

WE ARE AMS, YOUR PARTNER IN
ADVANCED MANUFACTURING

**Making additive
manufacturing
accessible**



AMS Powder Pro

Powder Pro is a unified, on-premises web application (built in C#) that you can host on your own servers or external cloud platform. It delivers end-to-end powder management by combining inventory control, quality-control logging, replenishment, and reporting in a single cohesive system. The interface adapts to each user's role: warehouse operators access intuitive scanning screens, QC technicians complete test-result forms, and managers monitor live dashboards and trend analyses. A QR code scanner embedded in your powder printer decodes QR codes on each lot, and a connected Raspberry Pi instantly streams these codes to Powder Pro's backend, creating an effective bridge between physical actions and software. Business logic executes in real time—updating stock levels, flagging discrepancies, and suggesting purchase orders—while built-in analytics continuously track consumption patterns and material costs. Every action is timestamped and user-authenticated in a tamper-evident audit log, and in-app notifications ensure that low-stock situations or QC deviations are brought to attention immediately.

Powder Pro turns manual paperwork and guesswork into automated precision and data-driven decision-making across your entire operation.

Key Principles

Live Inventory Visibility

Our built-in 3D scanner decodes barcodes or RFID tags the moment powder is loaded, unloaded, or transferred. A Raspberry Pi gateway pushes each transaction via secure HTTPS to the Powder Pro web app, where automated cycle-count routines validate on-floor data against system records. Live dashboards—filterable by site, bin, material grade, or lot—display color-coded alerts for discrepancies and near-expiry batches, enabling operators to resolve issues before they impact production. Historical scan logs and user-action trails also provide rapid root-cause analysis in the event of any stock variances.

Smart Replenishment Engine

Configure dynamic safety-stock levels, vendor lead times, minimum order quantities, and lot-prioritization rules to drive automated purchase-order recommendations. Powder Pro continuously evaluates current on-hand, reserved, and forecasted usage to calculate optimal reorder points, then surfaces them in a dedicated “Reorder” queue for managerial review. Email and in-app notifications keep procurement teams on schedule, while built-in approval workflows and audit logs ensure full visibility into who reviewed, modified, or issued each PO. This end-to-end automation slashes manual follow-up, prevents stock-outs, and avoids costly overstock.

Full Traceability & Compliance

Every powder lot's lifecycle—from receipt and supplier-certificate upload through custom QC tests (e.g. moisture, particle size) to final issue and consumption—is timestamped and user-logged in the application's immutable audit trail. Powder Pro's flexible QC template builder lets you define pass/fail criteria, automatic quarantine rules, and retest schedules. Comprehensive, exportable reports—ranging from lot genealogy to deviation logs—simplify ISO audits, customer-specific certifications, and regulatory inspections. Granular role-based permissions ensure that only authorized users can view or edit sensitive compliance data.