

DSS RAPIDORTHO™ SPECIFICATIONS

COLLECT IMAGERY AND DELIVER DECISION-READY ORTHOPHOTOS WITHIN HOURS OF LANDING

OVERVIEW

RapidOrtho 2.0 is the high-performance workflow option for the Trimble Digital Sensor System, a complete aerial digital mapping system for rapid response and commercial mapping applications. The streamlined workflow delivers rapid, highly-accurate orthorectified imagery without the need for time-consuming and expensive ground survey.

KEY FEATURES

- Develop images and generate high-accuracy orthos in as little as 12 seconds per image¹
- Allows approximately 1:1 ratio of flight data collection time to total ortho processing time (e.g. mapping mission of 3 hours flight time can be taken to full orthophoto product in as little as 3 hours after landing)²
- Streamline ortho generation into one batch process
- Can also be used as a QA/QC tool to evaluate mission success immediately after a flight
- Generate DEMs from stereo imagery, or use included DEM utility to ingest and transform available elevation data

PERFORMANCE WITH RECOMMENDED HARDWARE CONFIGURATION

A (user-supplied) workstation with 4 (or more) cores is recommended for fastest operation of DSS RapidOrtho. These 4 cores are required in Synchronous mode to perform image development for each image for a full frame at full resolution.³

CPU	Intel Core2 Quad (Q6600) @ 2.4GHz	
Memory	4GB	
Operating System	Windows XP Professional	

Performance Options enabled	[none]	clipping enabled, DEM anchors enabled
Synchronous mode	12 sec ¹	12 sec ¹

¹ Average time to develop and orthorectify one DSS 439 image in a block (114MB file size)

² Assumes pre-existing digital elevation model; includes data upload time, post-processing of POS AV data, image development and ortho correction

³ Configurations with fewer than 4 cores may experience poor performance due to CPU overloading. Additional cores (e.g. 8 core) allow users to perform other work simultaneously on the machine, but are not leveraged for ortho production

PRODUCT ACCURACY, RMS, HIGH PRECISION POST-PROCESSING*

Orthophoto	max of 1.2 X GSD** (max) or POS AV position accuracy
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* Post-processed POS AV, QA/QC procedure followed, self-extracted or high-accuracy DEM (LIDAR), datum errors removed

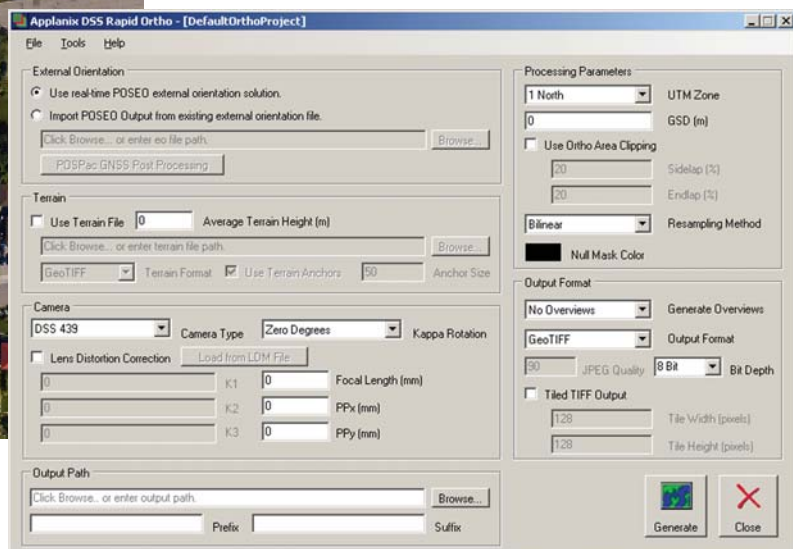
** Effective GSD = (1.2 - 1.3) X Theoretical GSD

PERFORMANCE OPTIONS

Synchronous mode (recommended)	Allows multiple instances of orthorectification process in parallel to reduce processing time Suitable for computers with multi-core processors (minimum 4 cores required for full performance)
Asynchronous mode	Considers image development and orthorectification as a serial process Suitable for computers with single-core processors
Ortho clipping	Improves speed; sidelap and endlap percentages should be set based on the mission flight plan
Terrain anchors	Improves speed by sub-sampling and interpolating DEM values
DEM formats supported	ASCII (XYZ), Bil, Grid Float, LAS, GeoTIFF

RAPIDORTHO SOFTWARE OPTIONS

RapidOrtho Bundle	DSS RapidOrtho INPHO OrthoVista	Ortho and mosaic generation
High-Precision RapidOrtho Bundle	DSS RapidOrtho INPHO OrthoMaster INPHO OrthoVista INPHO DTMaster INPHO Match-T	Ortho and mosaic generation; DTM generation from stereo imagery; advanced processing options



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