

# WMTS : How To access ?

IGN offers two services of tiled images (WMTS) : one serving tiled images in World Projection Web Mercator, the other in legal projection Lambert 93 on Metropolitan France.

The following tables contain the list of resources served by each of these services: name of the resource presented during the contract and technical name corresponding to use according to the context of use (GIS or Web use).

Detailed documentation : <https://geoservices.ign.fr/documentation/donnees-ressources-wmts.html>

Resources available as WMTS in Web Mercator are accessible through

: <http://wxs.ign.fr/KEY/geoportail/wmts>

A subset of WMTS services :

Nom de la ressource	Nom technique
WMTS-Géoportail – Admin EXPRESS COG	ADMINEXPRESS_COG_2017
WMTS-Géoportail – Admin EXPRESS COG CARTO	ADMINEXPRESS_COG_CARTO_2017
WMTS-Géoportail – Altitude	ELEVATION.SLOPES
WMTS-Géoportail – Arrêtés de protection de biotope	PROTECTEDAREAS.APB
WMTS-Géoportail – Bâtiments	BUILDINGS.BUILDINGS
WMTS-Géoportail – Carte de Guyane (1780 – Col Bonne)	GEOGRAPHICALGRIDSYSTEMS.BONNE
WMTS-Géoportail – Carte de Paris de 1906	GEOGRAPHICALGRIDSYSTEMS.1900TYPEMAPS
WMTS-Géoportail – Carte des pentes	GEOGRAPHICALGRIDSYSTEMS.SLOPES.MOUNTAIN
WMTS-Géoportail – Carte des pentes pour l'agriculture	GEOGRAPHICALGRIDSYSTEMS.SLOPES.PAC
WMTS-Géoportail – Carte des unités administratives	GEOGRAPHICALGRIDSYSTEMS.ADMINISTRATIVEUNITS
WMTS-Géoportail – Cartes IGN	GEOGRAPHICALGRIDSYSTEMS.MAPS
WMTS-Géoportail – Carte littorale (SHOM/IGN)	GEOGRAPHICALGRIDSYSTEMS.COASTALMAPS
WMTS-Géoportail – Cartes SCAN Express Classique	GEOGRAPHICALGRIDSYSTEMS.MAPS.SCAN-EXPRESS.CLASSIQUE
WMTS-Géoportail – Cartes SCAN Express Noir & Blanc	GEOGRAPHICALGRIDSYSTEMS.MAPS.SCAN-EXPRESS.NIVEAUXGRIS
WMTS-Géoportail – Cartes SCAN Express Routier	GEOGRAPHICALGRIDSYSTEMS.MAPS.SCAN-EXPRESS.ROUTIER
WMTS-Géoportail – Cartes SCAN Express Standard	GEOGRAPHICALGRIDSYSTEMS.MAPS.SCAN-EXPRESS.STANDARD
WMTS-Géoportail – Cartes SCAN OACI	GEOGRAPHICALGRIDSYSTEMS.MAPS.SCAN-OACI
WMTS-Géoportail – Conservatoire du littoral : parcelles protégées	PROTECTEDAREAS.CEN
WMTS-Géoportail – Conservatoire du littoral : zones d'intérêt	PROTECTEDAREAS.CDI

# WMTS : How To access ?

Resources available as WMTS in Lambert 93 are accessible through :

<https://wxs.ign.fr/KEY/geoportail/wmts>

Nom de la ressource	Nom technique	Echelles concernées
WMTS-L93 – Cartes SCAN 25* Topographique	GEOGRAPHICALGRIDSYSTEMS.MAPS.SCAN25TOPO.L93	5->15
WMTS-L93 – Cartes SCAN 25* Touristique	GEOGRAPHICALGRIDSYSTEMS.MAPS.SCAN25TOUR.L93	5->15
WMTS-L93 – Cartes SCAN Express Classique	GEOGRAPHICALGRIDSYSTEMS.MAPS.SCAN- EXPRESS.CLASSIQUE.L93	5->17
WMTS-L93 – Cartes SCAN Express Standard	GEOGRAPHICALGRIDSYSTEMS.MAPS.SCAN- EXPRESS.STANDARD.L93	5->17
WMTS-L93 – Cartes SCAN Express Routier	GEOGRAPHICALGRIDSYSTEMS.MAPS.SCAN- EXPRESS.ROUTIER.L93	5->17
WMTS-L93 – Cartes SCAN Express Niveaux de gris	GEOGRAPHICALGRIDSYSTEMS.MAPS.SCAN- EXPRESS.NIVEAUXGRIS.L93	6->17
WMTS-L93 – Orthophotographies	ORTHOIMAGERY.ORTHOPHOTOS.BDORTHO.L93	5->18
WMTS-L93 – Parcelles cadastrales	CADASTRALPARCELS.PARCELS.L93	0->19
WMTS-L93 – France Raster	GEOGRAPHICALGRIDSYSTEMS.FRANCERASTER.L93	5->19

Resources available as WMTS in Lambert 93 are accessible through :

<http://wxs.ign.fr/CLEF/geoportail/wmts>

MNT BDAIti V1	ELEVATIONGRIDCOVERAGE
MNT SRTM3	ELEVATIONGRIDCOVERAGE.SRTM3
MNT RGEALTI	ELEVATIONGRIDCOVERAGE.HIGHRES
Seuils de pente pour l'agriculture	ELEVATIONGRIDCOVERAGE.THRESHOLD
Modèle numérique de surface	ELEVATIONGRIDCOVERAGE.HIGHRES.MNS
Masque de source du RGE Alti	ELEVATIONGRIDCOVERAGE.HIGHRES.QUALITY

## Possible queries :

Geoportal WMS servers respond to the following three types of WMS requests:

- **GetCapabilities:** Returns the service parameters and the layers (a WMS layer is a resource) that are available with the information to set the following queries;
- **GetMap:** returns an image of the map;
- **GetFeatureInfo:** Returns information about the objects used to generate the map (optional).The GetFeatureInfo feature is not supported by all resources. This is indicated layer-by-layer in the response document to the GetCapabilities query.

# WMTS : How To access ?

## Available settings

The parameters that can be used depend on the submitted query (GetCapabilities, GetTile, GetFeatureInfo). They may be common or specific, mandatory or optional. The main parameters used are the following (non-exhaustive list):

## Common parameters

- SERVICE: the type of service (here: "WMTS")
- VERSION: the version of the service used (1.0.0)
- REQUEST: the request to the server (GetCapabilities, GetTile, or GetFeatureInfo)

## GetTile specific parameters

- LAYER: the requested layer (JPG or PNG)
- TILEMATRIXSET: The name of the image pyramid
- TILEMATRIX: The name of the matrix that contains the tile
- TILEROW: The line number of the top left corner of the tile
- TILECOL: The column number of the upper left corner of the tile
- FORMAT: the output format of the image file
- STYLE: the name of a rendering style of the layer to apply

## GetFeatureInfo specific parameters

A GetFeatureInfo request contains the parameters of a GetTile request to obtain an image and adds the following parameters indicating a point in the image and the format to use to return the response.

INFOFORMAT: the format - type-mime - of the answer to the request: (ex: text / html)

I: abscisse of a point in the image in pixels

J: a point in the image in pixels

## Formats :

PNG or Jpeg are both available

Size of tiles : 256 \* 256. Coordinate of origin for each level of zoom are (0,0) of the used projection.

Level of Zoom : 21 Level

*Web Mecator :*

Zoom	Résolution (m/px)	Résolution géographique (deg/px)	Échelle approximative
0	156543.0339280410	1.4062500000000000	1 : 559082264
1	78271.5169640205	0.7031250000000000	1 : 279541132
2	39135.7584820102	0.3515625000000000	1 : 139770566
3	19567.8792410051	0.1757812500000000	1 : 69885283
4	9783.9396205026	0.0878906250000000	1 : 34942642
5	4891.9698102513	0.0439453125000000	1 : 17471321
6	2445.9849051256	0.0219726562500000	1 : 8735660
7	1222.9924525628	0.0109863281250000	1 : 4367830
8	611.4962262814	0.0054931640625000	1 : 2183915
9	305.7481131407	0.0027465820312500	1 : 1091958
10	152.8740565704	0.0013732910156250	1 : 545979
11	76.4370282852	0.0006866455078125	1 : 272989
12	38.2185141426	0.0003433227539062	1 : 136495
13	19.1092570713	0.0001716613769531	1 : 68247
14	9.5546285356	0.0000858306884765	1 : 34124
15	4.7773142678	0.0000429153442382	1 : 17062
16	2.3886571339	0.0000214576721191	1 : 8531
17	1.1943285670	0.0000107288360595	1 : 4265
18	0.5971642835	0.0000053644180297	1 : 2133
19	0.2985821417	0.0000026822090148	1 : 1066
20	0.1492910709	0.0000013411045074	1 : 533
21	0.0746455354	0.0000006705522537	1 : 267

# WMTS : How To access ?

*Lambert 93 (EPSG : 2154)*

Zoom	Résolution (m/px)	Échelle approximative
0	104579.2245498940	1 : 373497230
1	52277.5323537905	1 : 186705472
2	26135.4870785954	1 : 93341025
3	13066.8913818000	1 : 46667469
4	6533.2286041135	1 : 23332959
5	3266.5595244627	1 : 11666284
6	1633.2660045974	1 : 5833093
7	816.6295549860	1 : 2916534
8	408.3139146768	1 : 1458263
9	204.1567415109	1 : 729131
10	102.0783167832	1 : 364565
11	51.0391448966	1 : 182283
12	25.5195690743	1 : 91141
13	12.7597836936	1 : 45570
14	6.3798916360	1 : 22785
15	3.1899457653	1 : 11393
16	1.5949728695	1 : 5696
17	0.7974864315	1 : 2848
18	0.3987432149	1 : 1424
19	0.1993716073	1 : 712
20	0.0996858037	1 : 356
21	0.0498429018	1 : 178