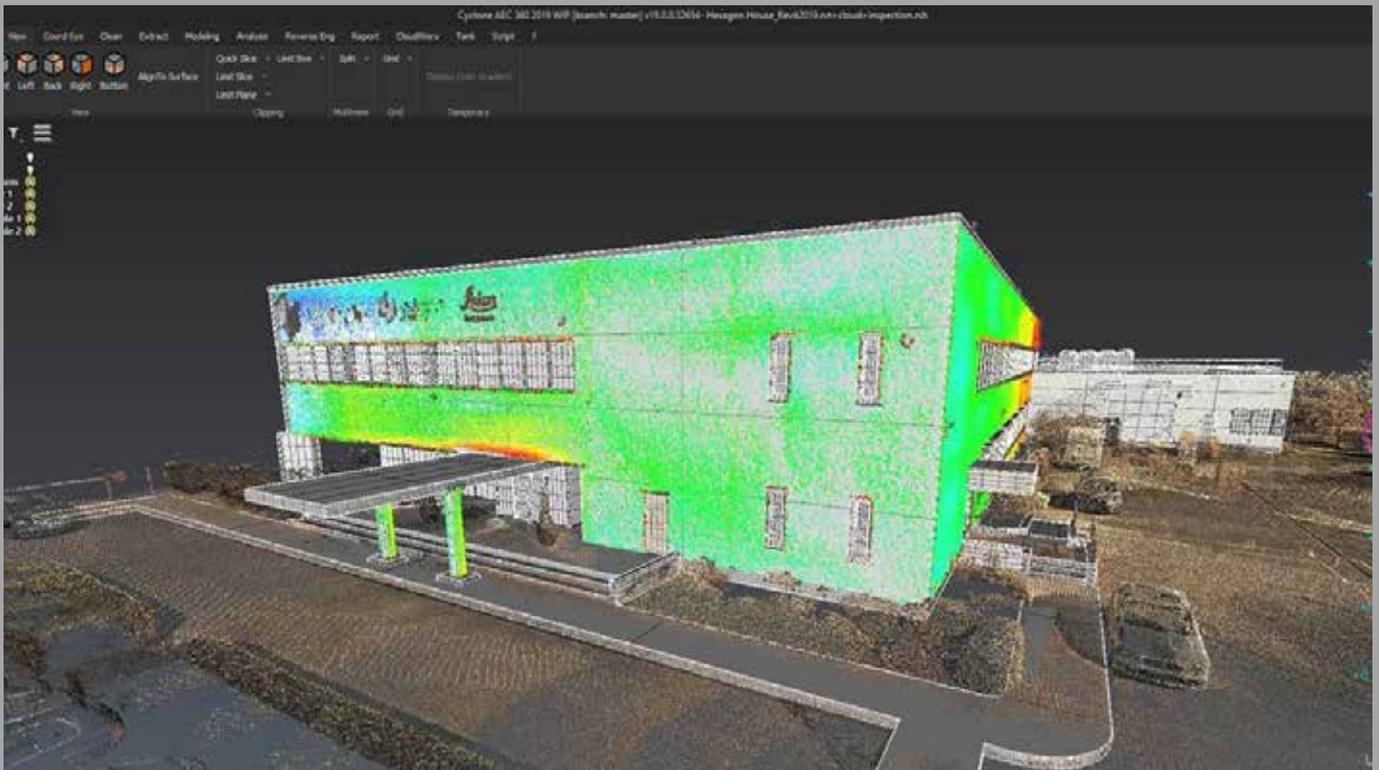


# Leica Cyclone 3DR Technical Specifications



Valid as of October 2019

leica-geosystems.com



- when it has to be **right**

**Leica**  
Geosystems



# Leica Cyclone 3DR Technical Specifications

Feature	Standard (Base)	Survey (Option)	AEC (Option)	Tank (Option)	PRO (Edition)
<b>Point Cloud Processing</b>					
Noise detection	◆				◆
Clean/Separate clouds by fence	◆				◆
Separate with object	◆				◆
Reduce	◆				◆
Density homogenisation	◆				◆
Segmentation (by distance, scan station and colour)	◆				◆
Target extraction	◆				◆
Ground extractor filter		◆			◆
Walls and floors filter		◆	◆		◆
Tunnel filter		◆	◆		◆
<b>CloudWorx</b>					
Connect to Cyclone IMP, LGS and JetStream server	◆				◆
Create UCS and align views	◆				◆
Create and manage limit boxes, limit slices and limit planes	◆				◆
<b>Registration/Alignment</b>					
Local coordinate systems	◆				◆
Translation, rotation, free move	◆				◆
Best align N points	◆				◆
Best fit	◆				◆
<b>Surface Modelling</b>					
3D meshing	◆				◆
Spherical meshing	◆				◆
2D meshing	◆				◆
Mesh refining: smoothing, decimation, hole filling sharp, edges and borders reconstruction, junctions	◆				◆
Mesh extrusion	◆				◆
Meshing under constraints (with polylines)	◆				◆
Spikes detection	◆				◆
Write on mesh	◆				◆
DSM and DTM creation		◆			◆
Building extraction		◆	◆		◆
<b>Control/Inspection</b>					
Angle, distance, surface	◆				◆
Cubature/volume	◆				◆
Geometric shape extraction	◆				◆
3D inspection	◆				◆
2D inspection	◆				◆
Reporting (CSV, PDF and 3DPDF)	◆				◆
Stockpile measurement		◆			◆
Cross-sections for tunnels and roads (creation, inspection, volumes, unroll)		◆	◆		◆
Surface analysis (levelness, flatness, slope)		◆	◆		◆

# Leica Cyclone 3DR Technical Specifications

Feature	Standard (Base)	Survey (Option)	AEC (Option)	Tank (Option)	PRO (Edition)
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Polylines/Section					
Sections (planar, radial, etc.)	♦				♦
Smoothing	♦				♦
Decimation	♦				♦
Chaining	♦				♦
Neutral axis extraction	♦				♦
Breakline extraction (single)	♦				♦
Planar countour extraction	♦				♦
Contours lines		♦			♦
Breakline extraction (multiple)		♦			♦

Image/Texture Management					
Conversion between inspected or coloured mesh to textured mesh		♦			♦
Automatic and manual mapping of pin hole, cube faces and spherical images		♦			♦
Automatic and manual mapping of ortho-images		♦			♦
Camera calibration		♦			♦
Creation of texture atlas		♦			♦
Ortho-image (including georeferencing information as World file)		♦			♦

CAD Surface Modeller					
IGES, STEP and DXF import	♦				♦
REVIT, IFC and DWG import			♦		♦
CAD Surface creation creation			♦		♦
Local or overall surface improvements			♦		♦
Reverse engineering workflow (creation and edition of networks, CAD surface generation based on networks)			♦		♦
IGES/STEP export	♦				♦

Tank Monitoring Module					
3D inspection				♦	
Roundness and verticality				♦	
Settlements				♦	
Export and reporting				♦	

User Interface					
Orthographic and perspective view	♦				♦
Multiview	♦				♦
Tree explorer	♦				♦
AutoSaves	♦				♦
Limit box, limit planed and limit slices	♦				♦
Grid	♦				♦
Shortcuts	♦				♦
Send to AutoCAD	♦				♦
Localisation	♦				♦
Cyclone camera	♦				♦
Unit management	♦				♦

# Leica Cyclone 3DR Technical Specifications

Feature	Standard (Base)	Survey (Option)	AEC (Option)	Tank (Option)	PRO (Edition)
<b>Automation</b>					
Scripting	◆				◆
<b>Point Cloud Import Formats</b>					
Leica Geosystems (*.pts, *.ptx) and LGS (*.lgs)	◆				◆
Leica Nova MS50/60 (*.sdb, *.xml)	◆				◆
ShapeGrabber (*.3pi)	◆				◆
3DReshaper binary file (*.nsd)	◆				◆
AutoDesk DXF (*.dxf)	◆				◆
STL (*.stl)	◆				◆
Polyworks (*.psl)	◆				◆
Leica T-Scan + Steinbichler (*.ac)	◆				◆
LiDAR data (*.las; laz)	◆				◆
Other ASCII (*.*)	◆				◆
Zoller and Fröhlich (*.zfs - *.zfc)	◆				◆
PLY points without triangles (*.ply)	◆				◆
ESRI ASCII (raster format *.asc)	◆				◆
FARO (*.fls - *.fws)	◆				◆
POLYWORKS (*.psl)	◆				◆
E57 (*.E57 files)	◆				◆
LandXML files (*.xml)	◆				◆
DOT Products (*.dpl)	◆				◆
RDBX	◆				◆
<b>Mesh Import Formats</b>					
STL format (*.stl)	◆				◆
Binary PBI format (*.pbi)	◆				◆
DXF 3Dface format (*.dxf)	◆				◆
ASCII POLY format (*.poly)	◆				◆
OBJ format (*.obj)	◆				◆
ASCII Leica format (*.msh)	◆				◆
VRML files (*.vrl / *.vrml / *.iv)	◆				◆
OFF files (*.off)	◆				◆
PLY (*.ply)	◆				◆
<b>Contour/Section Import Formats</b>					
IGES format	◆				◆
DXF polyline format	◆				◆
Binary MLI format (*.mli)	◆				◆
<b>CAD Model Import Formats</b>					
IGES	◆				◆
STEP	◆				◆
<b>Project Files - Import</b>					
RESHAPER (*.rsh)	◆				◆
DXF	◆				◆
XML	◆				◆
CYCLONE MSView and JetStream database through the CloudWorx plugin	◆				◆

# Leica Cyclone 3DR Technical Specifications

Feature	Standard (Base)	Survey (Option)	AEC (Option)	Tank (Option)	PRO (Edition)
<b>Point Cloud Export Formats</b>					
ASCII FILES (*.asc, *.csv...)	◆				◆
Binary files (*.nsd)	◆				◆
Leica Geosystems (*.pts, *.ptx)	◆				◆
E57 (*.e57)	◆				◆
IGES (*.igs)	◆				◆
LAS (*.las)	◆				◆
LAZ (*.laz)	◆				◆
AutoDesk DXF (*.dxf)	◆				◆
<b>Mesh Export Formats</b>					
ASCII and binary STL format (*.stl)	◆				◆
Binary PBI format (*.pbi)	◆				◆
DXF 3Dface format (*.dxf)	◆				◆
ASCII POLY format (*.poly)	◆				◆
Vertices only (*.asc)	◆				◆
DXF polyline (*.dxf)	◆				◆
STEP file (*.stp)	◆				◆
ASCII Leica format (*.msh)	◆				◆
VRML 2 (*.wrl / *.vml / *.iv)	◆				◆
PLY (*.ply)	◆				◆
LandXML (*.xml)	◆				◆
OBJ format (*.obj)	◆				◆
<b>Contour/Section Export Formats</b>					
IGES format	◆				◆
DXF polyline format	◆				◆
Binary MLI format (*.mli)	◆				◆
ASCII formats	◆				◆
<b>CAD Model Export Formats</b>					
IGES	◆				◆
STEP	◆				◆
Image export format	◆				◆
Ortho-image including georeferencing information as World file	◆				◆
<b>Project Files - Export</b>					
RESHAPER (*.rsh)	◆				◆
DXF	◆				◆
PDF 3D	◆				◆
SKETCHFAB	◆				◆
Animation - Video	◆				◆

## Recommended specifications

Processor	2 GHz Dual Quad Core i7 processor or better
RAM	minimum 16 GB or more for 64 bit OS
Hard Disk	1 GB free disk space
Graphic Card	NVidia – Quadro or GeForce 1GB (with OpenGL support, versions 4.3 or higher)
Operating System	Microsoft Windows 7 – 8 – 10 (64 bits supported)

## Edition components

Cyclone 3DR Survey Edition	Cyclone 3DR Standard, Cyclone 3DR Survey Option
Cyclone 3DR AEC Edition	Cyclone 3DR Standard, Cyclone 3DR AEC Option
Cyclone 3DR Tank Edition	Cyclone 3DR Standard, Cyclone 3DR Tank Option
Cyclone 3DR Pro Edition	Cyclone 3DR Standard, Cyclone 3DR Survey Option, Cyclone 3DR AEC Option

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