



# MATCH-3DX

## MATCH-3DX MATCH-3DX MESHING-ADD-ON

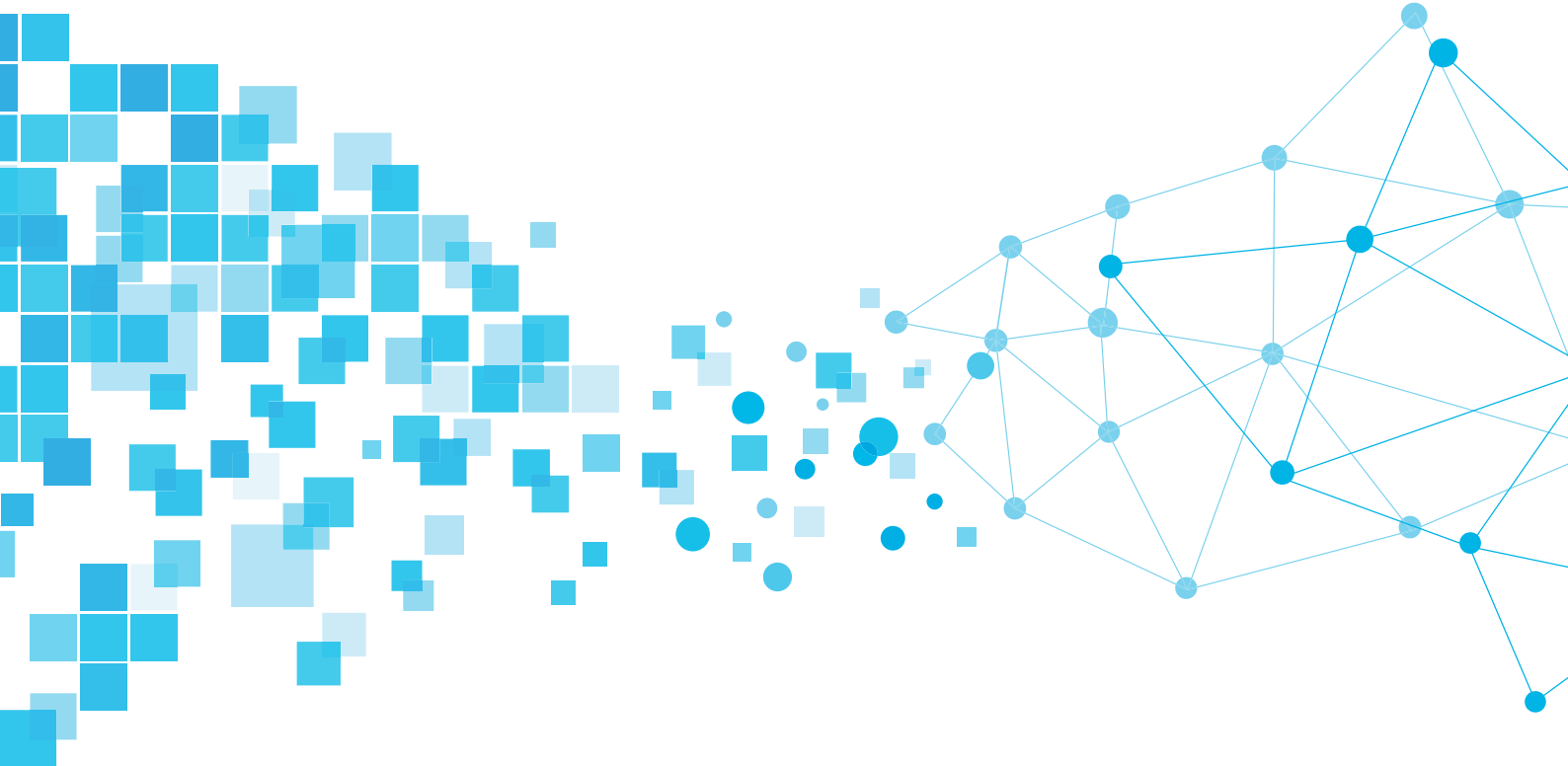
MATCH-3DX is a module in the software Inpho® for automatically generating three photogrammetry products: high quality dense point cloud based on Semi-Global-Matching algorithm, high quality true-orthophoto and high quality 3D meshes using Meshing-Add-On.

MATCH-3DX includes the full capability of MATCH-T DSM.

Using the advantageous tile management export tool in MATCH-3DX the final true-orthophotos can be exported in arbitrary areas, tiles or pixel sizes.

## Key Benefits

- ▶ Completely automatic workflow for true orthophoto production directly from the dense point cloud, without ortho-rectifying the aerial images
- ▶ Minimizing the user interaction in comparison to the traditional, time-consuming and expensive workflow for true-orthophoto production
- ▶ No need to consider pre-measured morphological data (breaklines, 2D and 3D exclusion areas, borderlines)
- ▶ Can be combined with the classical orthophoto generation workflow (MATCH-T DSM)
- ▶ Extracts colorized point clouds from aerial images
- ▶ Creates textured 3D-meshes from image-based point clouds to represent the surface geometry and provide realistic visual perception of the objects
- ▶ Tight integration into point-cloud editing workflows e.g. with DTMaster Stereo



## WORKSTATION RECOMMENDATION

- ▶ Up-to-date workstation with at least 64 GB RAM
- ▶ NVIDIA Graphic card is highly recommended
- ▶ Windows®

## IMAGERY RECOMMENDATION

- ▶ Digital frame sensors
- ▶ Nadir, oblique or multi-head imagery
- ▶ Imagery with 80% length and 60% side overlap
- ▶ Panchromatic or multichannel sensor

## PRODUCT PACKAGE

- ▶ MATCH-3DX Software
- ▶ MATCH-3DX Meshing add-on
- ▶ MATCH-3DX True-Orthophoto Tile Management Tool
- ▶ MATCH-3DX includes the full capability of MATCH-T DSM. Therefore, both workflows can be used if a MATCH-3DX license is available.
- ▶ **One year maintenance** for the first year to be extended yearly

## RELATED MODULES

- ▶ MATCH-AT
- ▶ DTMaster
- ▶ DTMToolkit
- ▶ DPMaster

## APPLICATIONS

- ▶ 3D City Modeling
- ▶ Real-estate
- ▶ Court-yard (mapping accident data scenes)
- ▶ Mining
- ▶ Forest management
- ▶ Construction
- ▶ Monitoring
- ▶ Heritage & archaeology
- ▶ Simulation projects (flight simulation and trainings)

## PROJECT TECHNICAL CONSIDERATIONS

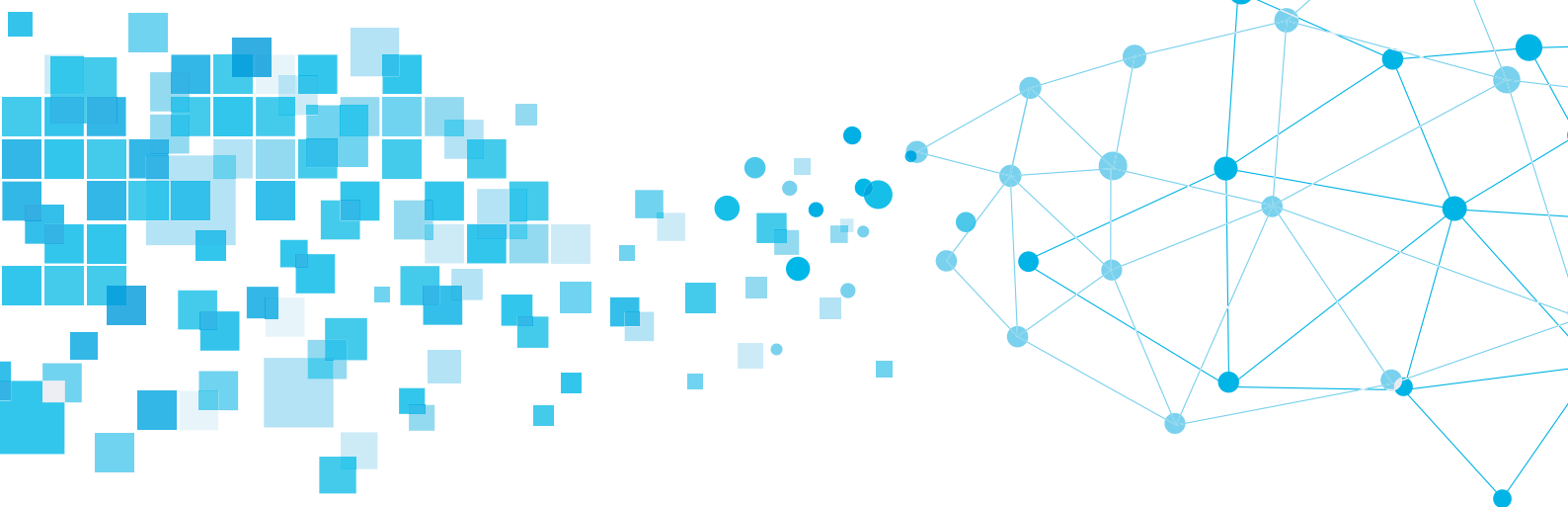
- ▶ Dense point clouds from nadir (SGM 2.5D) and oblique (SGM 3D) imagery
- ▶ True-orthophoto (SGM 2.5D), recommended for highly overlapped imagery (i.e. 80x80)
- ▶ Textured-meshes (SGM 3D or SGM 2.5D) in different formats

### Input Data/Formats

Project file	from MATCH-AT
Images	TIFF

### Output Data/Formats

Point Cloud	*.las, *.laz
LoD 3D-mesh	*.osgb, *.obj, *.i3s (SLPK), *.ply, *.cesium, *.dae, *.ive
True-Orthophoto	TIFF (GeoTIFF and TiffWorld)



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