

# 3D LANDSCAPE

*Unprecedented Accuracy*

## About the product

3D Landscape is SATPALDA's next-generation global 3D terrain dataset which provides seamless data up-to sub-meter post spacing enabling precise topographic analysis. This is a comprehensive worldwide offering that is available as a Digital Terrain Model (DTM), Digital Surface Model (DSM) and 3D Building Models.

DTM simply adds vector elements of the natural terrain, including rivers, hills, streams and other natural features. It also includes other ground features like roads, canals, embankments etc. to a DEM, while DSM records both the environment's natural and man-made/artificial features.

Derived photogrammetrically from high-resolution stereo satellite and aerial imagery designed to support developers, architects, network and urban planners in making informed decisions about the urban environment.

3D buildings provide an accurate and detailed visual representation of the built environment, allowing interaction, analysis and interpretation of any landscape in an unprecedented level with world-wide offering.



- DTM is typically generated by filtering out above-ground features like buildings, trees, and other objects to reveal the underlying ground surface.
- DTM is essential for various applications, including hydrology, land use planning, and environmental analysis.
- Unlike DTM, DSM includes the elevations of all visible features on the Earth's surface, regardless of whether they are natural or man-made.
- DSM is often used in applications like urban planning, 3D modeling, and telecommunication network planning.
- 3D building models are detailed representations of individual buildings or structures in a photogrammetric dataset.
- These models include information about the size, shape, and orientation of buildings, as well as their textures and colors, making them suitable for various applications, including architectural visualization, urban planning, and disaster management.

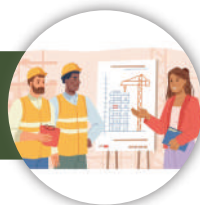
## | Wide range of Applications

Digital Terrain Models (DTMs), Digital Surface Models (DSMs), and 3D building models are valuable in various industries for a wide range of applications. Here are some of the industries that commonly use these models:



**Geospatial or Geographic Information System (GIS)**

**Architecture and Construction**



**Hydrology and Watershed Management**

**Mining and Quarrying**

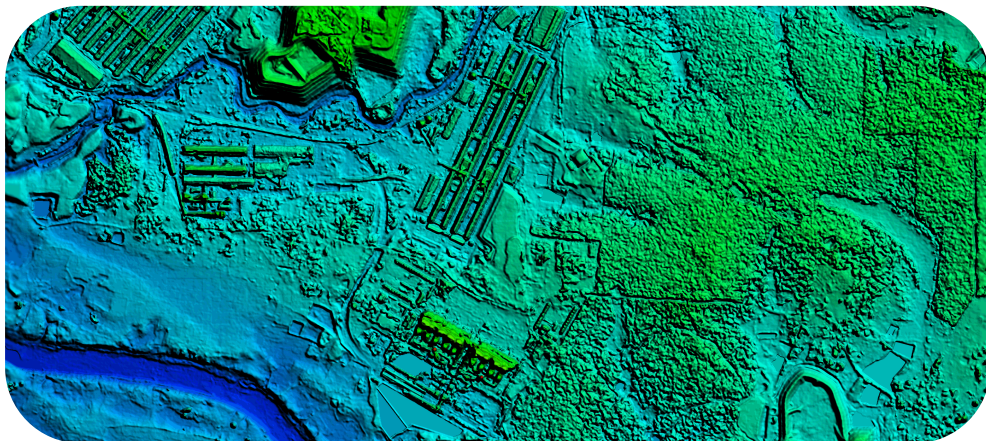


**Telecommunication and Network Planning**

**Disaster Management and Response**



## | Worldwide Sub-meter DSM



- 3D Landscape is SATPALDA's next generation global 3D terrain dataset.
- It provides seamless data up to sub-meter post-spacing enabling precise topographic analysis.
- One of the components of 3D Landscape is Digital Surface Model (DSM).



### Post Spacing / Resolution

0.5m to 10m



### Accuracy

#### Horizontal

With GCP - 1m CE90  
Without GCP - 4m CE90

#### Vertical

With GCP - 2m LE90  
Without GCP - 5m LE90



### Minimum Order Size

No size restriction for  
order placement



### Delivery Formats

GeoTIFF, ASCII or any other  
format as per request



### Delivery Method

FTP/Hard Disk

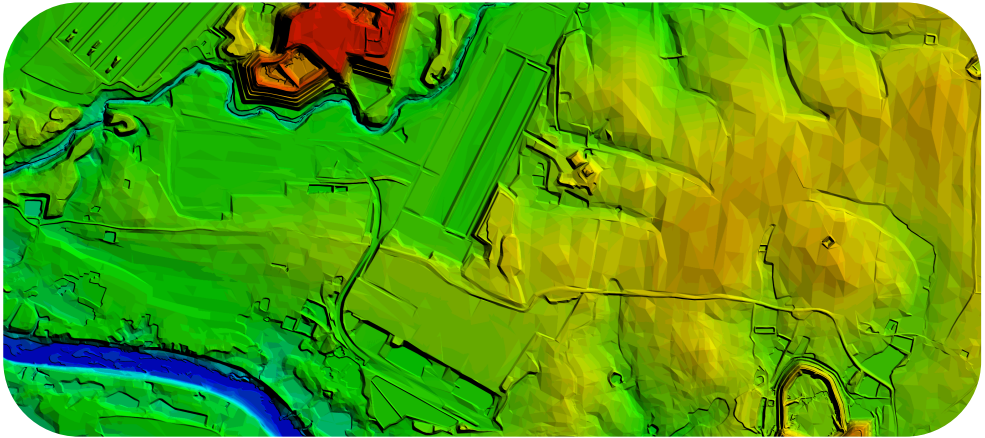


### Optional Services

- . Panchromatic ortho (2.5m resolution)
- . Quality-control file/layer
- . Color ortho(2.5m resolution)
- . Format conversion service for 3D Printer  
(Conversion to STL file format)



## | Worldwide Sub-meter DTM



- DTM is a bare earth model.
- Here we filter out above ground feature.
- This is an enhancement to DEM.



### Post Spacing / Resolution

0.5m to 10m



### Accuracy

#### Horizontal

With GCP - 1m CE90  
Without GCP - 4m CE90

#### Vertical

With GCP - 1m LE90  
Without GCP - 3m LE90



### Minimum Order Size

No size restriction for  
order placement



### Delivery Formats

GeoTIFF, ASCII or any other  
format as per request



### Delivery Method

FTP/Hard Disk

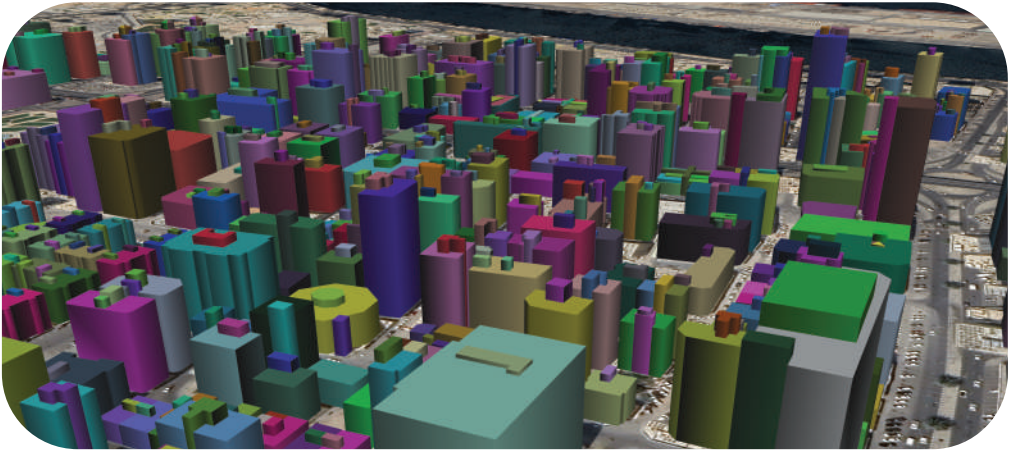


### Optional Services

- . Imagery option: resolution 30cm/40cm/50cm
- . New tasking option
- . Format conversion service for 3D printer  
(Conversion to STL file format)



## 3D Buildings Model



- Derived photogrammetrically from high-resolution stereo satellite or aerial imagery designed to support developers, architects, network and urban planners in making efficient, cost-effective and informed decisions about the urban environment.
- 3D buildings provide an accurate and detailed visual representation of the built environment, allowing interaction, analysis and interpretation of urban landscape in an unprecedented level.



### Product Type

3D Vector Data (Digital height Data, Polygon Type)



### Accuracy

#### Horizontal

With GCP - 1m CE90  
Without GCP - 4m CE90

#### Vertical

With GCP - 1m LE90  
Without GCP - 3m LE90



### Delivery Method

Online or Media (DVD)

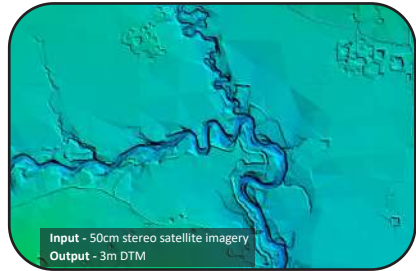
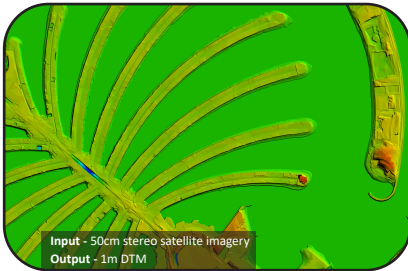
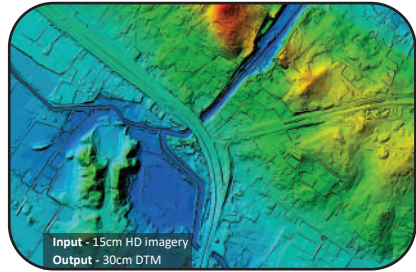
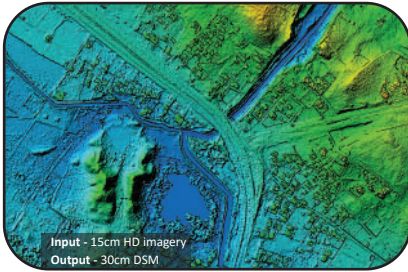


### Delivery Formats

ESRI shapefile (.shp), MapInfo TAB  
Formats (.TAB), DGN, DWG



## Case Studies



## | Our Geospatial Offerings

➔ Digital Terrain Model ➔ Digital Elevation Model ➔ Digital Surface Model ➔ 3D Modeling ➔ Orthophoto  
➔ Digital Height Model ➔ Topographical Survey ➔ Contour ➔ Aerial Triangulation ➔ Planimetric Mapping  
➔ True Orthophoto ➔ AMDB ➔ OLS Survey ➔ eTOD ➔ LULC ➔ Clutter Data ➔ Drone Survey ➔ Aerial Survey  
➔ Oblique Imagery ➔ Drone Mapping ➔ Remote Sensing ➔ GIS ➔ GPS Survey ➔ Mapping ➔ LiDAR Survey  
➔ Cadastral Mapping ➔ Mobile LiDAR Survey ➔ Terrestrial LiDAR Survey ➔ Drone LiDAR Survey ➔ Smart City  
➔ DGPS Survey ➔ Total Station Survey ➔ Digital Auto Level Survey ➔ Vegetation Mapping ➔ Route Survey  
➔ Final Location Survey ➔ Cross Section Drawing ➔ Geological Mapping ➔ Drone Based Visual Inspection  
➔ Feasibility Study ➔ 3D Scanning ➔ Volume Calculation ➔ Mine Planning ➔ Storm Water Drain Mapping  
➔ Pipeline Monitoring ➔ Land Subsidence ➔ Flood Modeling ➔ Watershed Delineation ➔ Photogrammetry  
➔ Flood Risk Assessment ➔ Pipeline Alignment Studies ➔ Crop Yield Estimation ➔ Cut And Fill Analysis  
➔ Satellite Imagery ➔ Seamless Mosaicking ➔ Stockpile Mapping



## Contact Us



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