

OSNI DIGITAL SURFACE MODEL (DSM)

What is a Digital Surface Model (DSM)?

The OSNI Digital Surface Model is produced from aerial imagery using a photogrammetric process and is updated in line with the orthophotography and DTM products. This high quality data is available as raster and point cloud, both at 40cm spatial resolution. It can be used for a wide variety of applications: line of sight, planning, aspect modelling (e.g. solar panels) and remote sensing applications such as change detection.

PRODUCT INFORMATION

- DSM is generated automatically through a photogrammetric process using aerial imagery
- Can be used in conjunction with DTM to create 3D models
- The LAS file is stored as Point Cloud
- Used to produce a normalised Digital Terrain Model (DTM)
- Provides surface for features such as top of tree canopy
- The DSM, DTM, Orthophotography and Near Infra-Red 4 Band imagery are all derived from the same data capture source and updated on a consistent cycle

Key Features:

- x, y and z values for every point

TECHNICAL SPECIFICATION

Format – LAS and TIF

Supply – Digital

Availability – Tiles (LAS) and Sheets (TIF)

Tile Size – Tile 2.4 x 1.6km | Sheet 9.6 x 6.4km

Coverage – Northern Ireland

Update Frequency – 3 year cycle

Resolution – 40 cm spatial resolution

Maximum file size – LAS 4.7gb (zipped), TIF 1.8GB

Coordinate Reference System – TM75 Irish National Grid

Accuracy Statement – The Root Mean Square Error (RMSE) is 0.659m in height based on a sample of 15,514 test points - this is for the tiff only



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APPLICATIONS

- Line of Sight analysis
- Planning such as building and surface visualisation.
- Aspect Modelling e.g. solar panels
- Remote Sensing detection
- Heighting
- Fly - through

Product Enquires and Feedback

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