

VPmap Series

THE WORLD OF RASTER AND VECTOR



THE PERFECT BRIDGE FROM SCAN TO GIS



VPmap Series

Scanned maps, satellite imagery, and aerial photographs are a major data source for GIS. VPmap Series is the perfect solution to bring image data to GIS; fully equipped, easy to use, and independent from any target GIS platform, it provides accurate integration, calibration, and conversion.

Scanning



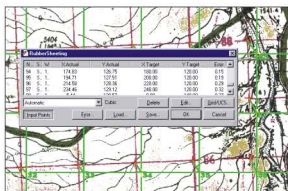
Edit and Modify



Merge Files



Color Management



Georeferencing

Seamless GIS Integration

Large format scanners deliver high quality digital "raster" images in black and white, gray scale, or color. However, for effective transfer of scanned maps to GIS, efficient software post-processing is indispensable; the perfect solution is VPmap Series.

VPmap Series provides the finest tools to process scanned maps, satellite imagery, or aerial photographs for seamless and quick GIS integration. Image correction, data reduction and interactive or automatic conversion with VPmap Series most elegantly avoid the tedious procedures associated with traditional digitizing. Starting with automatic clean-up after scanning for optimum raster image quality, even on colored maps.

Color Reduction and High Precision

Reduce image file sizes: choose from VPmap Series' unique color reduction tools. Without any loss of information, color areas can be combined according to color similarities or referring to their distribution frequency. Extract information from colors rapidly: single colors or color patterns can be separated and exported individually.

Exact rubber sheeting and calibration are important requirements for digital map processing. VPmap Series offers multiple options for selecting the most suitable method: polynomial or triangular, full manual control or automatic input support, importing coordinate values or assigning point positions by using a loaded reference map. Various transformation algorithms provide high precision results in high speed.

Georeferencing by GeoTIFF

VPmap Series supports professional georeferencing options for raster images with a full set of GeoTIFF settings and TFW creation. Having defined the Cartesian or Projected coordinate system type and the



- **Independent Scan-to-GIS solution**
- **Exact georeferencing and calibration**
- **One-Click area recognition**
- **Automatic raster to vector conversion**
- **Edit and convert maps and aerial imagery**



Quick Conversion to Lines, Areas, Attributes

A unique set of line following and contour recognition features assists in digitizing scanned maps or aerial images. Even multi-colored altitude lines are easily converted into splines and polylines.

A special polygon and polyline algorithm recognizes area objects in the mapping material. A single click is all that is required when digitizing buildings and properties in cadastral maps. Automatic equalization in bordering outlines and orthogonalization of traced objects are included. The user can automatically or interactively assign attributes to the recognized objects in the source images. An integrated attribute management enables the user to search and view objects by any queried attribute.

VPmap pro also includes automatic raster to vector conversion, especially for cadastral or contour maps. Benefit from softelec's state-of-the-art vectorization technology.

Mosaicing and Assembly

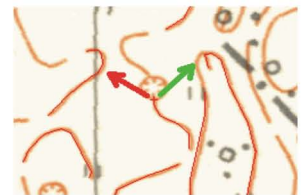
Large raster maps can be split into many small portions ("tiles") to enable a fast display focused on a region of interest. Or use automatic "Mosaicing" to assign equal tiles across an entire map or satellite image. With previous georeferencing these tiles will match perfectly in the target program.

The merging of raster maps is a supreme functionality in VPmap Series. Permanent display control provides maximum accuracy and there are several options, including smart stitching, scaling, and rotation.

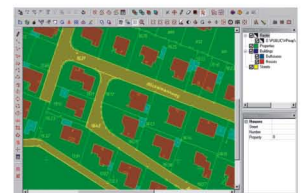
Compatible with any GIS

VPmap Series supports GIS image integration and conversion in all kinds of application fields, such as infrastructure planning, cadastral records, land development, land survey, geology and many more. The

Vector Conversion



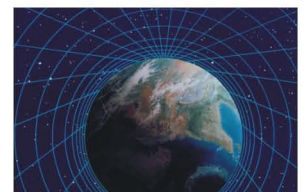
Area Recognition



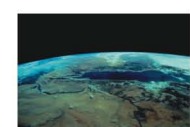
Add Attributes



Mosaicing



Export to GIS



- **Universal Scan-to-GIS desktop**
- **Transfer maps, imagery, photos to GIS**
- **Exact georeferencing and calibration**
- **Raster to vector conversion**
- **Independent from GIS platforms**



Product Specifications:

Raster Editing

Automatic cleanup and deskewing (mono and color)
 Exact multi-point rubber sheeting and georeferencing
 Raster structure improvement: thinning, thickening, open, close
 Raster merge, mosaicing, split, scale, mirror, rotate
 Color reduction, color separation, filter, conversion to b/w

Interactive Tracing/Line Following

Interactive tracing of contours (lines, polylines, splines)
 Polygon/polyline creation ("one-click area recognition")
 Trace objects/raster overlay with color transparency
 Elevation/altitude assignment to contour lines

Automatic Raster-Vector Conversion (VPmap pro)

Centerline, outline, and mixed vectorization
 Assist mode with vectorization Wizard
 Recognition of: lines, circles, arcs, ellipses, hatch, text (OCR)
 Classification of linetypes (e.g. dashed) and line widths
 Sorting of recognized entities into appropriate layers
 Symbol recognition

Attribute Assignment

Interactive and automatic assignment of attributes (e.g. position, area, circumference, etc.) to objects/entities
 Attribute management: search/display/modify attributes

Special Features

Network based symbol library (vector, raster, hybrid)
 Snap on raster and/or vector
 Rasterizing of vector entities, hybrid print/plot
 Batch processing (with Wizard support)

Scanner Interfaces

TWAIN (generic scanners)
 Selected large format scanners

Raster File Size

Practically no limitation of raster/hybrid files
 (maximum 16 million pixels in each direction)

Input Formats

Raster: TIF (+TFW / TAF), GeoTIFF, NIF, GP4, CAL, MIL, CG4, RST, C4, IG4, RLC, PCX, DCX, IFF, ILBM, BMP, GIF, JPG, TGA, G3, G4, RNL, VIF, SUN, RAS, RLE, CIT, CRL, TPE, LSR, ECW, BIL, ...
Vector: DXF, DWG
Hybrid: RVD (softelec format), RasterDWG, CGM
GIS: RVD (softelec format), SHP (ESRI), MIF (MapInfo)
 Updated listings at: www.softelec.com

Output Formats

Raster: TIF (+TFW / TAF), GeoTIFF, GP4, CAL, MIL, CG4, RST, C4, IG4, RLC, PCX, BMP, GIF, JPG, RLE, CIT, CRL, ...
Vector: DXF, DWG, IGES, DGN
Hybrid: RVD (softelec format), RasterDWG, CGM
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System Recommendations

Hardware: Pentium III, 128 MB (256 MB for color images)
 Operating System: Windows NT4.x, 2000, XP

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