Technical Information
Elevation1 Digital Terrain Model

Products		1m posting DTM	Orthomosaic (8 bits)
Method		DTM generated by automatic filtering of DSM produced from Pleiades stereo imagery, complex areas are completed by manual stereo editing. This product requires a minimum of 5 suitable GCP's to be provide by the customer	A seamless mosaic will be generated, with global radiometric optimization & semi automatic cut lines, as long as no significant seasonal variation is present between the imagery
Manual Editing Level		• Manual stereo editing of complex areas including areas with a high density of above ground features • Detection of water bodies (sea, lake, large river) and DTM flattening • Hydro Enforcement - To ensure hydrologically correct drainage network, this will be limited to the major drainage network, where continuous stretches of water are visible on the imagery	• Image Finalisation
Source Data		• Pleiades Stereo pair(s), • Level Primary Regular, Format DIMAP JPEG2000 • Cloud coverage < 5% (Where cloud appears in the source images ,it will not be possible to calculate terrain elevation values)	
Grid spacing		1m	50cm
Accuracy	**Absolute XY***	• With GCPs : 1.5m CE90 • With Ref3D GCPs : 6 to 10m CE90 • Without GCP: 8.5m to 10.5m CE90	• 1.0m CE90
	Absolute Z*	• With GCPs : 1.5m LE90 • With Ref3D GCPs : 6 to10m LE90 • Without GCPs: up to 10m LE90	• NA
	Relative	• With GCPs : 1.5m LE90 • With : Ref3D GCPs 4m LE90 (A global slopes of up to 0.02% may be present across the dataset) • Without GCPs: up to 4m LE90 (A global slopes of up to 0.02% may be present across the dataset)	• NA

Formats	DTM - ASCII Grid / GeoTIFF(32bit float) Ortho Image - GeoTIFF (3 bands 8bit)
Projection	Geo WGS84 or UTM / WGS84 (custom projection on request)
Vertical Unit	Metre
Vertical Reference	Elevations above mean sea level (ref. = EGM96)
Accuracy Level	The accuracy specification of Elevation1 is similar to HRE10 NGA classification ("HRE" means High Resolution Elevation)
GCPs	It is recommended that GCP's should be used for the creation of GeoTerrain1, customers need to provide a minimum of 5 GCP's evenly distributed across the scene. GCP's should be accurate to ~10cm XYZ & be visible in the stereopair.
AOI	Large AOI can be covered by adjacent stereopairs, the DTM mosaic will be seamless with no edge effect. Minimum area of 100 km², with a minimum width of 10 km.
No Data Value	The value -32767 is set for areas where the elevation is not determined.
Deliverables (on top of the DTM & ortho)	• Stereo model • Contours - 3m interval
Metadata	No additional metadata is provided with the DTM.
B/H Ratio	• The optimal B/H ratio is in the range of [0.3 – 0.6] • A high ratio (i.e. 0.6) is suitable for flat areas or small buildings • A low ratio (i.e. 0.3) is suitable for stiff landscape or high buildings
Remark	GeoTerrain1 DTM will only be available in areas where a high percentage of the ground is visible on the imagery. While areas that are obscured by above ground features, such as buildings & trees, where the DTM will be interpolated from surrounding areas of visible ground may therefore not produce such a high quality DTM. Areas of clouds (and their shadows) will be masked to NoData in the DTM as ground elevations cannot be computed.