



## Summit Evolution

### Production of geospatial data with precision, power and user-friendliness.

**Summit Evolution from DAT/EM Systems International, is a user-friendly digital photogrammetric stereo workstation and allows a 3D feature collection directly into ArcGIS, AutoCAD or MicroStation.**



*Summit Evolution presents images while compiling directly into AutoCAD, MicroStation, or ArcGIS.*

A wide range of efficient feature collection functions is offered via DAT/EM Capture and Stereo Capture for ArcGIS, which are integral parts of **Summit Evolution**.

Vector data collected by **Summit Evolution**, or imported from GIS or CAD systems, are superimposed directly onto the stereo models, making it an excellent solution for mapping, change detection and updating GIS data.

Automatic batch map-editing of collected data can be applied for best mapping performance. Routines for data generalization, checking and automatic line editing are included as well.

**Summit Evolution** is not restricted to aerial frame and pushbroom imagery, but also offers feature collection from close-range, satellite, IFSAR, Lidar intensity and orthophoto imagery.

**Summit Evolution** works in a project-based environment, using triangulated photo blocks generated by MATCH-AT or other software packages. The user can roam seamlessly throughout an entire project of any size.

Online contouring within the **Summit Evolution** environment is provided by Capture Contour, an optional package based on SCOP++ technology.

**Summit Evolution** is part of INPHO's modular system.



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## Features

- Summit Evolution comes with a variety of software components:
  - Summit Evolution – digital photogrammetric software including orientation tools and project management
  - DAT/EM Capture – data collection program for collecting 3D features directly into AutoCAD or MicroStation
  - Stereo Capture for ArcGIS – turns our Summit Evolution photogrammetric stereoplotter into a 3D ground coordinate digitizer for ArcGIS. 3D features are collected directly into ESRI's ArcView, ArcEditor, and ArcInfo
  - Map/Editor – software for automatic batch and vector editing in AutoCAD or MicroStation
  - Super/Imposition – software allowing stereoscopic viewing of 3D vector data, superimposed onto the stereo imagery
- With its flexible orientation tools, Summit Evolution fits into any production workflow:
  - Automatic interior orientation
  - Automatic or manual relative orientation
  - Absolute orientation
  - Orientation data import from inBLOCK, PATB, Applanix, Albany, Bingo, AeroSys
  - Project data import from MATCH-AT, BAE Socet Set, Z/I Image Station, Phorex
  - Project transformation from/into new coordinate systems
- Advanced imaging features make Summit Evolution a precise and easy-to-use stereo plotter:
  - Handling of 8-bit and 16-bit imagery
  - Measurement with subpixel accuracy
  - Quick frame sequential imaging
  - Smooth real-time panning and zooming
  - On-the-fly epipolar resampling
  - OpenGL for image rendering
  - User-definable cursors
  - Customizable GUI elements
- Summit Evolution supports all types of source image:
  - Digitized aerial photographs (TIFF, TIFF JPEG, ECW, BMP and others)
  - ADS 40 digital aerial camera
  - DMC digital aerial camera
  - UltraCam digital aerial camera
  - Digital Globe QuickBird
  - Space Imaging IKONOS RPC
  - SPOT5 HRS

- IFSAR Stereo
- LIDAR Stereo Images
- Close-range imagery
- Orthophoto images (GeoTIFF)

## Options

- CAD/GIS interfaces:
  - DAT/EM Capture for AutoCAD
  - DAT/EM Capture for Microstation
  - Stereo Capture for ArcGIS
- Hardware:
  - Optionally, INPHO provides all necessary hardware for Summit Evolution, including computers, monitors, stereo viewing systems and 3D cursors. Please contact INPHO for up-to-date information.
  - Additional optional hardware components are:
    - DAT/EM Keypad
    - DAT/EM handwheels and footdisk

Summit Evolution is available with three different functional extensions:

- SUMMIT Evolution "Professional"
  - Unlimited functionality of Summit Evolution
- SUMMIT Evolution "Feature Collection"
  - Full 3D feature collection, but no orientation capabilities
- SUMMIT Evolution "Lite"
  - Stereo viewer for Summit Evolution projects, simple measurement and basic editing

## Benefits

- Produces digital topographic and engineering quality maps and geospatial data directly into ArcGIS, AutoCAD or Microstation.
- Easy API integration of other CAD or GIS packages.
- Sophisticated yet straightforward mapping functionality.
- Developed for comfortable ease-of-use by photogrammetric professionals.
- Applies cutting-edge technology.

## Recommendations

- High-end PC workstation
- Dual Intel Xeon processors
- 4 GB RAM
- High-capacity disk system
- Windows XP/2000
- Hardware for 3D data capture:
  - Stereo-capable graphics card(s) supporting OpenGL quad-buffer stereo
  - Stereo viewing system
  - 3D cursor
  - DAT/EM Keypad
- Supported CAD and GIS:
  - AutoCAD 2002 or higher
  - MicroStation V8 version 08.05.00.64 or newer
  - ArcGIS 9 Desktop Products ArcView, ArcEditor or ArcInfo

