

CONVERT LAZ FILES TO LAS

LAZ files are frequently encountered. This is a great format as it compressed LAS files with no loss to the data itself. However, LAZ files cannot be read directly by ArcGIS but need to be converted first into LAS files.

ArcGIS can experience problems converting LAZ files and the best method to accomplish this is to use the LAS Tools application to convert LAZ files into LAS files. To do this, you will use the command line beginning with a batch file (*.bat) that sets the environment path and enables use of LAS Tools from anywhere on your computer. To make this work, you will obviously need to have LAS Tools installed on your computer. To download a copy, visit <https://rapidlasso.com/lastools/>

1. Open the command prompt (NOTE: the command prompt will be used for all the following steps)
2. Navigate to the folder where the `StartLAStools.bat` file exists.
3. Type `StartLAStools` and press ENTER.

The Windows path environment variable will be modified to include the location of the LAS Tools binary executables (NOTE: You may need to edit the batch file so it points to the actual location of the LAS tools folder on *your* PC. You can do this with any text file editor).

4. Next, navigate into the folder containing the LAZ files.
5. Type `laszip -v -i *.laz` and press ENTER

In a moment you will begin seeing a line by line listing of the files being converted. Wait until the command prompt cursor returns indicating the process has been completed.

NOTE: If the LAS Tools utility finds an unreadable or corrupt LAZ file it will simply stop processing. This can be very frustrating and an inefficient use of your time. To circumvent this potential, I recommend writing a sequential batch file.

6. To write a sequential file to further automate this process:
 - a. From the command prompt issue a DIRECTORY command and pipe the results into a text file. That command will look like this: `dir *.laz > LAZfiles.txt`
 - b. Import the resulting LAZfiles.txt file into MS Excel (be sure to indicate this is a delimited file using SPACES).
 - c. Remove all rows and columns save for the list of LAZ file names
 - d. Copy the list of LAZ file names
 - e. Paste these into COLUMN B of the LAZfilesTemplate.xlsx
 - f. COLUMN D will populate/update automatically
 - g. Open a new sheet/page
 - h. Copy the contents of COLUMN D from the Preparation sheet/page
 - i. Paste special (values) into the new sheet/page
 - j. Save this page as a new MS-DOS Text file (*.txt)
 - k. Close MS Excel
 - l. Using Windows File Manager, change the extension of the text file from *.txt to *.bat
7. Return to the command prompt
8. Type the name of the batch file you just created and press ENTER

Once completed, you can begin creating the LAS Dataset in ArcGIS Pro.