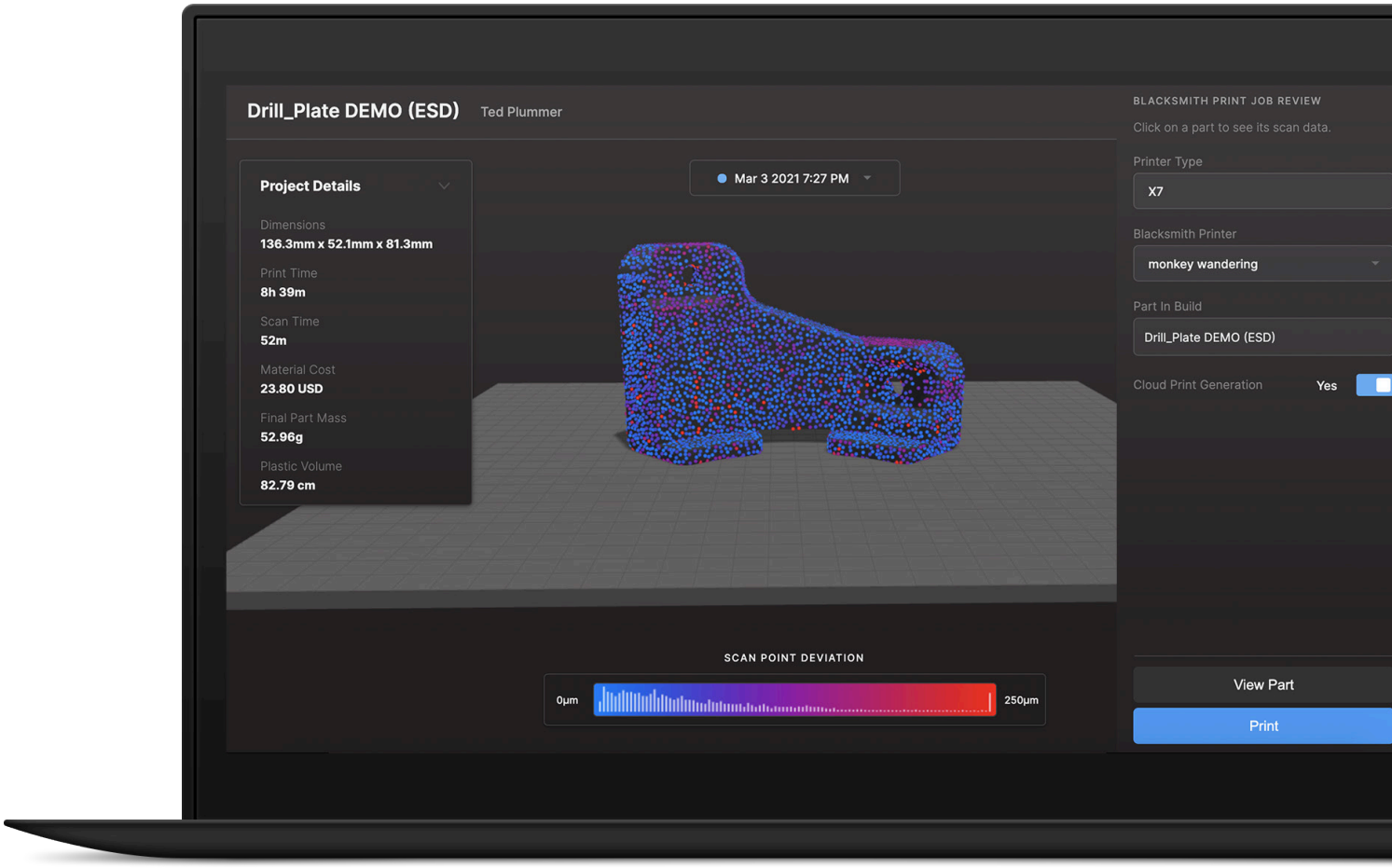
Markforged

ADDITIVE X

Blacksmith

for X7



Eiger Subscription

Automated quality control for additive manufacturing

Blacksmith for X7 establishes and streamlines the quality control process for additively manufactured parts. Get to market faster with confidence in your parts. By scanning parts while they print, the X7 is the only industrial-grade FFF 3D printer with in-process part verification.

Blacksmith is a subscription feature available through Eiger, the additive manufacturing software for Markforged. It scans, measures, and compares dimensional accuracy data of printed parts to their design files — giving manufactures reliable parts right off the print bed.

additive-x.com
team@additive-x.com
01765 694 007

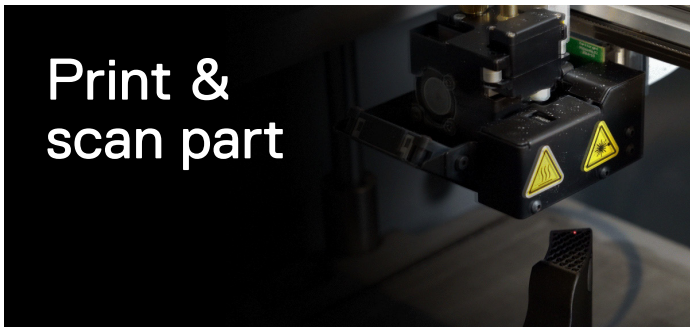
REV 1.0 - 2021/03/18

Blacksmith Overview

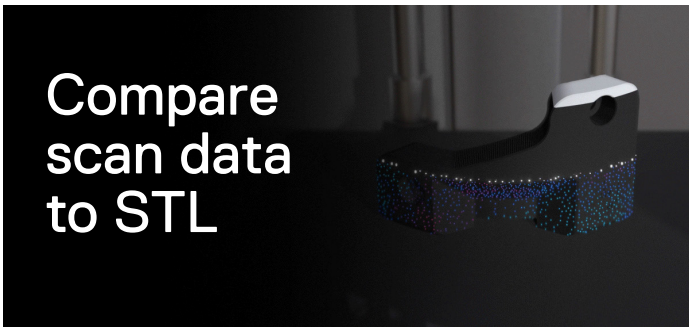
+ **Verified prints off the print bed** — Get known good parts at the point of fabrication. Generate, compare, and automatically store quality reports for any part printed with Blacksmith.
+ **Accessible and integrated workflow** — Integrate regular part inspection into your additive workflow with a single click. No specialized training or complicated inspection equipment needed.
+ **Confirmed fleet conformity** — Print consistent, predictable parts across a global fleet. Remove any headaches about part variability.
+ **Controlled additive quality process** — Establish a standardized process for measuring additively manufactured parts.
+ **Expand additive applications** — Transition business critical parts from traditional manufacturing to additive manufacturing with increased confidence in part quality.

Blacksmith Process

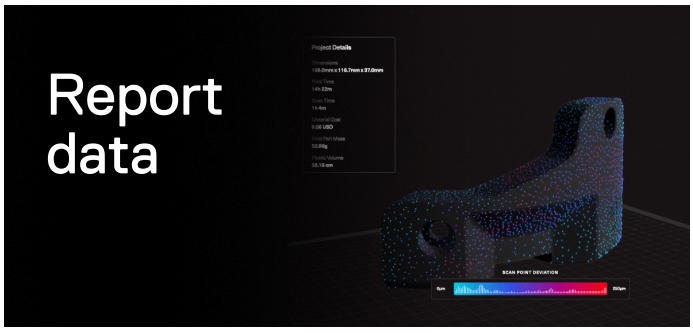
A series of automated calibration procedures is completed to ensure each printer is operating at the high standards required for Blacksmith.



Blacksmith harnesses the power of the X7's existing integrated laser micrometer and a patented intelligent scanning process to securely measure parts as they are printed.



Blacksmith collects measurement data during the print, and assembles a point cloud for review in Eiger. This point cloud is automatically registered and overlaid on the input STL for comparison.



View the deviation across the part's geometry, and set tolerance limits to assess part quality. The print report is saved in Eiger and can be referenced at any future date.