

HydraSystem map tile server

Integration guide. `tiles.hydrasystem.pl`

Layer addresses

Every layer is served in **EPSG:3857** (Web Mercator), **256×256 pixel** tiles, **XYZ** numbering (not TMS).

Day map — WebP, zoom 0–22

```
https://tiles.hydrasystem.pl/raster/hydra-day/{z}/{x}/{y}.webp
```

Night map — WebP, zoom 0–22

```
https://tiles.hydrasystem.pl/raster/hydra-night/{z}/{x}/{y}.webp
```

Hybrid overlay — WebP with an alpha channel, zoom 0–22

```
https://tiles.hydrasystem.pl/raster/hydra-overlay/{z}/{x}/{y}.webp
```

Ortophoto — JPEG, zoom 0–22

```
https://tiles.hydrasystem.pl/orto/{z}/{x}/{y}.jpg
```

Vector tiles — Mapbox Vector Tile, zoom 0–14

```
https://tiles.hydrasystem.pl/vector/poland/{z}/{x}/{y}.mvt
```

PMTiles archive — zoom 0–14

```
https://tiles.hydrasystem.pl/poland.pmtiles
```

The hybrid overlay carries roads, water, boundaries and labels on a transparent ground. It is meant to be drawn over the ortophoto.

The ortophoto comes from the Polish national survey authority (GUGiK) and reaches zoom 19; above that the server scales the level 19 image. Outside Poland, where there is no imagery, a map is returned instead.

The PMTiles archive is the complete vector dataset in a single file, read with HTTP Range requests. It is the correct way to obtain the whole dataset — rather than fetching tile by tile.

Coverage

The server covers **Poland and a band of roughly 30 kilometres beyond the border**. A tile lying on the border is composed from our own material and a public source along the edge of that coverage, so it contains no empty areas. Beyond the band, a tile from a public source is returned.

At zoom levels 0-11 the data additionally covers the neighbouring countries in full.

Configuration

QtLocation (Qt 6)

The `osm` plugin reads one JSON file per map type from the repository given to it. The repository address **must end in** `/qt/6.0/` — the plugin appends the type name itself.

```
Plugin {
    name: "osm"
    PluginParameter {
        name: "osm.mapping.providersrepository.address"
        value: "https://tiles.hydrasystem.pl/qt/6.0/"
    }
    PluginParameter {
        name: "osm.mapping.providersrepository.disabled"
        value: false
    }
}
```

Map types: `street` — day map, `terrain` — night map, `satellite` — ortophoto, `hiking` — hybrid overlay.

Note that `MaximumZoomLevel` from the repository files does **not** clamp `Map.zoomLevel`. Above that value the plugin simply stops fetching tiles, with no message anywhere. The value declared in the application must agree with the one in the repository files.

MapLibre GL / Mapbox GL

```
{
  "version": 8,
  "sources": {
    "hydra": {
      "type": "raster",
      "tileSize": 256,
      "maxzoom": 22,
      "tiles": ["https://tiles.hydrasystem.pl/raster/hydra-day/{z}/{x}/{y}.webp"],
      "attribution": "Map © HydraSystem, Data © OpenStreetMap contributors"
    }
  },
  "layers": [{ "id": "hydra", "type": "raster", "source": "hydra" }]
}
```

For the vector layer, use a `vector` source with

`https://tiles.hydrasystem.pl/vector/poland/{z}/{x}/{y}.mvt`. The TileJSON description is at `https://tiles.hydrasystem.pl/vector/poland/metadata` — with no `.json` extension.

Leaflet

```
L.tileLayer('https://tiles.hydrasystem.pl/raster/hydra-day/{z}/{x}/{y}.webp', {
  maxZoom: 22,
  crossOrigin: 'anonymous',
  attribution: 'Map &copy; HydraSystem, Data &copy; OpenStreetMap contributors'
}).addTo(map);
```

QGIS

Layer → Add Layer → **Add XYZ Layer**. Enter the address of the chosen layer from the list above, with a minimum zoom of 0 and a maximum of 22 — 14 for the vector layer.

Headers and caching

Tiles are returned with a `Cache-Control` lifetime of **30 days**. Fallback responses, returned while a source is temporarily unavailable, have a lifetime of **5 minutes** so that they can be replaced by correct ones. Please observe both.

Every layer returns `Access-Control-Allow-Origin: *`, which allows a browser to read the tiles as images with the `crossOrigin` attribute.

A version parameter may be appended to any address, for example `?v=2026-09`. Qt clients cache tiles on the full address, so changing that parameter forces a re-fetch.

Required attribution

The obligation arises from the licences of the source data and binds every party displaying these tiles.

Layer	Required attribution
Maps and overlay	Map © HydraSystem, Data © OpenStreetMap contributors
Ortophoto	Ortofotomapa: GUGiK (dane otwarte)

GUGiK require the ortophoto's source to be **visible to the operator**, not available only through an application menu.

Terms of access

The server is HydraSystem infrastructure and is not a public tile service. Use of it requires a prior arrangement.

Bulk downloading is not permitted. Parties with access are provided the complete dataset in the file `poland.pmtiles`.

These terms concern access to a service and are separate from the licences covering the data the service is built on: OpenStreetMap data is published under ODbL 1.0, and the GUGiK ortophoto as open data. Both licences are granted by the data's own custodians and cannot be narrowed by HydraSystem.

The full terms are published at `https://tiles.hydrasystem.pl/`

Contact

HydraSystem — info@hydrasystem.pl — hydrasystem.pl