

Scan Module - Measurements

This chapter explains how to install the scan module and convert structured E57 files to the Plantview compressed pvz format.

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1. Notes

- To install the scan module, you will need administrator rights on the computer.
- To run the scan module, Plantview Workspace version 6 or higher must be installed on the computer and an active Plantview account is required.
- The following terrestrial scanners are supported: Leica HDS 6000, Leica C and P series, Leica RTC 360, Leica BLK G2, Faro Scanners.

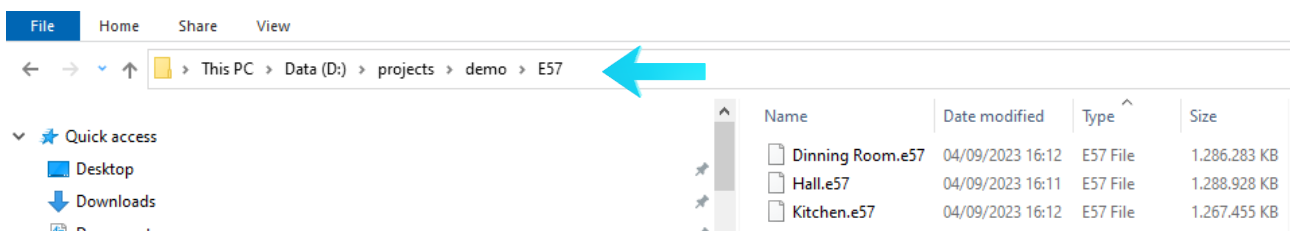
2. Download and install

Download the latest scan module and install it on your computer.

3. Run the Scan Module from the Windows PowerShell

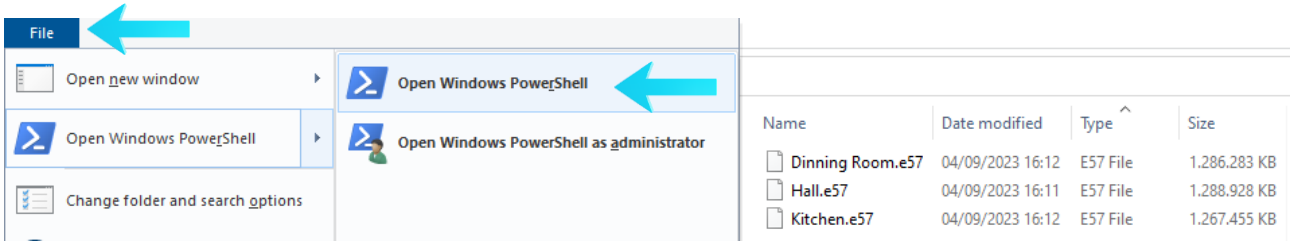
Login into your Plantview Workspace. This step is required to enable the license to be applied to the scan module.

Open File Explorer and go to the windows directory where the E57 files are located.



Plantview

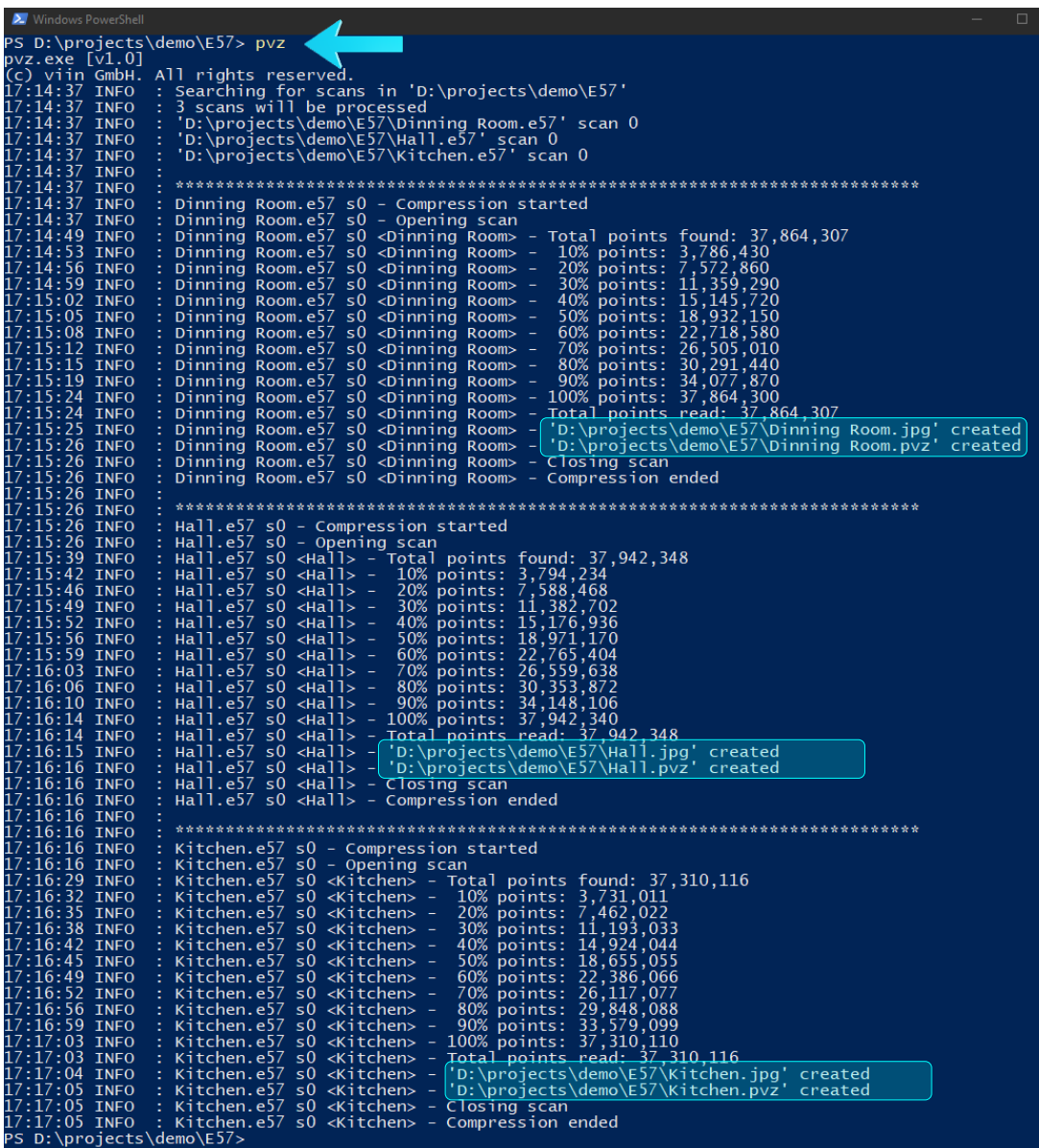
Press **File>Open Windows PowerShell**.



The windows PowerShell opens.

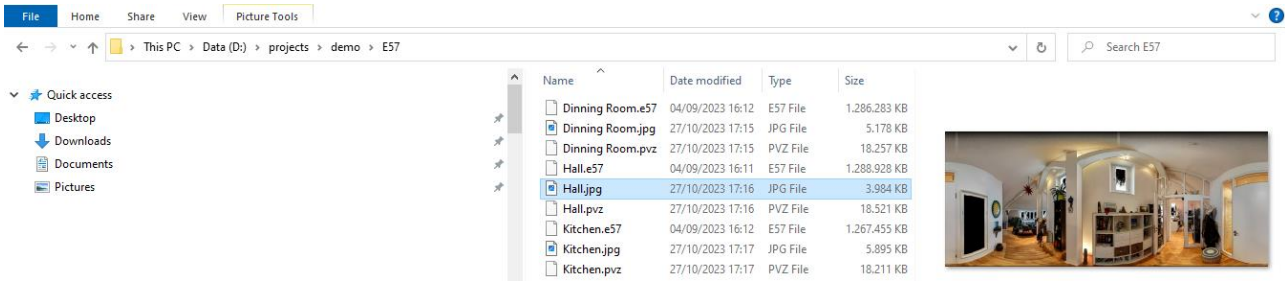
Type **pvz** in the command prompt and press **Enter**.

The Plantview Scan Module will then look for all E57 files located in the directory and start the conversion and compression process. The time required for the processing of one E57 depends on the computer hardware specification and the size of the scan.



The result will be the corresponding jpg and pvz file for each E57 file.

Plantview



The newly created pvz together with the corresponding jpg files can now be copied or moved to a Plantview project directory for analysis. The analysis process needs both pvz and jpg files to be in the same directory.

A 37 M points laser scan (6 mm @ 10 m) will produce approximately 23 Mb Plantview files.

A 144 M points laser scan (3 mm @ 10 m) will produce approximately 130 Mb Plantview files.

4. Running multiple instances

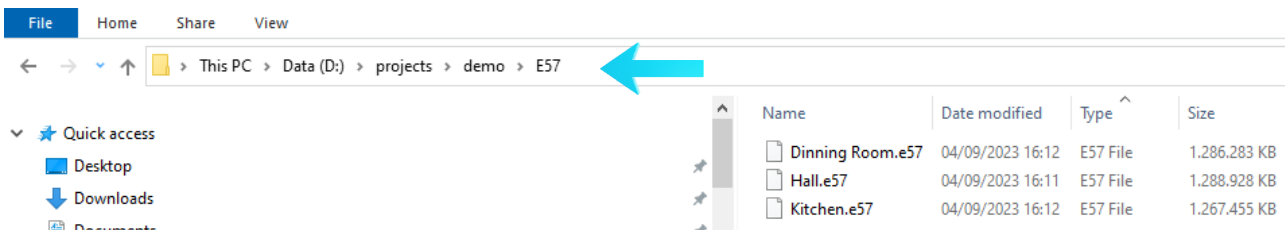
Multiple instances of the Scan Module can be started. To run parallel instances, the files need to be in multiple directories and the scan module started from the equivalent windows PowerShell.

The maximum number of parallel instances depends on the amount of memory (RAM). A computer system equipped with 64GB RAM can safely run 3 parallel instances. It is important to observe that the computer does not run out of memory during this process.

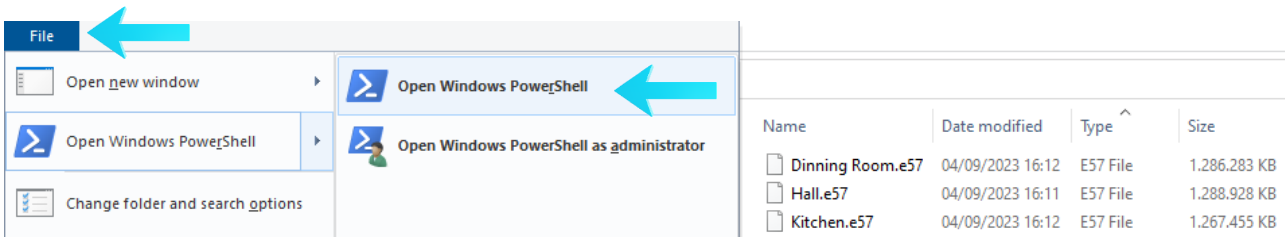
5. Options for the Scan Module running from the Windows PowerShell

Login into your Plantview Workspace.

Open File Explorer and go to the windows directory where the E57 files are located.



Press **File>Open Windows PowerShell**.



The windows PowerShell opens.

Plantview

Type **pvz -help** in the command prompt and press **Enter** to display all options.

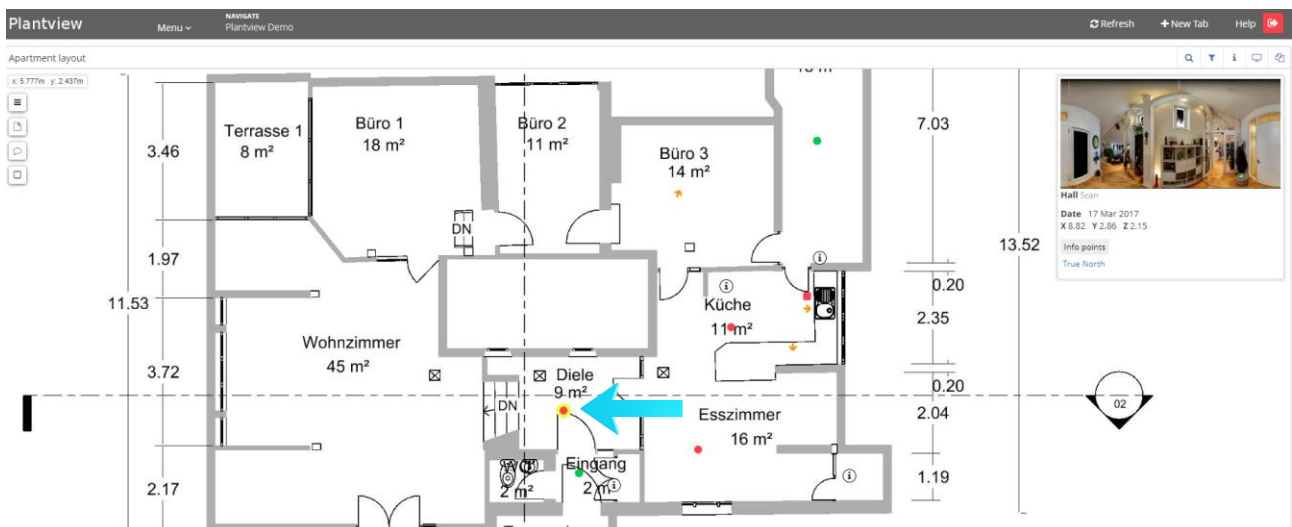
```

Windows PowerShell
PS D:\projects\E57\E57\4> pvz -h
pvz.exe [v1.0]
(c) viin GmbH. All rights reserved.
usage: pvz.exe [OPTIONS] [FILE]
Compress all the E57 files in the current or in the FILE directory
-h                print the help message
-o <dir path>    output directory path (the FILE directory by default)
-q <percentage>  image quality (50 percent by default)
-c <correction>  gamma correction for colored image (1 by default)
-b <correction>  gamma correction for black & white image (2.2 by
                 default)
-d <tolerance>   north Z tolerance Down (20.00 meters by default)
Please report issues at support@plantview.info
PS D:\projects\E57\E57\4>
    
```

Option	Description	Example
-h	Displays the help message with all options	pvz -h
-o <dir path>	The output directory path (Default is the FILE directory path)	pvz -o d:/temp
-q <percentage>	Defines the image quality (Default is 50%) A higher percentage will increase the quality and size of the image	pvz -q 70
-c <correction>	Gamma correction for colored images (Default is 1) A larger value will create a brighter image	pvz -c 2
-b <correction>	Gamma correction for black & white images (Default is 2.2) A larger value will create a brighter image	pvz -b 3
-d <tolerance>	North Z tolerance down (Default 20m)	pvz -d 50

6. Measurements

Double clicking on a scan position to enter the virtual tour mode.

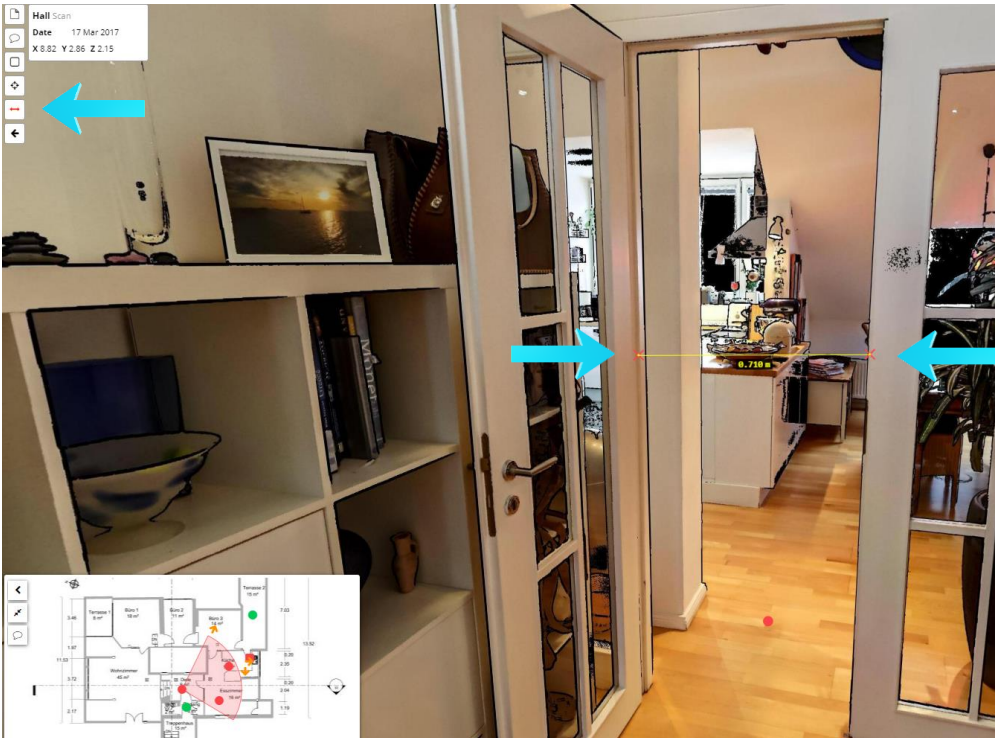


Plantview

Locate the area you want to perform a measurement.

Press on the **Distance** symbol and activate it. (Turns red)

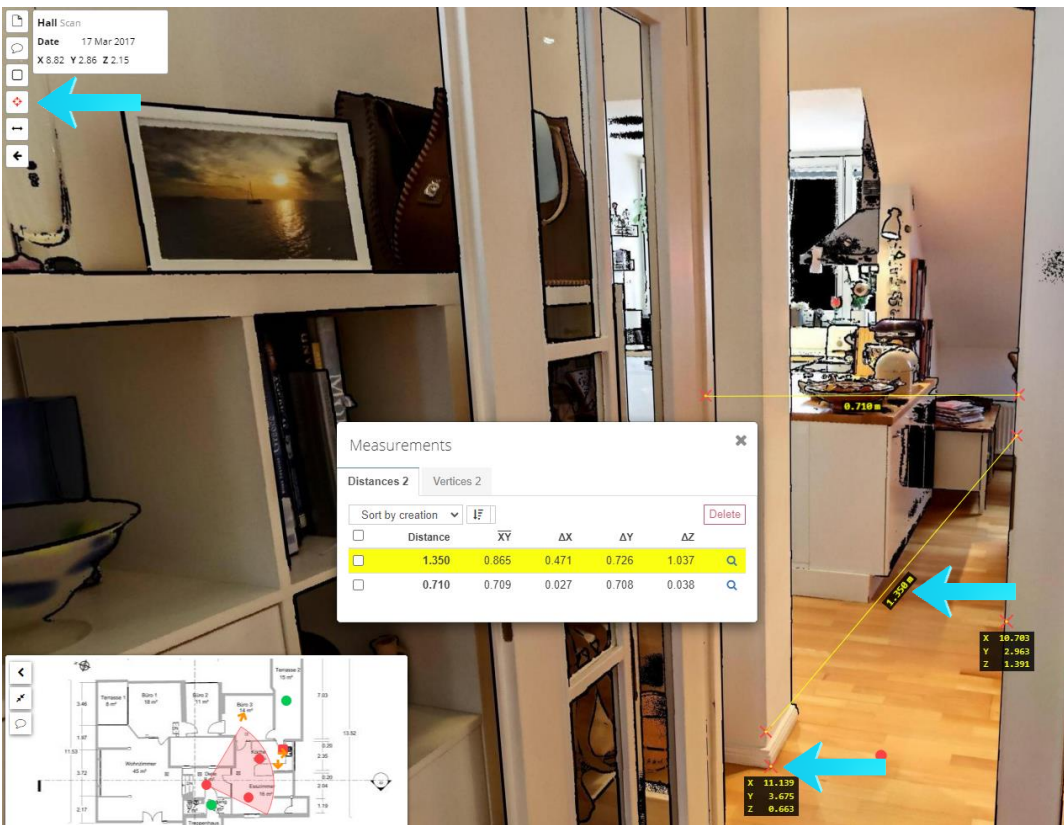
Locate two points (vertices) to define the distance you want to measure.



Press on the **Vertex** symbol and activate it (turns red)

Locate a point (vertex) to display its coordinates.

Press on the measurement or vertex result to display the extended information for every measurement plus a list of all vertices.



Plantview

	Distance	Absolute distance between the two vertices
	\overline{XY}	Distance between the two vertices keeping Z constant (Z defined by first vertex)
	ΔX	Difference between the two X coordinates
	ΔY	Difference between the two Y coordinates
	ΔZ	Difference between the two Z coordinates