



SuperPad 10.0 Specification

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SuperPad 10 is a full-function mobile GIS application. SuperPad contains the powerful and complete GIS functions as well as a superior C/P ratio to help field-based personnel to collect, edit, display and measure spatial data at a reasonable budget. The highly flexible development environment and diversified extensions enable you to create an ideal platform and solve more demands during field tasks. Moreover, SuperPad allows users to work with SuperGIS Server and OGC services and improve your work efficiency.

Specification Description

Map Navigation

- Support to directly open recently used projects through Open Map window while SuperPad is activated.
- Provide Quick Project to improve the efficiency of field surveying greatly. Quick Project is the built-in templates designed for different domains and offers preloaded spatial data and pre-designed attribute tables to save the time of field works.
- Map navigation functions include:
 - ✓ Zoom and pan the map
 - ✓ Map Rotation
 - ✓ Panning Frame, allowing users to tap the arrows on the frame with stylus or mouse to pan the map.
 - ✓ Slide Zoom, allowing users to slide upward or downward on the screen to zoom the map with fingers or stylus in browsing the map.
 - ✓ Quick Explorer, enabling you to pan, zoom in/out and zoom to the full extent of the map without switching the toolbar you are using.
 - ✓ Fixed Zoom in/out.
 - ✓ Zoom to the specified layer or feature.



- ✓ Record the specified spatial area for display, enabling users to position rapidly.
- ✓ Zoom to the current GPS position.
- ✓ Center the map on the assigned position
- ✓ Stop drawing by stylus or mouse
- Group Layer function facilitates users to group the layers and manage them easily.
- Support to display layers, features and text labels on assigned map scale.
- Support to add the labels on point, line, and polygon features.
- Add hyperlinks to the features on the layer to open the external files, such as video, document, website, etc.
- Support to set the pen tolerance for querying, selecting, or editing features.
- Support to query features and display the spatial and attribute information on the query result window.
- Search features by attributes.
- Provide more powerful symbol edit tools, facilitating you to create the suitable feature symbols.
- Measure the length, perimeter, and area of the features by a polyline, freehand line, polygon, circle tools.
- Provide Unique Values to categorize features.
- Set the visibility, font, color, font size and position of the labels.
- Support to set the font, size, and type of dialog box text.
- Support to display compass.
- Provide numerous tool button sizes for switching to satisfy users' needs.
- Support to display scale bar.
- Support to set the styles and labels of the map grid.
- Provide the list of recent layers and maps to add the layers or maps you often use rapidly.
- Support to use hotkeys to open commonly-used functions by number keys on the PC or arrow keys on the PDA.
- Support to adjust the background color and position of toolbars and add a new toolbar to include commonly-used tools.



Editing Functions

- Support to add, edit, delete and move features.
- Support to show the measurements of a newly-added feature, such as starting coordinates, end coordinates, perimeter, area, straight distance, and total distance.
- Provide numerous advanced feature editing functions, like offset, rotate, and scale features as well as vertex edit, repeat attributes, and etc.
- Support to have new or existing features accurately snap to the points or features within the radius of the snapping buffer while editing layers.
- Support to zoom or fixed zoom the selected feature.
- For line and polygon features, users can add, delete, and move vertices to modify the shapes of the features.
- Users can create and select a point, line or polygon feature by tapping on the screen or capturing the GPS position.
- Use GPS position to add a single vertex or add vertices continuously.
- Support graphics layers to enable users to add diverse graphics on the same graphics layer, such as point, line, polygon, rectangle, and ellipse. Furthermore, users can add annotations to the graphics.
- Users can use Edit Attribute function to edit the attributes of the selected feature while they are editing features.
- Users can use Edit Geography to edit the coordinates of the vertices of the selected feature while they are editing features.
- Smart Editing Toolbar supports Undo, Redo, Screen Lock, and etc while users are editing features.
- The Advanced Attribute Editing window can automatically produce the corresponding controls and forms according to the types of the fields for users to select the data easily, instead of keying-in the attributes.
- Support to add and delete a field in an existing layer.
- Support to create Graphics Layers; users are allowed to directly add point, line, and polygon graphics and texts in the way of adding features to rapidly record data.



GPS Position and Navigation

- Receive GPS signal to provide current position.
- Provide direction guide for current GPS position, target destination or a place where a photo is taken.
- Provide the current GPS position and waypoint navigation.
- Allow setting GPS track on the map.
- Support to automatically rotate the map based on the GPS heading direction after GPS is activated.
- GPS Status Bar is displayed on the bottom of the window; the GPS related information, including longitude, latitude, height, speed, and time, is shown on the map.
- GPS tracklog can be recorded.
- Allow users to set Protocol, Port, Baud Rate, Data Bit, Parity, and Stop Bit for GPS to receive data.
- GPS Status window displays satellite signal, distribution, and the current GPS related information.
- GPS Position Information window displays the user's speed, direction, distance, time, and the relative position between the waypoint and user.
- In GPS Position Information window, users who carry handheld GPS can fix the heading direction at the upward side of the map.
- Support NMEA 0183.
- Support to set the thresholds of GPS receiving quality, protocol parameters, GPS heights and datum to raise the accuracy of GPS position.
- GPS Debug window helps users to know the GPS signal streaming condition.
- Provide the settings of GPS information display, such as GPS cursor, GPS track, GPS status bar, GPS location, alerts, etc.
- Support to set the minimum sampling distance and rate of GPS track.
- Tracklog can be saved as points, lines, or polygons. The supported file formats are *.geo, *.shp, and *.kml.
- Support to select the fields for saving the tracklog file, like longitude and latitude, time, speed, height, HDOP, etc.

Waypoint Settings



- Allow to create and delete multiple waypoints.
- Allow to export and import waypoints; the supported formats include *.geo, *.shp, *.csv, *.kml.
- Allow users to set the waypoint by GPS position.
- Allow users to switch the waypoint in GPS Position Information window.
- Allow to edit the built-up waypoint, center the map on the waypoint, set the waypoint as the destination and the visibility of waypoints in Waypoint Management.
- Increase Stack-out mode, when the distance between current position and waypoint smaller than assigned distance, SuperPad will alert user the distance difference in an x-direction, y-direction, and z-direction.

Camera

- Support the built-in camera functionality in a mobile device; users are able to activate the camera functionality directly in SuperPad.
- Allow users to set the path for saving pictures, the name and the format of the pictures, the quality, and the file name of date and time.
- Allow users to save the XY coordinates of the position you take pictures simultaneously.
- Besides the coordinates, the azimuth and distance between the object and the photographer are allowed to input so that it will be easier for users to estimate the coordinates of the object.

Coordinate Systems

- Provide three coordinate formats: Degree, DM (degrees, minutes) and DMS (degrees, minutes, seconds).
- Hundreds of common coordinate systems are built in.
- Users are able to enter the parameters to define the coordinate system.
- Support users to search coordinate systems by EPSG code or projection name.
- Support to automatically adjust the datum parameters of layers to make them overlaid completely while opening layers with different



coordinate systems.

Export/Import layers

- Support to import *.apm project from ArcPad.
- Allow choosing “Use Relative Path for Layers” to avoid losing file when the project file is moved.
- Support to import SuperGeo Layer File (*.slr) and export the edited map as *.slr which can be opened in SuperGIS Desktop and other software.
- Support to open SuperPad 2 project file (*.spm) file.

Multiple Extensions

- **AdvancedAttributeEditing:** support to customize the attribute form to assist users in inputting and modifying the attributes with ease.
- **BirdView:** 2.5D bird view makes the map be displayed with 3D effect and look more like the reality.
- **DataServicesToolbar:** support to add the layers from the Internet to SuperPad through the Internet. The layers include WMS, WFS, the maps published by SuperGIS Server 3 and images by SuperGIS Image Server. Administrators can manage the access to the data in SuperGIS Server 3 by using username and password.
- **FixedZoom:** Provide fixed zoom in and fixed zoom out. Tapping the icons can zoom the map with the fixed scale.
- **Laser:** Supports to use laser rangefinder (LaserCraft Contour XLR and TruPulse360/360B) to measure. Users can apply GPS or reference point as the datum to get the information of the point.
- **Network Tool:** It provides route planning function; through the settings of flags and barriers, the system works out the superior route planning.
- **SketchLabeling:** The sketch extension can draw the freehand line with a stylus on the screen map as highlight or shorthand.
- **SBAS:** Support to activate SBAS function of PDA; while an SBAS satellite is passing by, an icon will be displayed on the map to remind users.
- **OnlineMapTool:** Users can use OpenStreetMap or BingMap as the



basemap when conducting a field survey.

- **GPS Accuracy:** GPS accuracy and number of satellites can be displayed on the user interface to help users recognize the current status of GPS signal.
- **GNSS:** Users can record the data of satellite signal when conducting a field survey. The collected data can be post-processed in SuperGIS Desktop add-on to enhance the data accuracy.
- **NTRIP:** Apply NTRIP Service to get high accuracy GPS position. Before activating NTRIP Services, users have to setup configurations including, serial port, Baud Rate, etc. Then, the position information from NTRIP will show up in the main dialogue.

Supported File Formats

- Vector formats: GEO, SHP, DXF
- Raster formats: SGR, BMP, GIF, PNG, MrSID, ECW, LAN, TIFF(includes GeoTIFF), JPG, JPG2000
- Support Cached Map: SuperGIS Tile(STP, STC, SGT)

Support OGC standards

- Support to read the services conforming the following OGC Standards:
 - ✓ Web Map Service (WMS)1.1.0, 1.1.1, 1.3.0
 - ✓ Web Feature Service (WFS, WFS-T)1.0.0
 - ✓ Web Map Tile Service (WMTS) 1.0.0
- Support to view the layers downloaded from WMS, WMTS and WFS servers.
- Support users to edit features provided by WFS-T services.
- Enable users to query WMS services.

User Interface and Environment

- Provide toolbar groups, integrating toolbars, to make the best use of the limited screen space in the handheld device.
- Support screen lock to avoid touching unintendedly.



- Provide Traditional Chinese, Simplified Chinese, English, Japanese, Spanish, German, French, Portuguese, Russian, Turkish, Arabic, Polish, Korea and Italian user interface.
- Hundreds of built-in code pages to support to read character codes of different languages.
- Complete SuperPad User Guide and Quick Reference.

System Requirements

- **Handheld Devices**
 - ◆ Operating System:
 - ✓ Windows Mobile 5.0 for Pocket PC and Smartphone
 - ✓ Windows Mobile 5.x/6.x
- **PC**
 - Operating System: Windows 7/8/8.1/10
- **Synchronization Environment**
 - ◆ Microsoft ActiveSync 4.2 or higher
 - ◆ Windows Mobile Device Centre 6.1 or higher (if your operating system is Windows Vista or above)