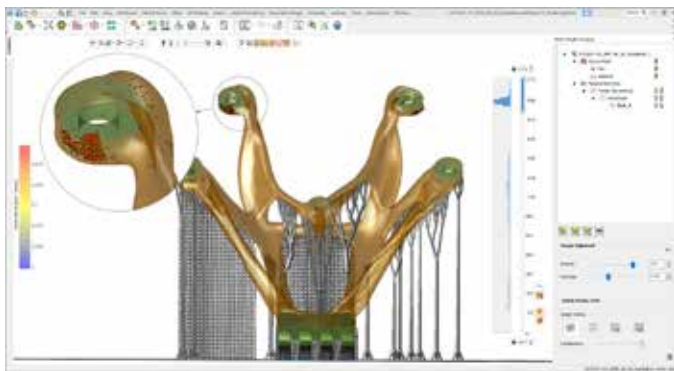


# Build Insight

3D visualization tool for advanced diagnosis of AM builds, enabling improved application development lead time, cost, and success.



## GET MORE INSIGHT ABOUT THE BUILD PROCESS WITH 3DXPERT BUILD INSIGHT

- Analyze — Identify signatures of AM process anomalies
- Diagnose — Perform root cause analysis with 3D visualization of anomalies with the digital model
- Resolve — Easily take corrective actions to resolve the issues with the build design and printer maintenance

## RECOMMENDED SOFTWARE AND TRAINING PACKAGE

- Build Insight is available for all materials on DMP 350 series\* (single/dual laser) and DMP Factory 500
- Build Insight is available as an add-on to 3DXpert Standard and Ultimate packages
- Build Insight Advanced Training is offered by 3D Systems' Application Innovation Group

\*Also available for ProX DMP 320

## BENEFITS

- Add confidence to the AM process by monitoring process stability for each build
- 3D visualization of signature of AM process issues and the digital model
- Identify potential issues related to the build design or printer maintenance
- Root cause analysis and corrective actions in the same software help minimize design and process optimization loops, saving time and reducing waste
- Advanced data size reduction strategies to compress data size down to the order of megabytes

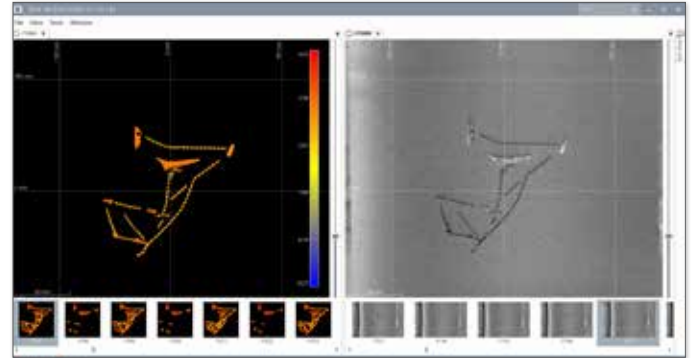
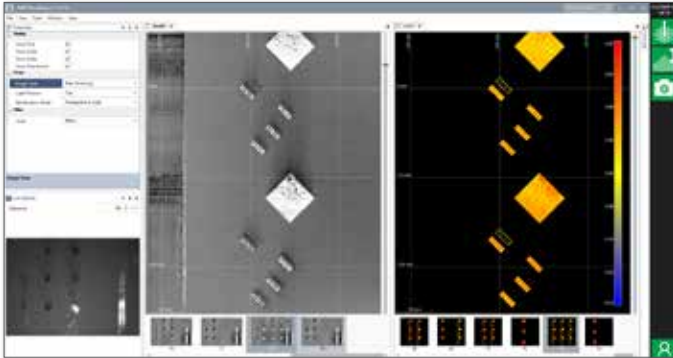
## FEATURES

- Post-build analysis of monitoring data
- Detection of AM anomalies such as warpage, spatter, short-feed, dross, coater lines, gas flow issues, etc.
- Load and visualize monitoring data in the design environment
- Tunable thresholds for advance users
- Dynamic histogram displaying detections along the build height

# DMP Monitoring

## Real-time process monitoring for informed decisions on product quality

Generate a wealth of process data for non-destructive analysis and understanding of metal 3D printing build quality, accelerated process parameter optimization, and enhanced understanding of process results.



### REAL-TIME IN-BUILD DATA COLLECTION AND VISUALIZATION

- Visually (manually) detect, analyze and minimize 3D metal printing process defects such as: lumps, spatters, flow quality, porosities, feed quality, etc.
- Control and ensure that the process is running smoothly, monitoring consumables and maintenance items such as the coater and materials
- Remote monitor-capable for combined control from centralized location, e.g. live camera and remote machine access\*

### FEATURES

- Automatic data recording
- Fully configurable user interface
- Real-time job analysis and offline functionality
- Synchronized side-by-side comparison of Meltpool\*\* and Vision data, comparison with previous print jobs (meltpool-to-meltpool, vision-to-vision, meltpool-to-vision)
- Synchronized zooming and panning through all jobs opened on screen
- Integrated live camera
- Video generation: sequential layers to video frames
- Coordinates and scale display on screen matching with build plate
- Measurement tool: line and surface
- Automatic back-up tool (to server or external data storage)

\* Remote machine access requires standard 3<sup>rd</sup> party software

\*\*Available only for single laser platforms

### POST-BUILD PROCESS ANALYSIS

- Analyzing Vision and Meltpool data synchronized side by side allows build quality monitoring on a macro level to e.g. ensure powder deposition quality
- The post-build analysis of DMP Meltpool data enables further inspection of build quality by monitoring e.g. porosity on a micro level
- Use Build Insight for automated data analysis, which facilitates diagnosis of process issues and enables user to take corrective actions with a single tool