specific

NTRIP Caster available in Base mode



The **NTRIP Caster** configuration option for GNSS sensors in Base mode was first introduced in Leica Captivate v9.00. However, this functionality was exclusively available through the Webserver, which prevented certain sensors, like the GS05, from being configured as an NTRIP Caster.

With the release of Leica Captivate v10.00 (and SmartWorx Viva v14.00), the ability to configure an **NTRIP Caster** is now available directly through the Captivate user interface. This makes the functionality accessible on all GNSS sensors, including the GS05.

Internet Port Connection	
Internet port	GS Internet 1
User type	NTRIP caster
Mobile Internet IP address	10.48.220.226
WLAN IP address	192.168.251.2
TCP/IP port	3000
NTRIP mountpoint	NTRIP mountpoint
Identifier	NTRIP caster
NTRIP user ID	user
NTRIP password	user
Display password	<input checked="" type="checkbox"/>
OK	

Tilt information in NMEA message

From Leica Captivate v10.00 onwards, **tilt information** is available in a newly created Leica proprietary **NMEA message**, the LTR message.

LTR message includes:

- Status of tilt compensation
- Overall tilt quality
- Tilt value and its quality
- Direction of tilt value and its quality
- GS heading value and its quality

This message can be enabled as usual in the NMEA options available under GS connections (Connection Settings) and through OWI.

NMEA Messages				37 1D 5.1697 m 2D 3.1698 m 14:04			
GSA	Use No	Rate —	Output —				
GSV	Use No	Rate —	Output —				
LLK	Use No	Rate —	Output —				
LLQ	Use No	Rate —	Output —				
RMC	Use No	Rate —	Output —				
VTG	Use No	Rate —	Output —				
ZDA	Use No	Rate —	Output —				
LVM	Use No	Rate —	Output —				
LDM	Use No	Rate —	Output —				
GST	Use No	Rate —	Output —				
LTR	Use Yes	Rate 1.00	Output Immd				
Fn	OK		Edit	All	Use		Fn

Updated Measurement Engine firmware to v7.905

With Leica Captivate v10.00 the **Measurement Engine** firmware has been updated to version 7.905.

This version has optimized channel configuration, improving BeiDou and Galileo tracking performance and reducing the amount of BeiDou cycle slips.

This new firmware version will be automatically installed in all GS10, GS16, GS25 and GS18 with OEM7 boards. For GS07, a manual update via Captivate will be needed.

Updated PPP reference frame database REFRMSET.DAT

With Leica Captivate v10.00 the **PPP reference frame** database, which includes the default PPP reference frame transformation parameters, has been updated. This database now includes the reference frame used by HxGN SmartNet, ITRF2020.

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This new PPP reference frame database will be included by default in all new field controllers being delivered with Captivate v10.00.

For all other field controllers currently in the market, the new database can be downloaded directly using the Leica Captivate **Regional configurator** tool. The updated reference frame database is available in the **Admin (Captivate)** folder, within the subfolder "**Reference Frames**".

//Missing image

Tick the REFRMSET file and click download.

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The file will be automatically downloaded and stored in the correct location in your device's internal memory, allowing direct use of the new PPP reference frame transformation parameters.

GS05 WLAN connection improvements

Leica Captivate v10.00 introduces significant improvements to the GS05's WLAN connection.

Previously, establishing a WLAN connection could be occasionally unreliable. With the new release, a more robust connection handling approach has been implemented, providing a more stable and dependable connection.

Furthermore, a key enhancement in Captivate v10.00 is the ability to display WPA3 SSIDs when searching for WLAN networks on the GS05, a feature not available in previous versions.

4 Leica Captivate Software Improvements

4.1 *Software specific*

4.2 *GNSS specific*