

WEB PLATFORM · BETA AUGUST 2026

FiberQ Designer The Map Section

A complete guide to every tool in the interactive map workspace — where you plan, draw, design, validate, and document fiber optic networks end to end.

Built on **MapLibre** · Multi-CRS aware · Import & export across GIS and CAD formats

A browser-first companion to FiberQ for QGIS · fiberq.net

The Map is your design workspace: a real geospatial canvas built on MapLibre, with basemaps from OpenStreetMap to ESRI satellite (or your own WMS/WMTS service). It is multi-CRS aware — you design in your local coordinate system while data is stored cleanly in WGS 84. This guide walks through every control, grouped by where it lives in the interface.

Top navigation

Tabs switch between the platform's major modules:

- **Map** — the geospatial design workspace (this guide).
- **Splice Manager** — fiber splicing, bulk and auto-suggested.
- **Diagrams** — optical schematics and fiber diagrams; also holds the document template (company name, logo, paper, timestamp) used by the Map print layout.
- **Manhole Editor** — detailed editing of manholes and duct infrastructure.
- **Settings** — application configuration.

Project bar: **Export GPKG** exports the whole project as a GeoPackage, **Close** closes it, and a live counter shows the layers and features currently loaded.

Left sidebar — Project & Layers

PROJECT ACTIONS

- **+ New** — create a new project.
- **Import GPKG** — open an existing GeoPackage as a project.
- **Import DXF** — bring in a CAD drawing.
- **Reload list / Browse all projects** — manage the project list.

PROJECT BAR CHIPS

- **CRS chip ("4326")** — opens the **Coordinate Reference System** picker. Search by name, EPSG code, or area and apply any CRS (UTM zone 33N/34N, ETRS89, Pulkovo 1942, Web Mercator, and more). Design in your local system; data persists in WGS 84.
- **Basemap chip** — opens **Basemap Layers**: a gallery (OpenStreetMap, OpenTopoMap, ESRI Street / Imagery / Topo, CartoDB Positron / Dark Matter, Stadia Toner, or None), plus **Add Connection (WMS / WMTS / Raster)** to bring in your own map services.

SEARCH & LAYERS

- **Search box** — find features by name, *#uuid*, or *key:value*.
- **Layers panel** — every layer with per-layer visibility, opacity, reorder and delete, plus a style editor: Color, Width, Dash, **Color by attribute**, reset to base, and **Upload JSON** for a custom style.
- **Bookmarks** — save and recall map views. **Fit** — zoom to your data extent.

Map toolbar

SELECTION & INSPECTION

- **Select (dropdown)** — Select (V, click a feature), Select Multiple, Select by Rectangle, and De-Select All.
- **Select by Attribute** — pick a layer and select features by an attribute query.
- **Toggle Hover Inspect (H)** — preview a feature's properties just by hovering.

DRAWING GEOMETRY

- **Draw Line (dropdown)** — line types: Aerial Cable, Underground Cable, Route, Conduit, Transition, Microduct. Plus **Lay cable on route**: Aerial Cable → Route and Underground Cable → Route, so geometry and structure stay linked.
- **Draw Polygon (dropdown)** — draw a ServiceArea zone or a generic Object polygon.
- **Snap to features** — set snapping radius and targets: Vertex, Endpoint, Midpoint, Edge.

POINTS, SPLITTING & ROUTES

- **Add Point Element (dropdown)** — place ODF, OLT, Closure, OTB, TB, PP, Cabinet, DP, TO, Customer, ONT, Pole, Manhole, Handhole.
- **Split single line at a point (B)** — click a route/cable to split it in two.
- **Route tools ("..." dropdown)** — Add Pole, Create Route, Merge Selected Routes, Import Route from File, Add Breakpoint, Create Route Manually, Change Route Type, Route Correction.

MEASURING & EDITING

- **Measure** — Distance (multi-segment) and Area (drop 3+ points), with live readout.
- **Place a fiber break on a cable** — mark a fiber break at a chosen point.
- **Cut Infrastructure** — cut all lines at a single point at once (cross-section + marker), ideal where multiple ducts/cables cross.
- **Wrap into Service Area** — select 3+ point elements, then wrap them in a Service Area zone.
- **Move selected** — translate selected feature(s) on the map.
- **Toggle visual offset for parallel cables** — fan out overlapping cables on a shared route so each is visible.

NETWORK DESIGN & QUALITY

- **Auto FTTH Design** — an automated design wizard: set the start point (OLT/ODF), coverage area, architecture (GPON, split ratio), feeder/distribution cable types, distance limits, customer density, fiber counts, route source and an advanced loss budget — then Preview and Generate the full network.
- **Optical Slack** — add slack/loops to a cable: Type, Length (m), and Location (Auto or interactive placement).
- **Pitstops in Project** — lists every element defined as a pitstop on a cable (latent = the cable passes through but does not splice).
- **Data Quality** — runs validation checks and reports Errors / Warnings / Info, so issues are caught before exporting or hand-off.

IMPORT / EXPORT / REPORTING

- **Import Layer** — import Points or Lines from KML, KMZ, SHP (zip), GPKG, GeoJSON, GPX, DXF, and convert features into a chosen FiberQ layer type.
- **Export Layer** — export as GeoPackage, GeoJSON, KML, KMZ, Shapefile (zip), or DWG/DXF.
- **BOM Report (XLSX/CSV)** — Bill of Materials by layer or summary, with optional cost estimation; export to .xlsx / .csv.
- **Import / Export portable bundle (.fqz)** — move a whole project plus its photos in one file, built entirely in your browser — nothing uploaded.
- **Print Layout — Map** — paper size, orientation, and an optional title block (project, designer, sheet no.); output as Print/PDF or Download PNG.

CATALOGS & NAVIGATION

- **Optical Relations Management** — define optical relations/categories and assign cables to them.
- **Color Catalog Manager** — fiber color standards (TIA-598-C / IEC 60304) with the 12-color sequence, plus add/edit/import/export.
- **Address Locator** — jump to a place by address or by coordinates.
- **Help (?)** — opens help.

The Inspector (feature properties)

Selecting a feature opens the Inspector on the right:

- **Identity** — name, element type, UUID.
- **Actions** — Delete, Edit Vertices, Split in half, and Pitstops (for cables).
- **Lifecycle** — mark elements Existing / Planned / Dismantled, with an optional note.
- **Attributes** — view, edit, and add fields. Cables carry a rich set: cable route type, segment type, color code/standard, ducts, fibers, fibers per tube, fiber type, install year, length, slack and condition.
- **Photos** — attach site photos that stay on your machine and are never uploaded.
- **DWG files** — link CAD files to a feature by browse or by path.

Map canvas controls

- North / compass, Zoom + / -, tilt/pitch, geolocate, and fullscreen on the right edge.
- **Status bar**: active tool, scale bar, live coordinates, EPSG code, scale ratio, zoom level, units, and a snap toggle.

The Map section is one part of the FiberQ Designer workflow — splicing, end-to-end tracing, optical schematics, and generated documentation build on top of it. FiberQ Designer is in active development, with a v0.1.0 beta targeted for August 2026. Learn more at fiberq.net.