

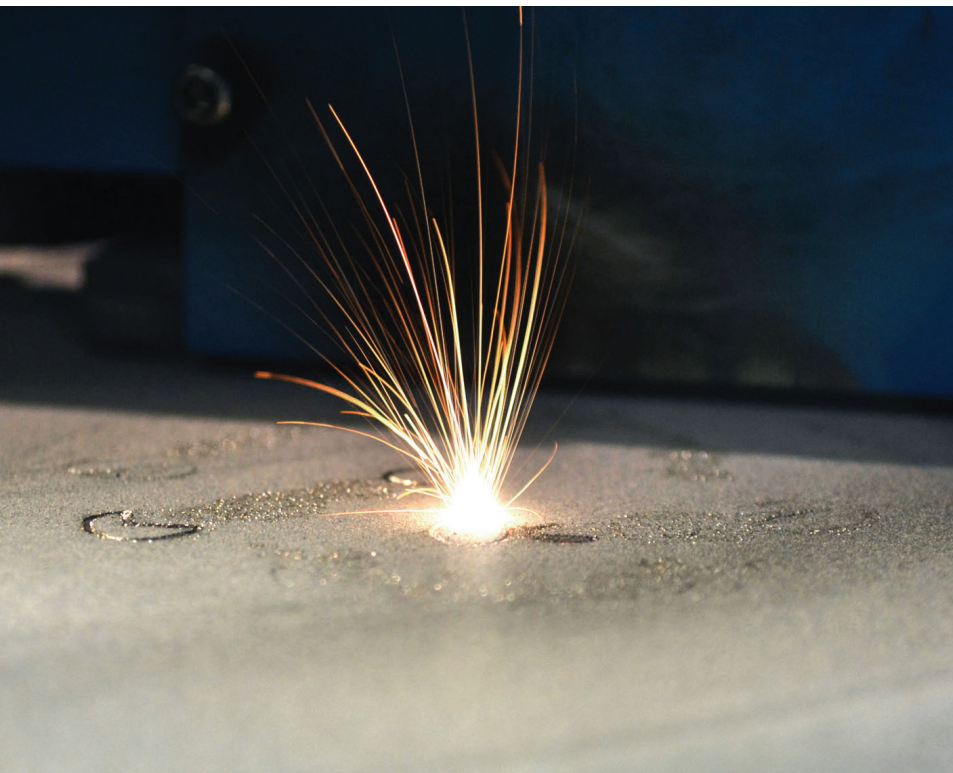
PrintRite3D® Version 7.0

Interactive in-process quality assurance solution for the commercial and industrial Additive Metal sector.

PrintRite3D provides data collection, inspection, feedback, and critical analysis in a platform-agnostic solution that can be installed as a retrofit to an existing machine and/or as a factory option from OEM suppliers. The system quickly discovers anomalies and combines machine learning alongside tried-and-true metrics reducing the need for, and the cost of, post-production QA testing—all while enabling a regulatory framework for compliance & traceability.

PrintRite3D has been known for years as the standard for AM quality, providing users with features like:

- › Independent Third Party Quality Assurance
- › Real-Time Monitoring, Alerts and Reporting
- › Calibrated Meltpool Temperature Measurement
- › Meltpool Cooling Rate Measurement
- › Advanced Data Analytics, TED + TEP Quality Metrics



Key New Features

Temperature Monitoring and Calibration: now includes a cooling rate enabling classification of crystalline structures and Celsius and Kelvin conversion.

Recoater Interaction Detection: provides greater diagnostic accuracy and faster than visual methods.

Machine Learning: customizes the detection toolkit by defining anomaly signatures that are unique to user machines, parts and builds scenarios. Alert operators when an occurrence frequency exceeds established thresholds.

Predictive Modeling: import 'as-built' conditions into analysis software to determine the effects of anomalies on part performance; a key step in establishing a "digital twin".

Multi-Laser: gain confidence in large builds by verifying weld integrity and metal quality in areas where lasers interact.

User Roles and Log In: control access to sensitive data and maintain traceability of actions for regulatory compliance.

Multiple Viewing Modes: statistical charts, 2D Layers, 3D Volume, and now introducing Multi-Axis view enabling XYZ views for advanced analysis of vertical x-sections.

Request a Demo

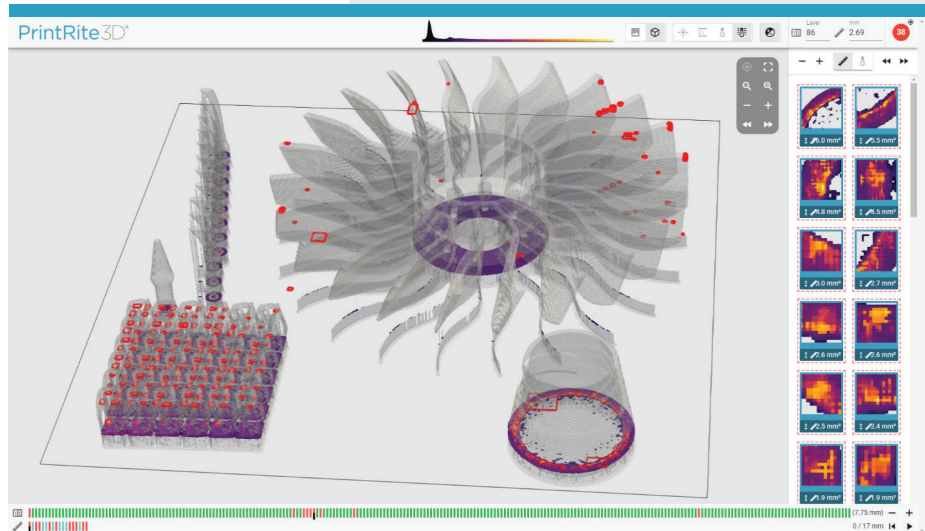
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Benefits of PrintRite3D® 7.0

Our objective is to provide Sigma Labs' end users and OEMs with trust in the ability to build quality parts and realize the promise of metal additive manufacturing.

Along with the benefits of earlier versions of PrintRite3D, users now receive:

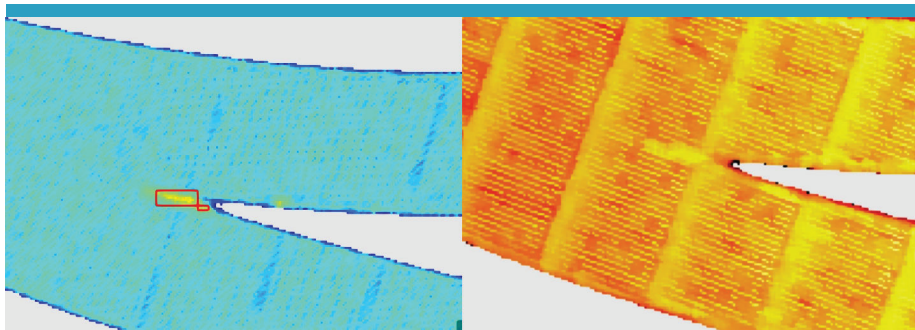
- Actionable knowledge of what is occurring inside your machine during the build process
- Increased productivity with higher throughput and process consistency
- A significant step toward the promises of Industry 4.0 with machine learning and predictive modeling
- Reduced risk of part failure with build quality by design (QBD) modeling
- Save costs and time on your parts and production runs—eliminate time and money spent on corrective post processes



3D Volume Workspace - Anomalies shown in red.

About Sigma Labs Inc.

Sigma Labs Inc. is a leading provider of In-Process Quality Assurance (IPQA®) software to the additive manufacturing industry, specializing in the development and commercialization of PrintRite3D®, a real-time monitoring solution for metal additive manufacturing technologies.



Anomaly identified by TED [blue] (also shown in TED [orange]). Anomaly signature indicates an area of multiple lasers scans due to internal knife edge.