

DTM of the Earth

Esri provides a digital terrain model (DTM) of the Earth for you to use in your image processing and analysis projects. This 6 arcsecond resolution global DTM dataset is suitable for creating typical [Ortho Mapping](#) products, especially using high resolution satellite source data. It is likely not suitable for very high resolution drone or airborne ortho mapping projects. Since this is a good quality elevation surface, it can also be used for 3D visualization, processing, and analysis.

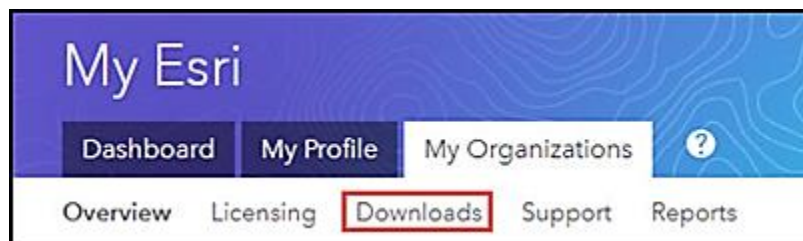
This DTM may be downloaded from MyEsri.com and used on your desktop computer or local network. Since this global DTM is a downloadable, it can be used in work environments with internet access restrictions, or with limited internet bandwidth. For enterprise work environments with many users, you can create an image service and share it across your enterprise.

Download the DTM Data

You can download the DTM dataset from [MyEsri](#) by following the instructions below.

1. Log into your Esri account.
2. From the My Esri **Dashboard** tab, click the **My Organizations** tab.
3. Under **My Organizations**, click **Downloads**.

Note: The **Downloads** sub-tab is only available if the Esri account is connected to an organization. If the account is not connected to an organization, click **Request permission to your organization** from the **My Organizations** tab, to notify the organization administrator.



4. In the list of available downloads, scroll down to **Data and Content** and expand the list.

5. You will see the DTM dataset as **ArcGIS Raster Data**. Click the **Download** button.

The screenshot shows the ArcGIS Download Manager interface. On the left, there are buttons for 'Request Media', 'Ask a Question', and 'Contact My Administrator'. The main content area is divided into two sections: 'Product Components' and 'Data and Content'. Each section contains a table of files with columns for 'Files', 'Additional Information', 'File Size', and 'Action'. The 'ArcGIS Raster Data' entry is highlighted with a red box. Below the table, there is a 'Checksum' field with the value 'c3f76e57212f0f713c6729b43b070b3', a 'Description' field with text about a compressed global elevation model, and a 'Reference' field with a dash.

Files	Additional Information	File Size	Action
ArcGIS Pro ArcGIS Pro	Additional Information	1.67 GB	Download
ArcGIS Pro Offline Help ArcGIS Pro	Additional Information	316.80 MB	Download
ArcGIS Data Interoperability for Pro ArcGIS Pro	Additional Information	1.03 GB	Download
ArcGIS Indoors for Pro ArcGIS Pro	Additional Information	2.66 MB	Download

Files	Additional Information	File Size	Action
ArcGIS Coordinate Systems Data for ArcGIS Pro Per User Install ArcGIS Pro	Additional Information	1.34 GB	Download
ArcGIS Coordinate Systems Data ArcGIS Pro	Additional Information	1.09 GB	Download
ArcGIS Raster Data ArcGIS Pro	Additional Information	1.09 GB	Download
Aviation Airports Product Data ArcGIS Pro	Additional Information	6.74 MB	Download
Aviation Charting Product Data ArcGIS Pro	Additional Information	2.98 MB	Download
Defense Mapping Product Data ArcGIS Pro	Additional Information	128.59 MB	Download
Indoors Product Data ArcGIS Pro	Additional Information	18.32 MB	Download
Production Mapping Product Data ArcGIS Pro	Additional Information	63.87 MB	Download

Checksum: c3f76e57212f0f713c6729b43b070b3

Description: Contains a compressed global elevation model primarily required by users of Ortho Mapping workflows who work offline and don't have better elevation data required for orthorectification of satellite imagery or to initiate some photogrammetric workflows.

Reference: —

6. The **Esri Download Manager** dialog window opens. Click the **Click to download your file now** button to begin the download process.

The screenshot shows the Esri Download Manager dialog window. The title bar reads 'esri Download Manager'. Below the title bar, there is a section titled 'About the Esri Download Manager' with text explaining the benefits of the Download Manager. A prominent button labeled 'Click to download your file now' is highlighted with a red box. Below this, there is a section titled 'Should the Download Manager fail to start, or if you do not accept the security certificate, you can click here to download the file without using the Download Manager.' and a link to 'click here'. At the bottom, there is a small section of legal text regarding Esri software licensing.

- The default path for downloading the files is C:\Program Files\ArcGIS\RasterData. You can also specify a download location for the file, and then download the files.

Description of the Esri global DTM

The download consists of 5 files. SRTM_GMTED_20_gcs.mrf is a digital terrain model of the Earth. It has been compressed with LERC and stored in MRF format.

Files	SRTM_GMTED_20_gcs.mrf SRTM_GMTED_20_gcs.idx SRTM_GMTED_20_gcs.lrc SRTM_GMTED_20_gcs.mrf.aux.xml Readme.txt
Format	MRF (Meta Raster Format)
Compression	LERC (Limited Error Raster Compression)
Size	1.7 GB
SR / VCS	WGS84/EGM96
Row x Col	84000 x 216000
Resolution	0.001667 (180 m)
Extent	-180, 180, 84, -56

The DTM was created from Shuttle Radar Topography Mission (SRTM) data. It has been subsampled by an average of 2 times - to a resolution of 6 arcseconds. In the area of the two poles, the Global Multi-resolution Terrain Elevation Data (GMTED2010) data was integrated.

The data has been compressed with LERC, with a tolerance of 20m. This means that the values may deviate 20m from the average of the 4 posts used to create each pixel value.

The dataset includes pyramids for faster viewing at all scales, but note that as you zoom in, the possible error doubles for each pyramid level.

In the MRF data files, "0" values are coded as NoData, but the NoData values are ignored for oceans that have a height of "0". Some larger seas have a non-zero elevation.

The data source is from SRTM, created by the International Centre for Tropical Agriculture (CIAT) (2010) and GMTED2010 from the USGS.

Using the Esri global DTM

Once you have downloaded the Esri global DTM to your desktop, you can use it with **ArcGIS Pro**, **ArcGIS Image Server**, **ArcGIS Enterprise** with raster analytics, and **ArcGIS Online**.

If you want to use the DTM in **ArcGIS Pro** as your default elevation dataset, specify it in your project settings: *Project tab > Options > Map and Scene > Ground Elevation Surface*.

If you want to use the DTM in **ArcGIS Enterprise** or **Image Server**, use the [Create Imagery Layers](#) tool to publish and share the DTM to a data store. The [data store](#) can be a local folder or a cloud store. You can also configure [ArcGIS Ortho Maker](#) to use this DTM as the default elevation surface.

This data is only for use with Esri products and may not be redistributed or resold.