

Leica Viva TS11 & TS15 Hardware



- when it has to be **right**

Leica
Geosystems

TS11 & TS15 Hardware Contents



1. Introduction
2. Product Variants
3. Side Cover
4. Display and Keyboard
5. Environmental Rating
6. Telescope
7. Live View Streaming
8. Operating System & Software
9. Summary



- when it has to be **right**

TS11 & TS15 Hardware

1. Introduction



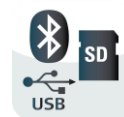
- Successor of TPS1200+
- Motorized variants – **TS15**
- Non-motorized variants – **TS11**
- SmartWorX Viva onboard
- Support of imaging
- Grid scan functionality

- when it has to be **right**

TS11 & TS15 Hardware

1. Introduction

- Complete new electronics
- New storage media and data connections supported
- New Windows CE operating system
- SmartWorx Viva onboard & new applications
- New keyboard, display & sound
- Variants with wide-angle camera



- when it has to be **right**

Leica
Geosystems

TS11 & TS15 Hardware Contents



1. Introduction
2. Product Variants
3. Side Cover
4. Display and Keyboard
5. Environmental Rating
6. Telescope
7. Live View Streaming
8. Operating System & Software
9. Summary



- when it has to be **right**

TS11 & TS15 Hardware

2. Product Variants



	Reflectorless	Motorization	Automated Aiming	Tunnel Laser Guide	Power Search	Wide-angle Camera
■ TS15 M						
■ TS15 A						
■ TS15 G						
■ TS15 P						
■ TS15 I						



- when it has to be **right**

Leica
Geosystems

TS11 & TS15 Hardware

2. Product Variants



	Reflectorless	Wide-angle Camera
■ TS11		
■ TS11 I		



- when it has to be **right**

TS11 & TS15 Hardware Contents



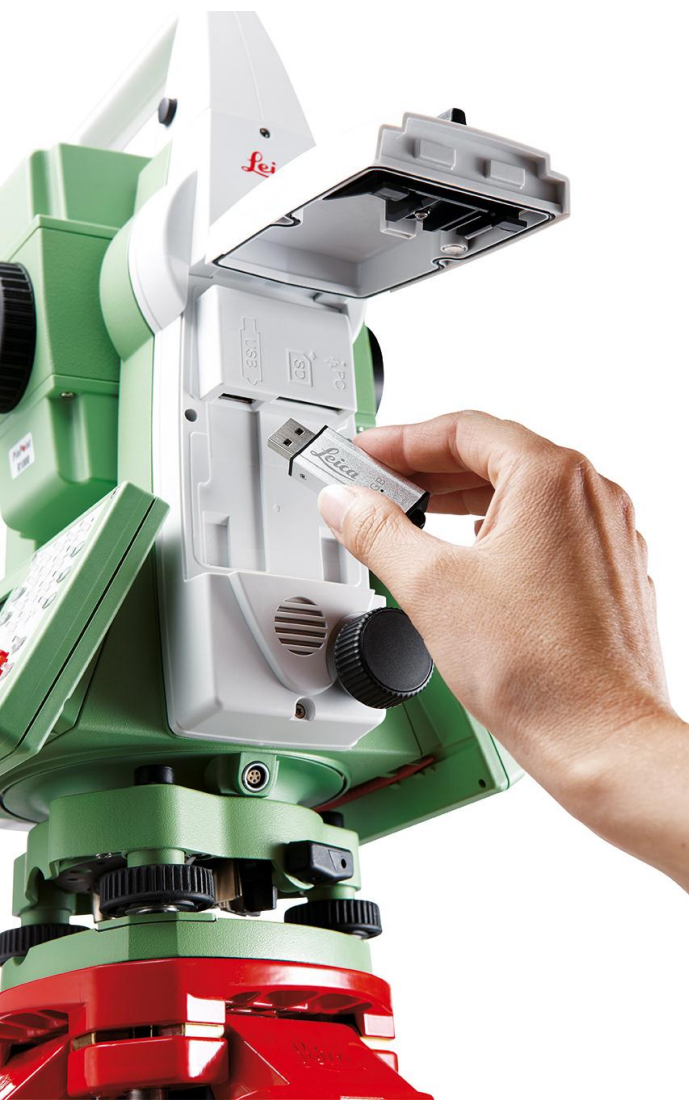
1. Introduction
2. Product Variants
3. Side Cover
4. Display and Keyboard
5. Environmental Rating
6. Telescope
7. Live View Streaming
8. Operating System & Software
9. Summary



- when it has to be **right**

TS11 & TS15 Hardware

3. Side Cover



New Side cover

- Removable SD card
- Removable USB Stick (for data transfer)
- 1 GB Internal Memory standard
- Bluetooth as standard
- USB via Mini-USB B connector
- Loud speaker

Benefits

- Possibility to use different storage locations
- Easy data exchange (USB Stick, Active Sync)
- Audio assistance, voices

- when it has to be **right**

Leica
Geosystems

TS11 & TS15 Hardware Contents



1. Introduction
2. Product Variants
3. Side Cover
4. Display and Keyboard
5. Environmental Rating
6. Telescope
7. Live View Streaming
8. Operating System & Software
9. Summary



- when it has to be **right**

TS11 & TS15 Hardware

4. Display & Keyboard

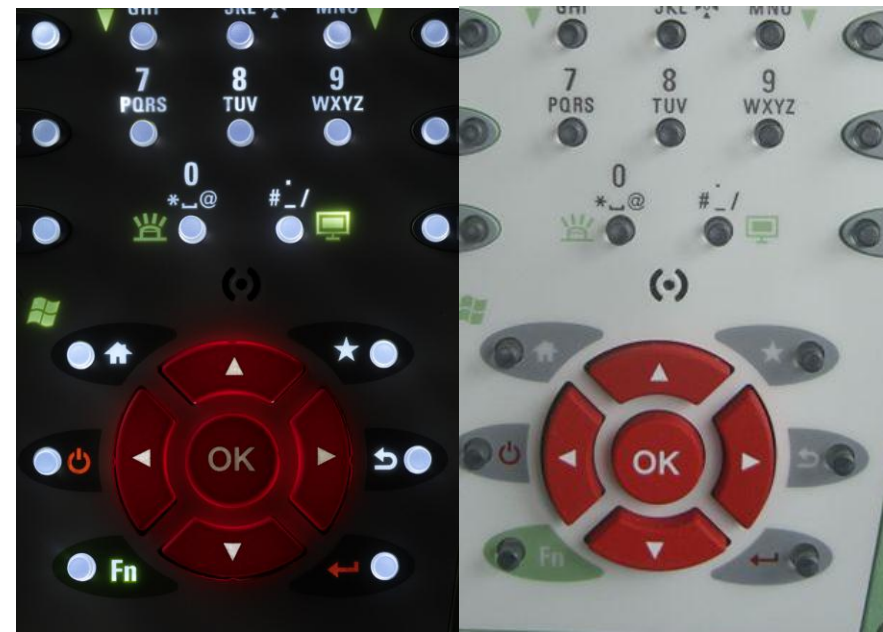


TS11 & TS15

- Full VGA Color & Touch Display
- Viva layout with ergonomic navigation keys
- Keys, numbers and characters can be illuminated
- Multifunctional keys: e.g. zoom, volume

Benefits

- Faster input
- Better readability in all environmental conditions



TS11 & TS15 Hardware Contents



1. Introduction
2. Product Variants
3. Side Cover
4. Display and Keyboard
5. Environmental Rating
6. Telescope
7. Live View Streaming
8. Operating System & Software
9. Summary



- when it has to be **right**

TS11 & TS15 Hardware

5. Environmental Rating

TS11 & TS15

- New side cover is fully sealed
- Increased sealing of keyboard-display unit
- **TS11 & TS15 are IP55**

Benefits

- Operational in harsher environment



- when it has to be **right**

TS11 & TS15 Hardware Contents



1. Introduction
2. Product Variants
3. Side Cover
4. Display and Keyboard
5. Environmental Rating
6. Telescope
7. Live View Streaming
8. Operating System & Software
9. Summary



- when it has to be **right**

TS11 & TS15 Hardware

6. Telescope

Wide-angle camera

- TS11 I & TS15 I equipped with Wide-angle camera
- Resolution: 5 Mpixel
- Frame rate: 20 Hz

Fine Focus

- High quality Leica optics
- 30 x magnification

Benefits

- Perfect focus on objects at any distance
- Imaging functionality



- when it has to be **right**

TS11 & TS15 Hardware Contents



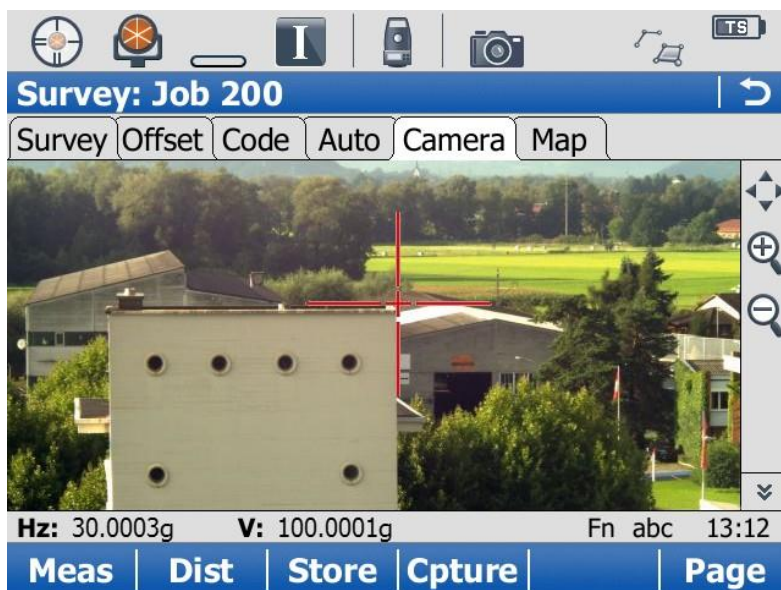
1. Introduction
2. Product Variants
3. Side Cover
4. Display and Keyboard
5. Environmental Rating
6. Telescope
7. Live View Streaming
8. Operating System & Software
9. Summary



- when it has to be **right**

TS11 & TS15 Hardware

7. Live View Streaming



TS11 I & TS15 I

- 20 Hz Live stream to full VGA display
- Frame update rate adopts to light conditions
- Real time correction of parallax
- Optimized flow from live view capture to display on screen

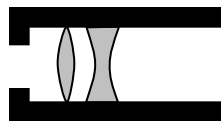
Benefits

- Sharp live stream
- Target can be better detected (e.g. target behind moving tree branches)
- Best image assisted surveying

- when it has to be **right**

TS11 & TS15 Hardware

7. Live View Streaming



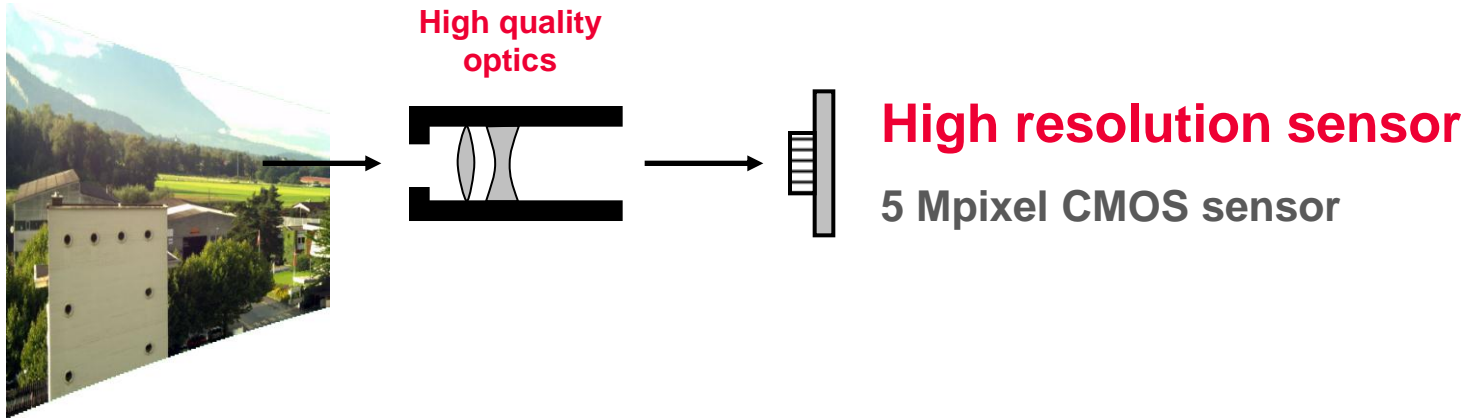
High quality optics

Sharp projection in the whole image area

- when it has to be **right**

TS11 & TS15 Hardware

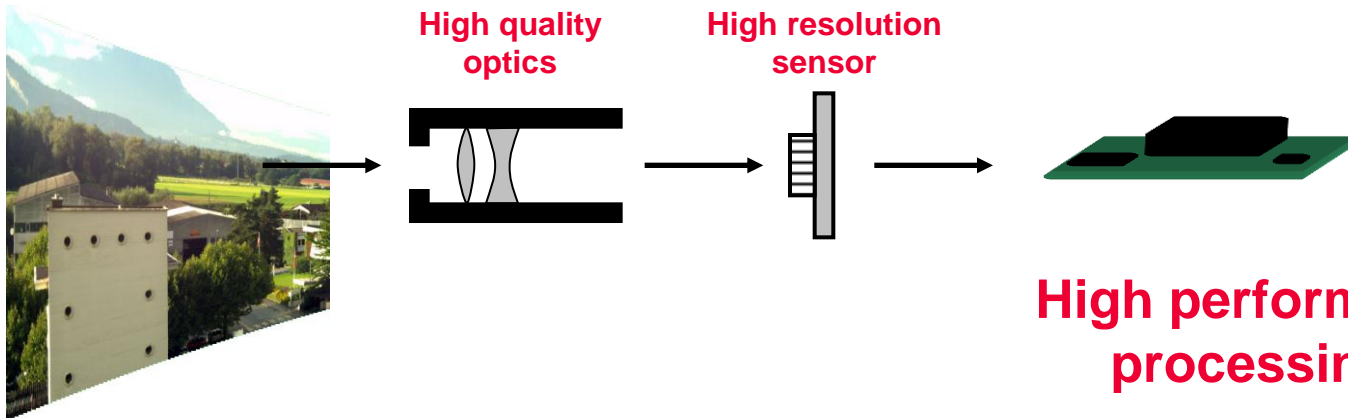
7. Live View Streaming



- when it has to be right

TS11 & TS15 Hardware

7. Live View Streaming



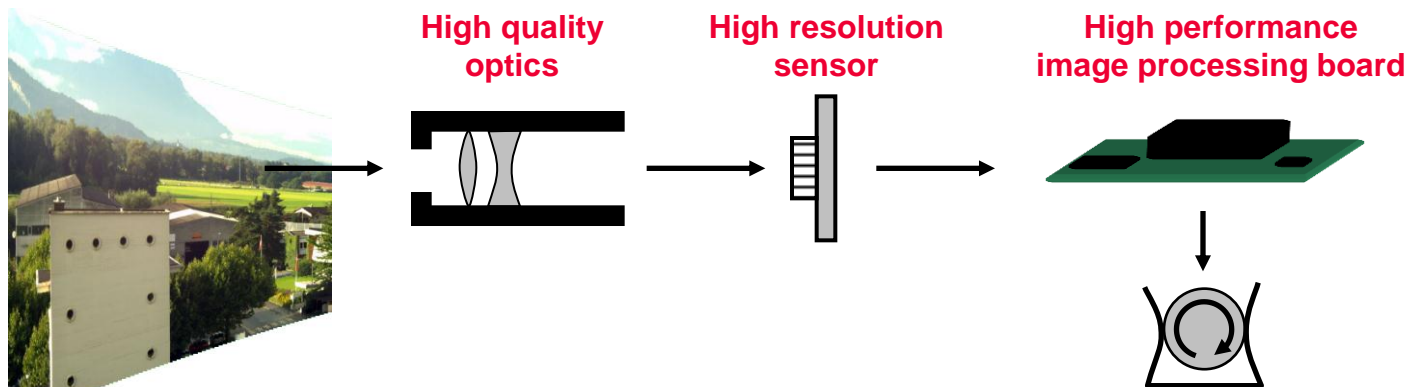
High performance image processing board

- Automated exposure calculation
- Automated white balance calculation
- Zooming

- when it has to be **right**

TS11 & TS15 Hardware

7. Live View Streaming



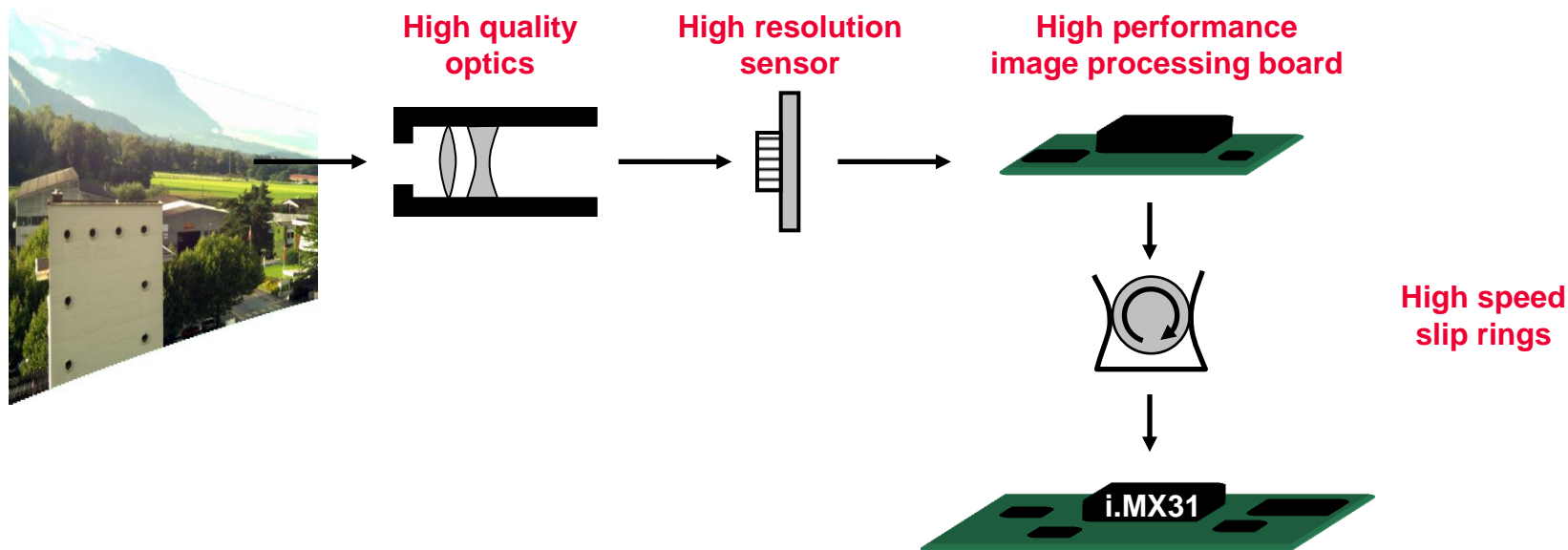
High speed slip rings

- Fast data transfer from telescope to main body of instrument

- when it has to be **right**

TS11 & TS15 Hardware

7. Live View Streaming



High performance processor

- i.MX32: Dedicated Multimedia processor with a fast image processing unit (IPU)

- when it has to be **right**

TS11 & TS15 Hardware

7. Live View Streaming



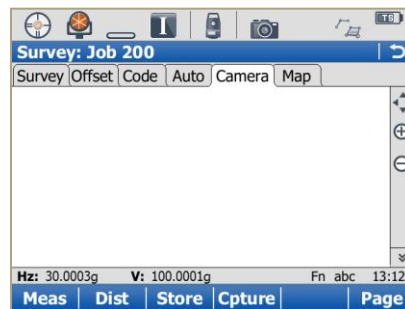
High performance processor



- Combines different graphical input to deliver a 20Hz live stream within SmartWorx



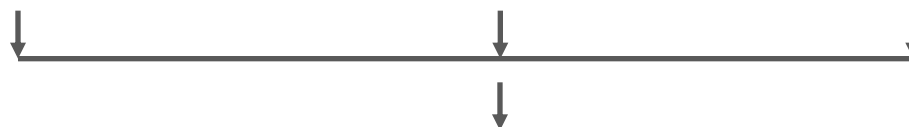
20Hz live stream



5Hz SmartWorx GUI



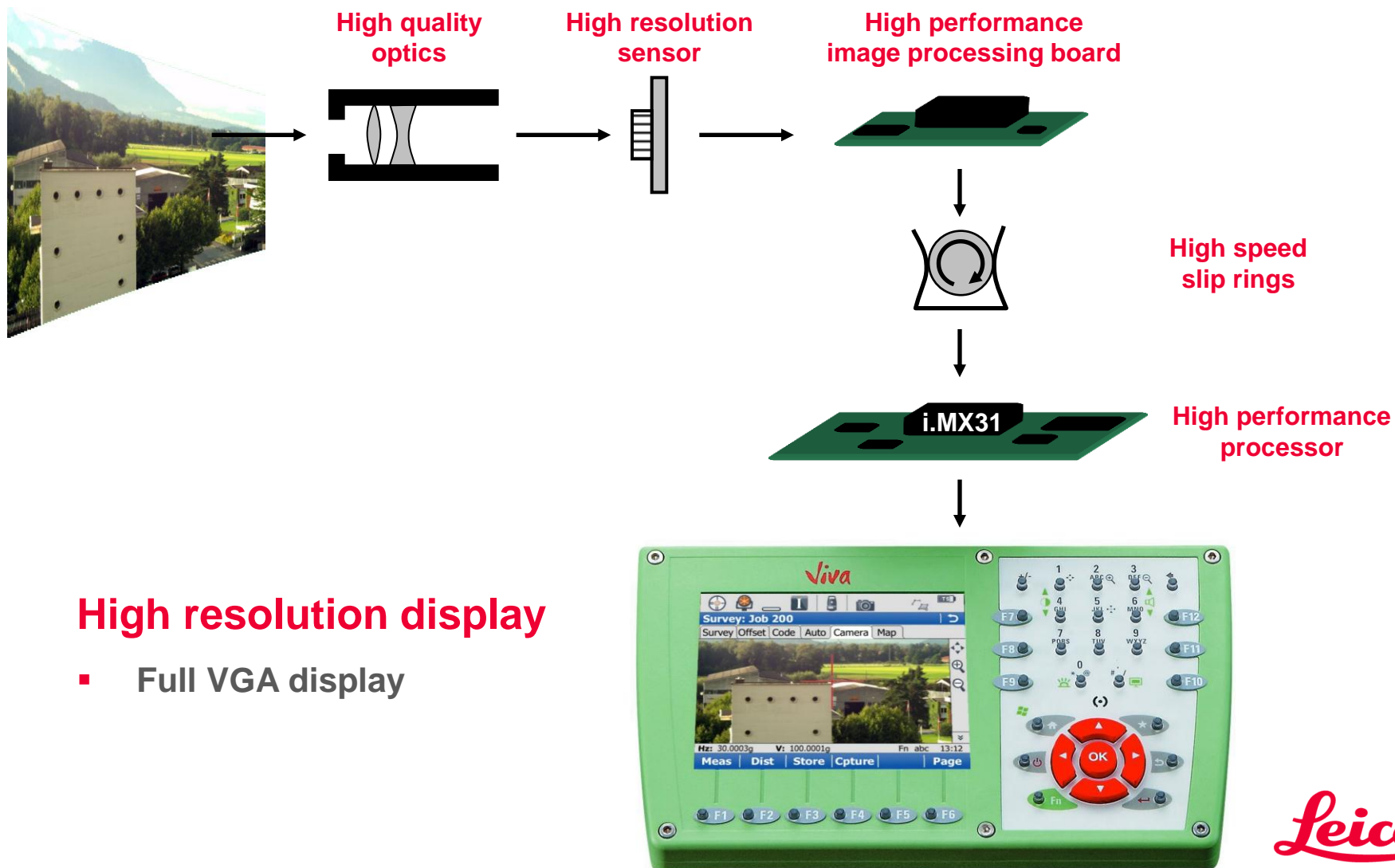
Real time parallax correction



- when it has to be right

TS11 & TS15 Hardware

7. Live View Streaming



TS11 & TS15 Hardware Contents



1. Introduction
2. Product Variants
3. Side Cover
4. Display and Keyboard
5. Environmental Rating
6. Telescope
7. Live View Streaming
8. Operating System & Software
9. Summary



- when it has to be **right**

TS11 & TS15 Hardware

8. Operating System & Software

Operating System

- Windows CE v 6



Benefits

- WinCE + USB Mini-USB B connector: Windows Drag & Drop for data download – drivers but no additional software is needed for data download
- Standard Windows CE programs available
 - e.g. text editing via Word Pad
 - e.g. Internet Explorer. Use case example: the total station is connected to internet via Bluetooth mobile phone. Download of coordinates from federal surveying office homepage
 - Windows media player: replay mp3 files

TS11 & TS15 Hardware

8. Operating System & Software



SmartWorx Viva onboard

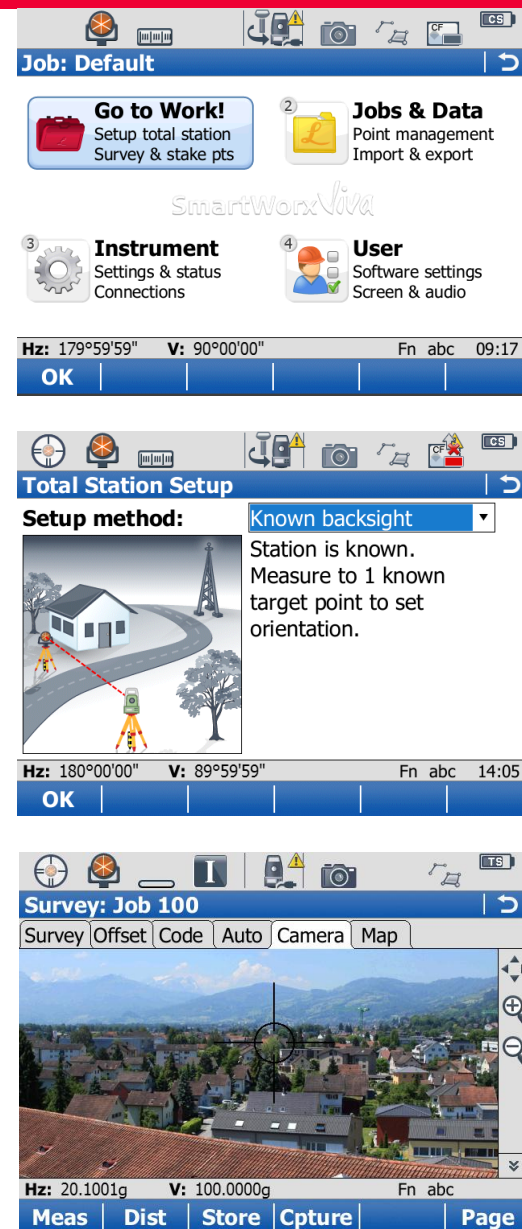
- Viva software on all platforms



- Simple and modern graphics
- Clear graphical assistance within the applications
- Assisted workflow through wizards

Benefits

- Easy to understand & intuitive
- One common learning curve for Viva GPS & TPS
- Improved ease of use & productivity



- when it has to be **right**



TS11 & TS15 Hardware

8. Operating System & Software



Image Assisted Surveying

- Tap
- Turn
- Measure

Image Notes

- Capture
- Sketch
- Link

- when it has to be **right**

TS11 & TS15 Hardware

8. Operating System & Software




Grid Scan

Grid scan on plane

Ref Plane & Grid Scan

Task: **Grid scan on plane**

Grid scan a regular grid on a defined reference plane within a defined area.



Hz: 5.0002g V: 65.0001g Fn abc 16:40


OK

Grid scan on surface

Ref Plane & Grid Scan

Task: **Grid scan on surface**

Grid scan a regular grid of points on any surface within a defined area.



Hz: 150.0002g V: 99.0001g Fn abc 21:24

OK

TS11 & TS15 Hardware Contents



1. Introduction
2. Product Variants
3. Side Cover
4. Display and Keyboard
5. Environmental Rating
6. Telescope
7. Live View Streaming
8. Operating System & Software
9. Summary



- when it has to be **right**

TS11 & TS15 Hardware: 9. Summary

TS15 - The Fastest Imaging Total Station



- Images that tell the Survey Story

“It doesn’t get clearer”

 Capture –  Sketch –  Link

- Simplicity in the field

“It doesn’t get easier”

 Choose – Connect – Collect – Combine

- A Fast Total Station

“It doesn’t get quicker”

 Best-in-class One-person Surveying

 Best-in-class EDM

 Best-in-class Tap, Turn & Measure

 Best-in-class Grid Scan



- when it has to be **right**

Leica
Geosystems

TS11 & TS15 Hardware: 9. Summary

TS11 - The most Advanced Manual Total Station



- Images that tell the Survey Story

“It doesn’t get clearer”



Capture –



Sketch –



Link



SmartWorx Viva onboard

- An Advanced Manual Total Station

“It doesn’t get more Advanced”



Proven technology



Think to the future



Work as you want to



Seamless Dataflow

- when it has to be **right**



- when it has to be **right**

Leica
Geosystems