

Eidos

Eidos Manufacturing™ Software Suite
for large format platform **Heron AM**

CARACOL

BUILD BEYOND POSSIBLE

with Advanced Robotic Manufacturing

Caracol is a leader in advanced manufacturing, developing robotic platforms for complex industrial production with composites and metals.

Application-first approach

Since 2015, Caracol has built its tech around one principle: provide the tools for companies to solve their real production needs, so they can produce complex, high-performance applications while cutting costs, lead times, waste, and providing greater flexibility in their parts engineering and value chains.

The company's mission is to change the manufacturing paradigm, making it more efficient, flexible, and sustainable.

Eidos Manufacturing Software Suite

The brain behind process and motion

Eidos Manufacturing is Caracol's proprietary software suite, developed specifically for robotic large-format additive manufacturing.

It covers the full production workflow — from design file to machine execution — and connects process control, monitoring, and data management in a single platform integrated with Heron AM and Vipra AM.

The software suite includes two key products:

Eidos **Builder**

transforms 3D models into optimized part programs for precise robotic execution.

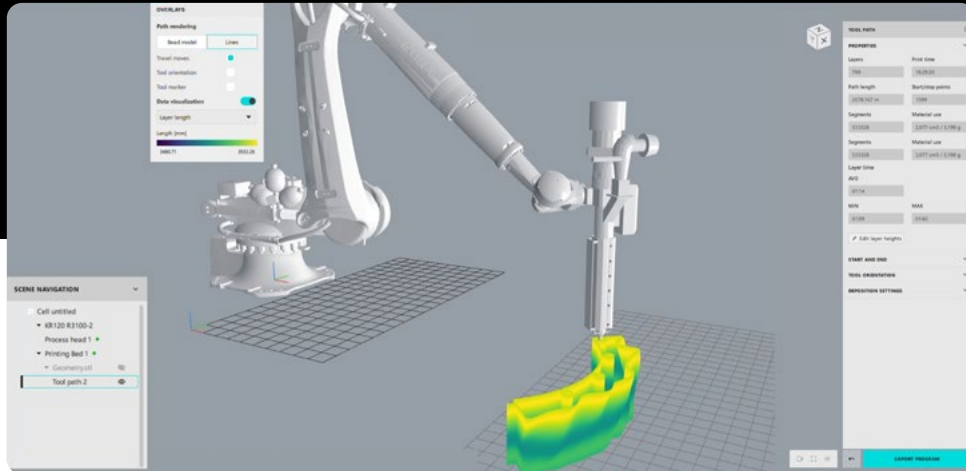
Eidos **Nexus**

enables live process and machine monitoring through IoT, ensuring efficient data collection and handling for advanced analysis, remote technical support, and actionable production insights.

Eidos Builder

The slicing and programming environment for robotic LFAM.

Builder converts 3D models into optimized machine programs, supporting advanced toolpath strategies across 6+2 axes — from planar to non-planar and conformal. It includes toolpath simulation with collision and singularity check, a material library with preset process parameters, and pre-production analysis of print time and material consumption.



To work with fully automated hybrid workflows, Eidos Builder also enables the Print, Scan & Machine functionalities to combine different processes and enable continuous multi-process production cycles. Main features include:

- Optimized workflow for best user experience
- Configurable modular machine and tools setup
- Advanced slicing strategies
- Robot library 6 + 2 external axes
- Material library with preset process parameters
- Fast toolpath recalculation with part displacement
- Toolpath simulation with collision and singularity check
- Custom or automatic process specific parametrization
- Pre-prod analysis of printing time and consumables

Feature Highlight

Eidos Builder **PRINT, SCAN, and MACHINE**

Automate complex robotic workflows for advanced part manufacturing, combining printing, scanning, and surface finishing in one intelligent process. Caracol's hybrid systems deliver fully automated, multi-process production, with no operator intervention required to switch end-effectors — ensuring higher productivity, precision, and efficiency.

Built on deep integration between hardware, automation and software, Eidos Builder makes it possible to use additive manufacturing with complementary processes inside a single manufacturing cell.

What it includes:



Automated calibration for precise tool and part positioning, for consistent accuracy across operations



Intelligent robotic scanning to capture and process 3D data automatically for instant digital reconstruction



Real-time and exact geometry comparison to generate adaptive tool paths for additive or finishing operations

WHY IS IT USEFUL?

- Reduce manual setup, calibration, and rework
- Eliminate manual operations between process steps
- Minimize risk of part misalignment or process failure
- Enhance surface quality and dimensional accuracy

POWERED BY
 **ADAXIS**

ADAXIS is a European robotics software company enabling anyone to unlock the full potential of hybrid robotic manufacturing, driving simpler, smarter, and more sustainable production.

Eidos Nexus

The monitoring and fleet management platform.

Nexus provides real-time process and machine monitoring, 3D data mapping, job history, preventive maintenance, remote technical assistance, and full fleet management via a centralized dashboard. Raw data streams directly to ERP, MES, and third-party applications via API.



Eidos Nexus also integrates AI-based process control capabilities that enable the platform to monitor, analyze, and adjust production autonomously. Main features include:

- Multi user level
- Live process monitoring
- Live system monitoring
- Data visualization and charting
- 3D data mapping
- Job data logging and history visualization
- Preventive maintenance
- Remote technical assistance
- Management dashboard of full fleet
- Connectivity
- Area monitoring
- Expandability to advanced monitoring tools

Eidos Nexus can be customized on your specific industrial needs

	EIDOS Nexus Lite	EIDOS Nexus Advanced	EIDOS Nexus AI
Live Monitoring (parameters, webcam, energy consumption)	✓	✓	✓
Remote Service*	✓	✓	✓
Remote control software updates**	✓	✓	✓
Preventive Maintenance	✓	✓	✓
Fleet Management	✓	✓	✓
Management Dashboard		✓	✓
Time Series (jobs history, charts, downloads)		✓	✓
Digital Twin (3D mapping of relevant parameters)		✓	✓
API (stream raw data to ERP/MES/Apps)		✓	✓
Smart Quality Reports (AI-based thermal and visual defect detection)			✓
Predictive Maintenance			✓
Material Development Agent			✓
Closed Loop Agent			✓

Dedicated hardware is required for Eidos Nexus - check the system's compatibility for upgrades. The Eidos Nexus Lite software license is free of charge. The Eidos Nexus Advanced and Eidos Nexus AI software are available on a subscription basis.

* Remote support costs are not included in Eidos Nexus license, the customer can buy dedicated Service Packages.

** For full functionality, the machine must be connected to the internet.

Feature Highlight

Eidos Nexus AI

Harness AI and advanced sensing for real-time control over your process. Autonomously monitor, analyze, and implement intelligent adjustments for each layer and build, with sensors, thermal and optical cameras, and seamless integration via Eidos Nexus.

Move toward autonomous and data-driven additive manufacturing: enable machine learning, with closed feedback loops between process data, quality control, and machine motion for your robotic platform to not only execute but also learn, adapt, and improve.

What it includes:



Quality Reporting Agent automatically generates quality reports based on live process data



Material Development Agent assists process characterization with real-time feedback to find optimal parameters



Closed Loop Agent builds predictive models to automatically correct critical process parameters (release in 2027)

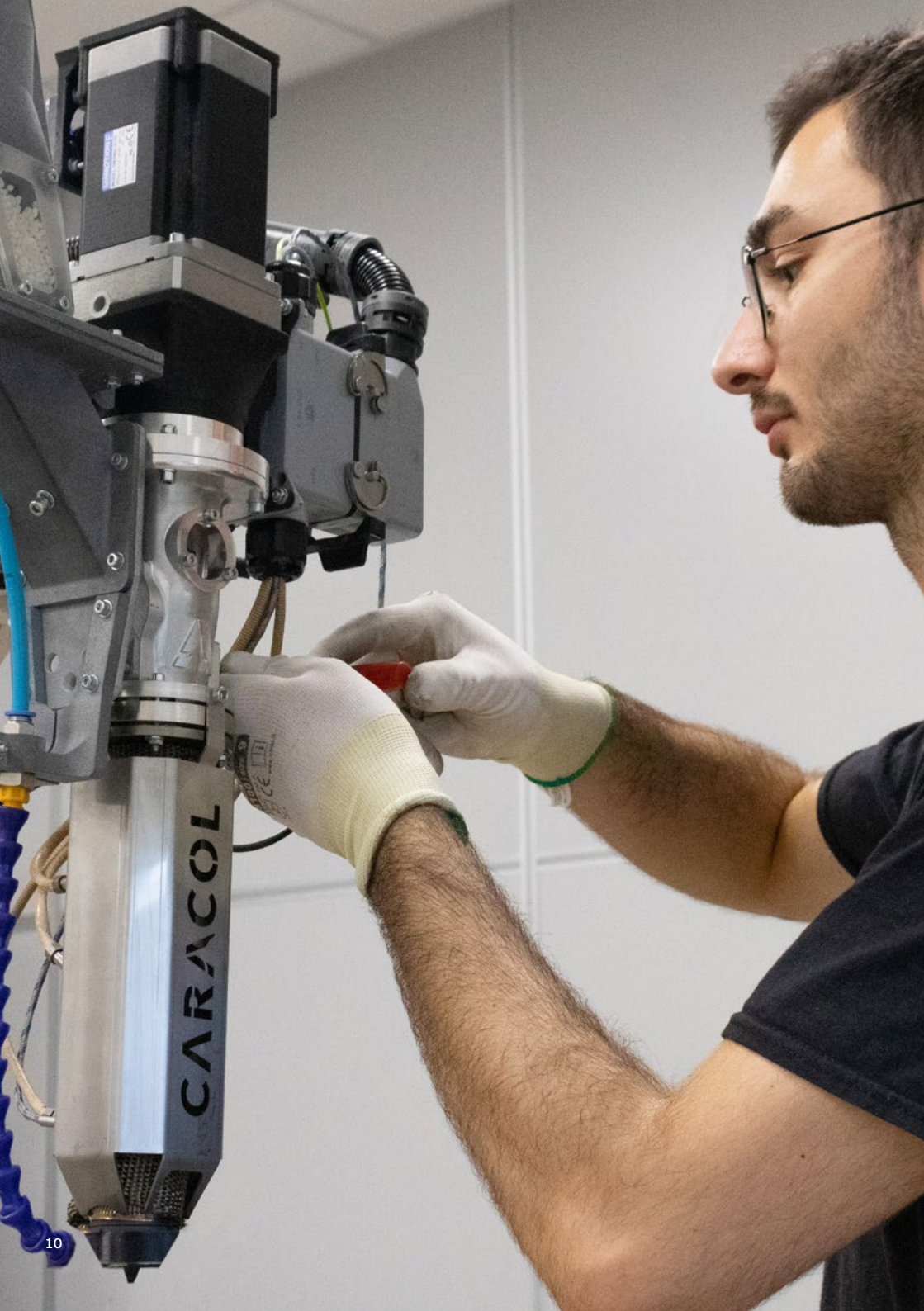
WHY IS IT USEFUL?

- Increase repeatability through continuous monitoring and adaptive correction
- Accelerate part industrialization with faster parameter optimization and validation
- Improve material and surface quality, combining real-time data with predictive decision-making
- Reduce waste and operator intervention with automated detection and correction cycles

POWERED BY
Matta

Matta is a London-based technology company developing artificial intelligence for industrial applications. Powered by award-winning in-house research in machine learning and computer vision, Matta is developing the next generation of factory operating systems, enabling smarter, safer operations with boosted productivity. Matta is redefining how factories think and act, envisioning a future of sentient factories, where intelligent machines can sense, reason, self-correct, and collaborate seamlessly.





Caracol manufacturing services

At your service, to guarantee your manufacturing continuity.

Application Development: Caracol supports the development and optimization of additive manufacturing applications through a proven methodology focused on performance, scalability, and economic viability.

Training & Ramp Up Support: Our training and support services help operators and technical teams quickly build expertise, ensuring safe, efficient, and scalable manufacturing operations.

After-Sales Support: Caracol provides dedicated after-sales services to maximize machine uptime through technical assistance, remote diagnostics, continuous optimization, and global support.

Material & Process Qualification: We qualify materials and manufacturing processes to ensure reliable and repeatable production, supporting both standard portfolios and custom solutions for demanding industrial applications.



Services evolve with your production needs.

Scan to download the full services brochure: packages, training programs, and everything Caracol offers to keep your system running at its best.

[Or click here!](#)

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