



Leica FlexLine plus

Product Presentation

V4.00

- when it has to be **right**

Leica
Geosystems



Leica FlexLine plus

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- when it has to be **right**



Leica FlexLine plus

Product Concept





Leica FlexLine plus

True Quality



▪ **Product Design**

- High robustness due to the specific and dedicated product design optimized for the Surveying and Construction segment for highest reliability.
- High Quality Leica optics

▪ **Experience**

- Close to 200 years of experience in manufacturing world-class surveying equipment

▪ **True global coverage**

- 250 Support & Service centres covering every continent
- Customer support & information hotlines
- Regular Training Course
- Informative seminars & Web broadcasts

▪ **Customer Support**

- 250 Support & Service covering every continent



Leica FlexLine plus

True Flexibility



Flexibility due to choice

- **Angular Accuracy**
 - Various models , starting from 1“ up to 7“
- **EDM types and range**
 - Various Prism and reflectorless models up to 1000m
- **Keyboards**
 - Choose out of 3 models: Simple or Full black & white or Colour- & Touch
- **Communication interfaces**
 - Standard transfer option with RS232 or advanced with USB & Bluetooth
- **„Arctic“ option**
 - Working in low-temperature regions ? Arctic option available for all models!
- **Onboard software**
 - Enhance your default configuration by various software options
- **Service upgrades**
 - Upgrade your product hard- & software during product lifecycle



Leica FlexLine plus

True Speed & Simplicity



▪ Keyboards

- Simple keyboard with the minimum button you need (TS02)
- Advanced keyboard for enhanced, fast data entry (TS06plus)
- Colour & Touch keyboard for fastest navigation inside the software via touch screen, tabs and icons (TS09plus)

▪ Communication interfaces

- Fast data transfer with USB communication

▪ Onboard software

- Speed up your daily work due to...
 - low learning curve due to guided workflows
 - large font size for fast and clear readability
 - fast operation through graphic guidance
 - icons to continuously and quickly verify instrument status



Leica FlexLine plus

True Precision & Performance



- **Angular Accuracy**
 - Starting from 1"
- **Prism Mode (EDM)**
 - Distance accuracy up to 1.5mm+2ppm
- **Non-Prism Mode (EDM)**
 - Distance accuracy of 2mm+2ppm
 - Extremely bundled NP-Beam spot
 - Long range >1000m
- **Battery Life**
 - ~ 30 hours operating time with internal battery



Leica FlexLine plus Overview



Data Transfer

- Bluetooth® wireless
- Removable USB stick
- Via Cable (Mini-USB, RS232)



Angular accuracy

- 1", 2", 3", 5", 7"



Software

- FlexField plus Software
- FlexOffice Software



Theft protection

- mySecurity
- PIN & PUK

Customer Care Packages

ACTIVE customer care

Electronic Guide Light



Electronic Distance Measurement

- PinPoint – Power, >500 m
- PinPoint – Ultra, >1000 m

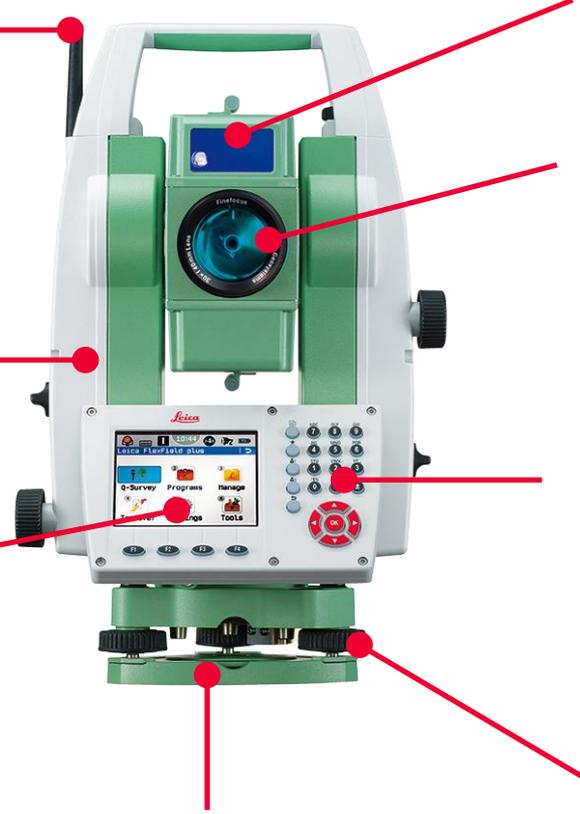


Keyboard

- Standard (TS02)
- Alpha-numerical (TS06plus)
- Colour- & Touch screen (TS09plus)



Arctic Version -35°C



Leica FlexLine plus – Hardware Features

Electronic Distance Measurement (EDM)



Leica FlexLine plus – Hardware Features

“Finefocus” telescope

- Developed for long range & high accuracy distance accuracy

Key-features: Prism Mode

Range:	3`500m
Accuracy:	1.5mm + 2.0ppm
Typ. Meas. Time	1.0 sec (2mm+2ppm)

Key-features: Non-Prism Mode

Range*:	1000m
Accuracy:	<500m: 2mm + 2ppm >500m: 4mm + 2ppm
Typ. Meas. Time:	3-6 sec

*) Under optimal conditions on Kodak Grey Card (90% reflective). Maximum range varies with atmospheric conditions, target reflectivity and surface structure.



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Leica FlexLine plus – Hardware Features

Electronic Distance Measurement (EDM)



Telescope Type	TS02	TS06plus	TS09plus
	<ul style="list-style-type: none">• TC•R400 (power)-	<ul style="list-style-type: none">-•R500 (power)•R1000 (ultra)	<ul style="list-style-type: none">-•R500 (power)•R1000 (ultra)



Leica FlexLine plus – Hardware Features

Electronic Distance Measurement (EDM)



Non-Prism „PinPoint“ Technology

- Non-Prism measurement to wall corner and inaccessible points without special applications
- Highest degree of pointing and measurement accuracy
- Small laser dot due to extremely bundled laser in the line of sight
- Reliable measurements under hardest conditions such as rain, fog, snow and multiple targets
- Market's best EDM in combination of range, accuracy, laser dot size and measurement time.



Leica FlexLine plus – Hardware Features

Communication Interfaces



Available Interfaces

- Bluetooth® wireless technology
- USB memory stick as removable memory
- USB Mini port
- RS232 interface – up to 115`200 b/s



Leica FlexLine plus – Hardware Features

Bluetooth®



Bluetooth

- Cable-free
- Licence-free
- Long range communication
- Connect with Leica CS10/15 Dataloggers with Viva software onboard or any familiar data collector.



Leica FlexLine plus – Hardware Features



USB



USB Host port

- 1 Giga Byte industrial grade USB stick for outdoor use included in Set
- Easy and fast data handling via trouble free USB plug-and-play technology
- No cables
- Maximize your flexibility in data handling
- Backup of your data in the field at any time with just one key press
- Double data security
- Continue working and send the complete work for further processing.



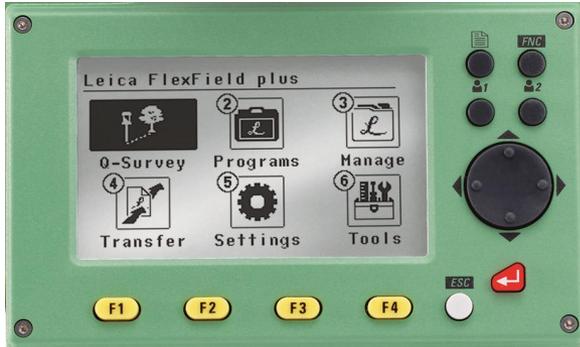
USB-Device port

- USB Data transfer via Cable
 - High Speed
 - Reliable
 - To connect to FlexOffice/LGO



Leica FlexLine plus – Hardware Features

Keyboards & Displays



TS02



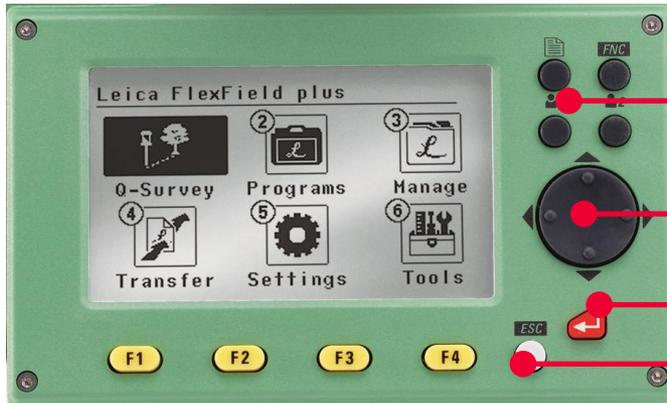
TS06plus



TS09plus

Leica FlexLine plus – Hardware Features

Keyboard – Standard (TS02) & Alphanumerical (TS06plus)

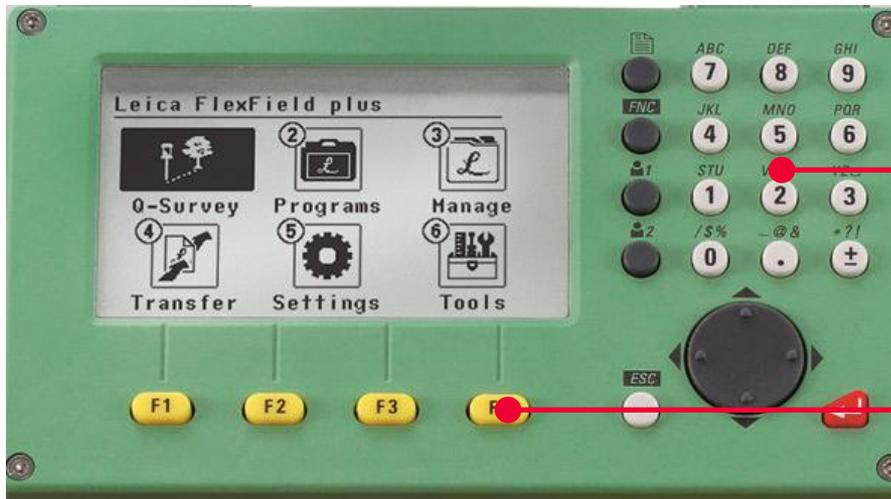


Fixed keys for direct access

Navigation key for fast operation

ENTER for confirmation

ESC one step back



Alpha-numerical keypad
for rapid entry

Function keys
for immediate access

Leica FlexLine plus – Hardware Features

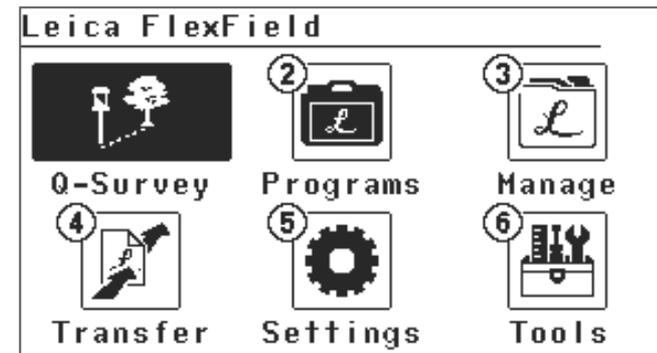
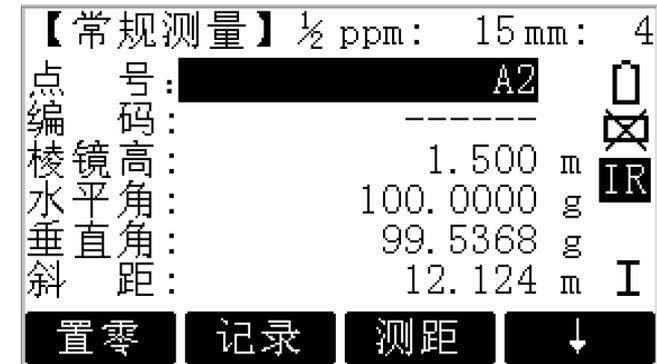
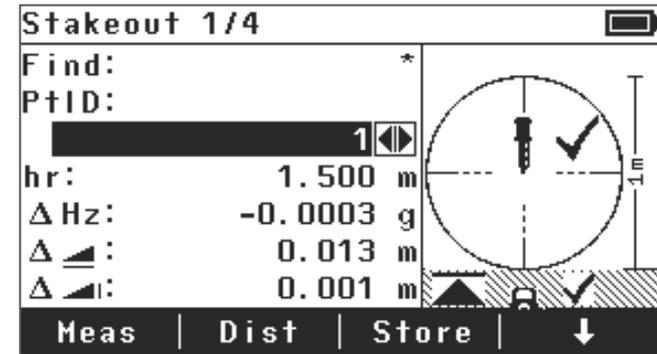


Display – A class of it's own



Black & White displays

- Sharp, clear, brilliant image due to high resolution – 288 x 160 pixel
- 31 x 8 characters in Latin layout.
- Everything at a glance without paging due to extra large size.
- Display heating and illumination allowing to work in difficult conditions.
- Second keyboard for measurement in two faces
- Intuitive icons to navigate through the menus
- Intuitive graphics to fasten application tasks



Leica FlexLine plus – Hardware Features

Keyboard – Color- & Touch (TS09plus)



Fixed keys for direct access

**Alpha-numerical keypad
for rapid entry**

ESC one step back

**Navigation & ENTER key for fast
operation**

**Function keys
for immediate access**



Leica FlexLine plus – Hardware Features

Display – A class of it's own



Colour & Touch display

- Sharp, clear, brilliant image due to high resolution.
- 320 x 240 pixels (Quarter-VGA)
- 256 Colours
- 31 x 8 characters in Latin layout.
- Extra large font size
- Everything at a glance without paging due to extra large size.
- Self-heating display and key illumination allowing working in difficult conditions. (e.g. Arctic...)
- Second keyboard for measurement in two faces
- Touch functionality for easier and faster handling





Leica FlexLine plus

Additional Features



- Two-function Trigger-Key (ALL and DIST at the same time)
- Two user definable keys for fast access to functions
- Endless horizontal and vertical drives
- Arctic option (-35°C) for all models
- Laser plummet for easy setup
- IP55 environmental protection
- Definable start-up sequence
- Screensaver
- Signal reflection information for improved aiming under hard conditions
- Definable adjustment reminder
- ...





Leica FlexLine plus

Additional Features

Theft Protection

- Prevents unauthorized persons usage
- Increases data security
- Makes the equipment unattractive to steal
- Lowers insurance cost



▪ PIN/PUK protection

- User defined 6 digit PIN-code
- PUK-code required if PIN-code entered wrong for 5 times. PUK-code is part of delivery papers.



▪ mySecurity protection

- Cloud based theft protection
- Flag your instrument online as “stolen”
- If activated, it forces user to connect to myWorld server in definable sequence
- If not done, instrument will be locked
- Location information if stolen instrument is connected to myWorld

Leica FlexLine plus



Hardware Differentiation



Description	TS02	TS06plus	TS09plus
Angular Accuracy	3", 5", 7"	1", 2", 3", 5", 7"	1", 2", 3", 5"
Accuracy to prism Measurements	1.5mm+2ppm		
Full numeric black & white display			
Color & Touch display			
2nd keyboard			
Communication Sidecover			
Internal Point memory [Meas.-Pts]	13`500	60`000	60`000
Electronic Guide Light			
Trigger Key	1 function	2 function	2 function



Included



Optional



Not available

- when it has to be **right**

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Leica FlexField plus - Onboard Software

Applications for every task



Station Setup

- Resection
- Local Resection
- Helmert Resection
- Orientation with Angle
- Orientation with Coordinates
- Height Transfer



Surveying & Coding



Stake Out



Tie Distance



Remote Height



Reference Line, Arc, Grid, Segment



Area (Plan & Surface) & DTM Volume



Height Transfer



Hidden Point



Backsight Check



COGO



Reference Plane



Road 2D



Road 3D



Traverse incl. adjustment

Leica FlexField plus - Onboard Software Functions



Main Menu



Level/Plummet



Delete Last Record



Free Coding



Laser pointer



Non-Prism/Prism Toggle



EDM Tracking



EDM Signal Reflection



Display Light



Key Illumination



Lock with PIN



Check Tie



Offset



Height Transfer



Hidden Point



Backsight Check

Leica FlexLine plus - Onboard Software Differentiation



Application	TS02	TS06 plus	TS09 plus			
Survey with Coding						
Stake Out						
Station Setup						
•Resection (Std.,Local-,Helmert-)						
•Orientation with Angle						
•Orientation with Coordinates						
•Height Transfer						
Reference Line/-Grid /-Segment				✓	✓	✓
Tie Distance						
3D Area & DTM Volume						
Remote Height						
Offset (Standard & Cylindrical)						
Backsight Check						
Hidden Point						
COGO Calculations				!		
Road 2D						
Reference Arc						
Reference Plane	-					
Road 3D						
Traverse	!	!				
Mining						

- ✓ Included
- ! Optional
- Not available

- when it has to be **right**



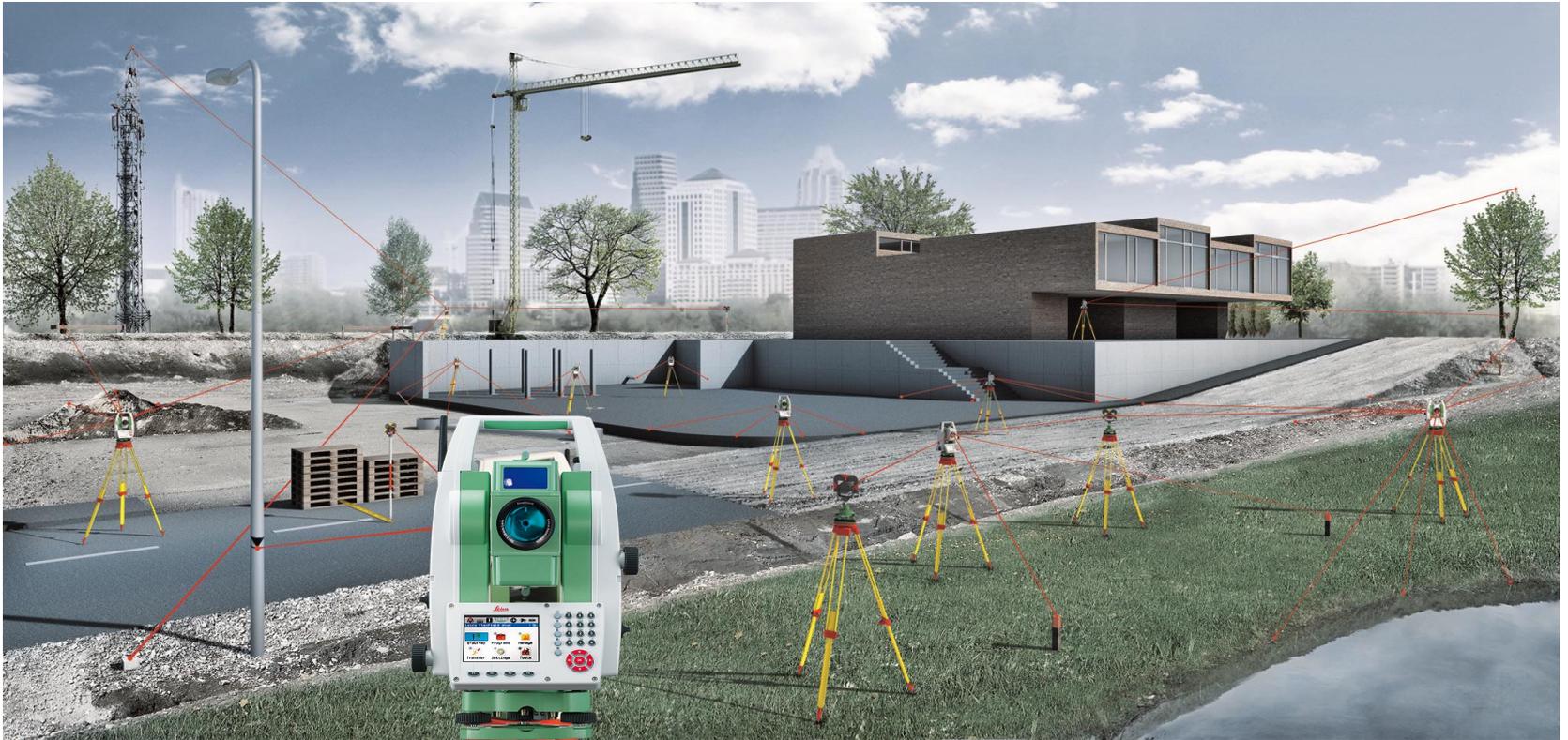
Leica FlexField *plus* - Onboard Software



More...



For more information about FlexField plus please refer to the separate presentation.



Leica FlexLine plus

One Family – Three Series



TS02



TS06 plus



TS09 plus

Leica FlexLine – TS02

Best-In-Class Precision



Leica Quality

- Proven specifications
- Reliable instruments
- Highest EDM precision

Intuitive FlexField software

- Low learning curve due to guided workflows
- Easy to understand graphics & icons
- Icons to quickly verify instrument status
- Faster operation due to graphics

Keyboard

- Standard keyboard: Minimum number of keys for maximal overview

Flexibility

- Choose from various hard- & software options



Product Upgrades

- ✓ Hardware
- ✓ Software

- when it has to be **right**

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Leica FlexLine plus – TS06 plus

Top Precision meets High Efficiency



FlexField software

- Enhanced Application package
- Enhanced optional applications

Hardware

- Advanced black & white Keyboard: Fast and error free entry of characters with full numeric keypad
- Enhanced hardware package including USB & Bluetooth.
- Reflectorless R500 EDM included
- Enhanced angular accuracy from 1" to 7"

Top performance

- High speed & highly accurate EDM
- High Angular Accuracy



Product Upgrades

- ✓ Hardware
- ✓ Software

SmartWorx *Viva*

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Leica FlexLine plus – TS09 plus

Full Precision at High Performance



Intuitive FlexField software

- Enhanced Application package

Hardware

- Colour- & Touch keyboard for more convenience & performance

Flexibility

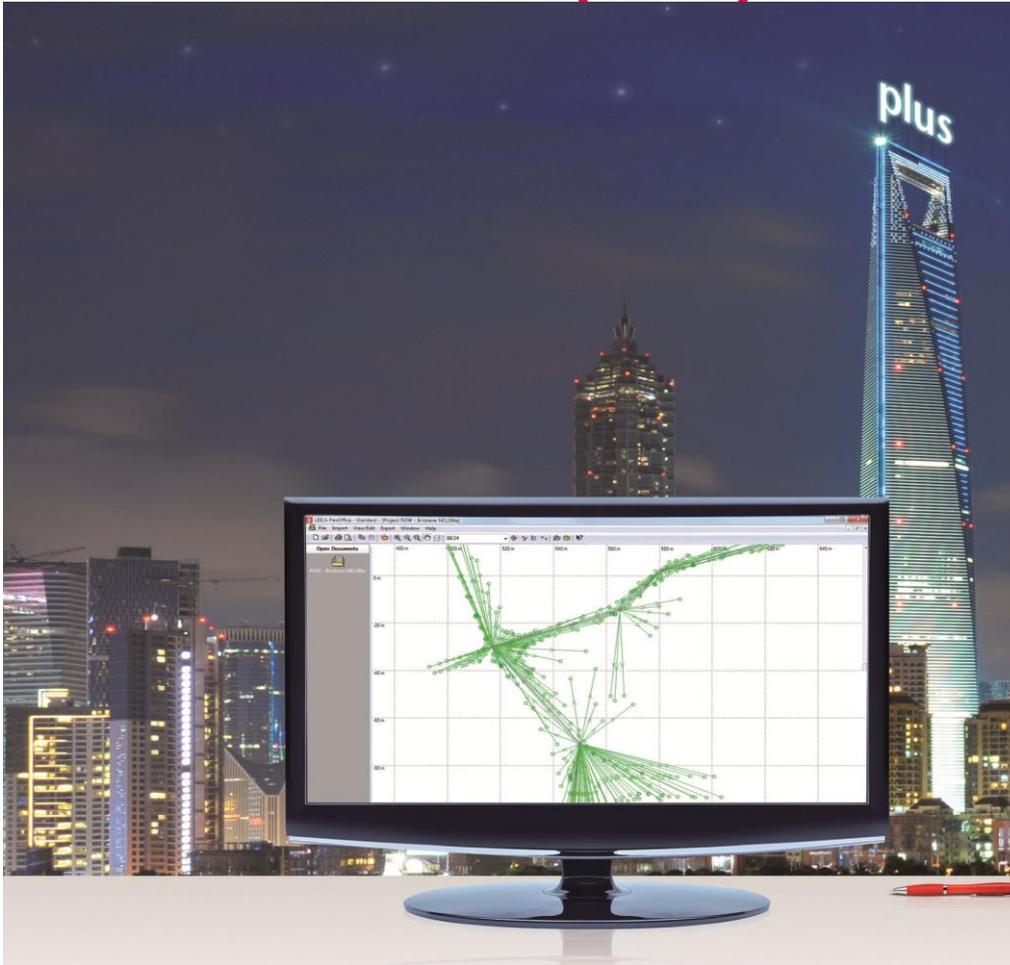
- Everything onboard – prepared for any task



SmartWorx *Viva*

- when it has to be **right** *Leica*
Geosystems

Leica Geo Office (LGO) V. 8.3 Leica Flex Office (LFO) V. 2.2



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Leica FlexOffice – The Perfect Match



Available solutions



Leica FlexOffice Standard

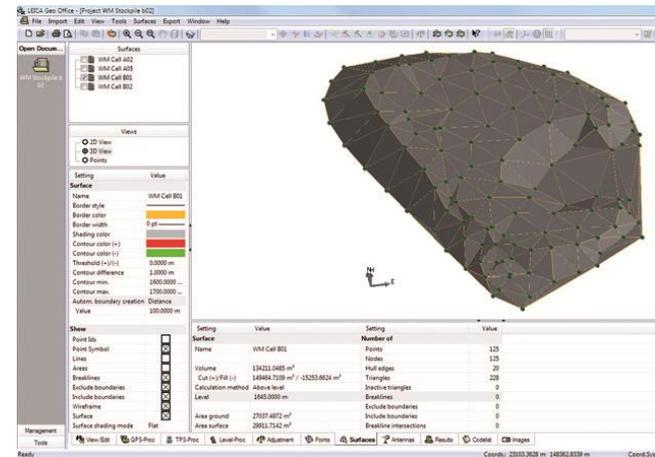
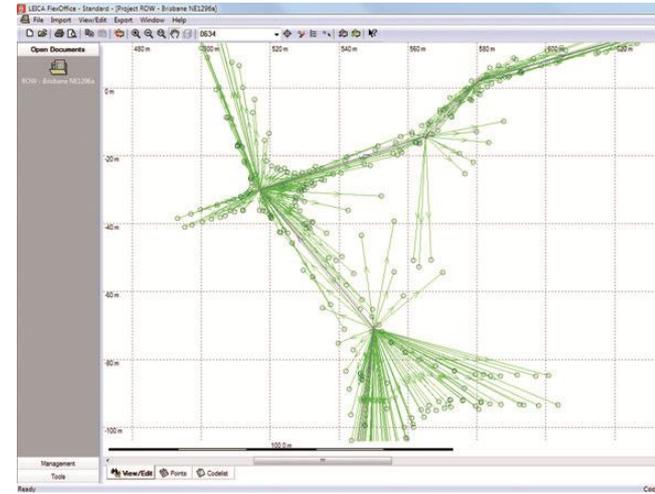
- High functionality, simple to use

Leica FlexOffice Advanced

- Enhanced functionality but still simple to use
- Dongle protected

Leica Geo Office

- No compromises in functionality and flexibility
- Dongle protected



Leica FlexOffice – Leica Geo Office



Overview



Functionality	FlexOffice Standard	FlexOffice Advanced	LGO TPS Bundle
Simplicity	✓✓	✓✓	✓
Data Exchange Manager			
Coordinate Manager			
Format Manager			
Configuration Manager	✓	✓	✓
Codelist Manager	✓	✓	✓
Firmware Upload			
Project Management			
View & Edit (Points+Obs.)			
Image Referencing			
HTML Reports			
TPS Processing (Traverse,..)			
Design to Field (Road 3D)			
COGO			
Support of other Leica Equipment	✖	✖	
GPS Processing, DNA,..	✖	✖	
GIS/CAD Export			
Adjustments		!	!
Surfaces/ Volumes			

✓ Included

! Optional

✖ Not available

- when it has to be **right**



Leica FlexOffice

New Features in V 2.2



- Support of FlexLine plus instruments
- “Backup”
 - Transfer all instrument data to your hard drive and back
 - Fixpoints from all jobs
 - Measurements from all jobs
 - Instrument Configuration
 - Format Files
 - Codelist
- **Mining Data Manager**
 - Embedded in LFO
 - For FlexLine plus Mining application

- when it has to be **right**

Leica Original Accessories





Accessories

Leica Original Accessories



- Highest quality
- Highest precision
- Highest reliability
- Interchangeable between different equipments
- Long-term availability of spare parts
- Broad range of available products
- Three Series
 - **Professional 1000 Series**
Reliably fulfils all requirements of the most common surveying tasks.
 - **Professional 3000 Series**
Meets high standards in exactness, function, consistency & service
 - **Professional 5000 Series**
Meets the highest demands for precision, reliability, longevity & service.



Leica FlexLine plus – Accessories

Lithium Ion Battery



Type	Operating Time [h]	Charging Time [h]
GEB211	~ 10	~2.5
GEB212	~ 12	~2.75
GEB221	~ 20	~3.0
GEB222	~ 30	~3.5



- Long life and low maintenance
- Latest technology
- Small, light, high-capacity
- Same chargers as for other Leica equipment (e.g. TS11/12/15/30/GS.....)





FlexLine plus

Everything in one small container

- Everything is with you in the field
- Tough container for hard conditions
- Light weight for easy transport



myWorld @ Leica Geosystems

The World at your fingertips





myWorld @ Leica Geosystems

The World at your fingertips



myProducts

- **Equipment Information**
 - Serial- & Equipment number
 - Warranty start & end date
 - Software Version
 - Hardware Configuration
 - Software Licence keys
- **Software**
 - Perform automatic online firmware updates
 - Download latest version of FlexOffice
- **Manuals & Tools**
 - Download latest User Manuals & Quickguides
 - Download useful tools for your equipment

myService

- View complete service history of your products
- View status of service cases





myWorld @ Leica Geosystems

The World at your fingertips



mySupport

- Create support requests on-line
- Promptly answered by skilled professionals
- View the history of your support cases

myTraining

- Participate in online-trainings for your product
- Subscribe to newsletter
- Register for local seminars and training courses



internet portal for customers
myWorld.leica-geosystems.com



myWorld @ Leica Geosystems

The World at your fingertips



Exchange

- Exchange data from the field to office and vice versa
- Data securely stored on a Leica Geosystems Server
- Connection of FlexLine plus instruments requires CS10/15 Datalogger



Active Assist

- Online access to your device by a support engineer for more efficient support.
- Connection of FlexLine plus instruments requires CS10/15 Datalogger



myWorld @ Leica Geosystems

The World at your fingertips



mySecurity

- Flag your instrument online as “stolen” – 24/7
- Define a connection date of the instrument to myWorld
- Blocks the instrument, if not connected due time
- Provides location information if stolen instrument is connected to myWorld to unblock it.



...last but not least....



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ACTIVE customer care



Leica FlexLine plus After Sales Upgrades





FlexLine plus

Flexibility a product life long....

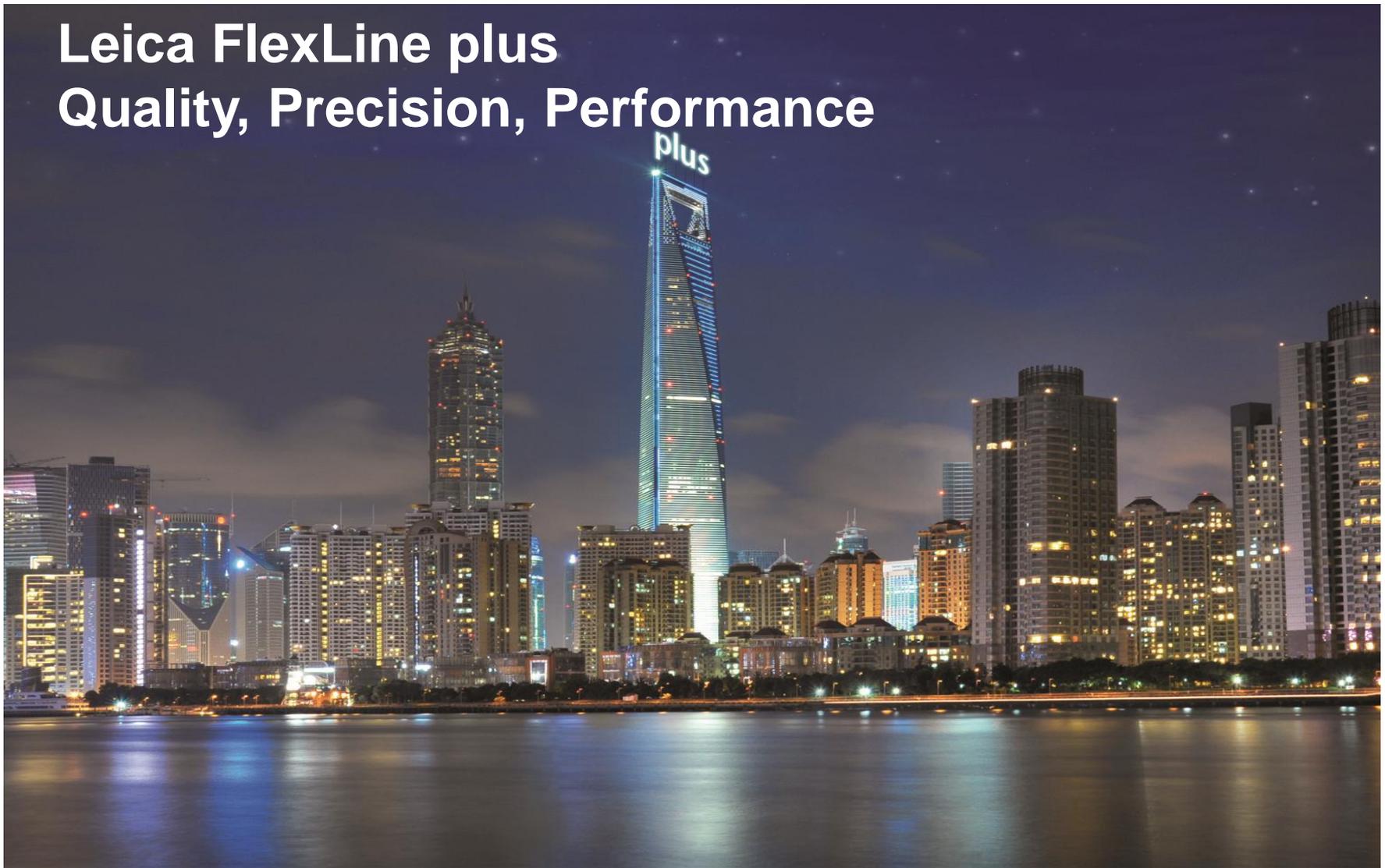


After Sales Articles

- **Enhanced flexibility due to attractive product upgrades**
 - **Software**
 - Various application upgrades
 - **Hardware**
 - Reflectorless range upgrades
 - Electronic Guide Light upgrade
 - 2nd Keyboard Upgrades

Contact your local Leica representative for more information !

Leica FlexLine plus Quality, Precision, Performance



- when it has to be **right**

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