



**omni**  
ROBOTIC

Autonomy**OS**<sup>™</sup>

# Your Operating System for Autonomous Manufacturing

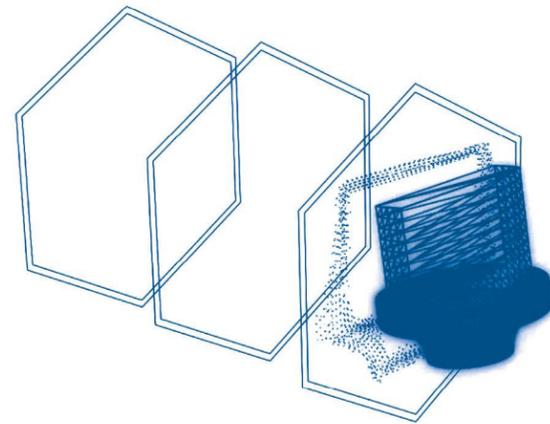
## Welcome to the new world of **AutonomyOS™**

Welcome to the new world of **AutonomyOS™**. This one-of-a-kind robot autonomy operating system will be your essential tool to finally build systems and use robots within value-added processes for High-Mix manufacturing.

How is this possible? **AutonomyOS™** is designed with a few unique capabilities in mind to empower integrators and end-users with flexible robotic systems that provide the same consistency and repeatability for which robots are already loved.

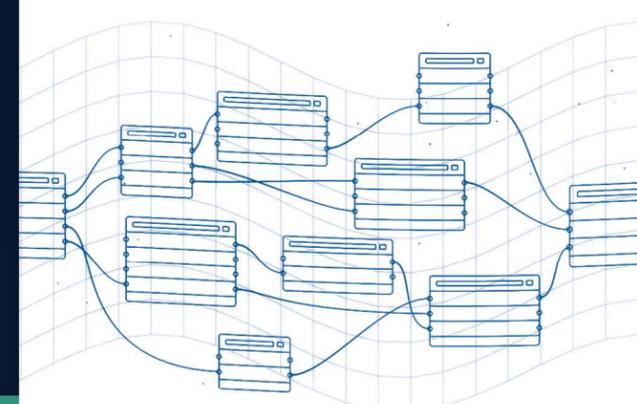


While AI is being found in more applications across the industrial space, very few use the task planning required to function autonomously in unstructured environments.



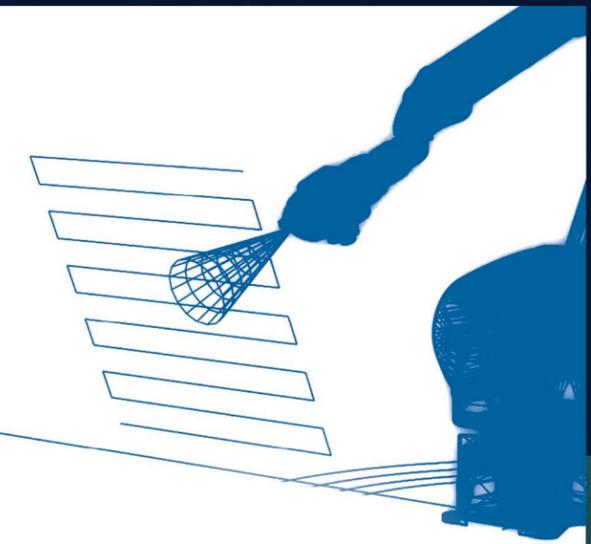
## 3D Perception

3D Perception that combines sensor fusion with 3D cameras to eliminate the need for jiggling or precision fixturing.



## Task Planning

Task Planning to understand process constraints and autonomously find the action plan that match your unique requirements.



## Motion Planning

Motion Planning that autonomously generates motion avoiding collision, singularities, speed or joint limitations of your robotic system.



## Why Integrate AutonomyOS™?

AutonomyOS™ provides a series of benefits specifically to High-Mix manufacturers that simply weren't possible before. These include:

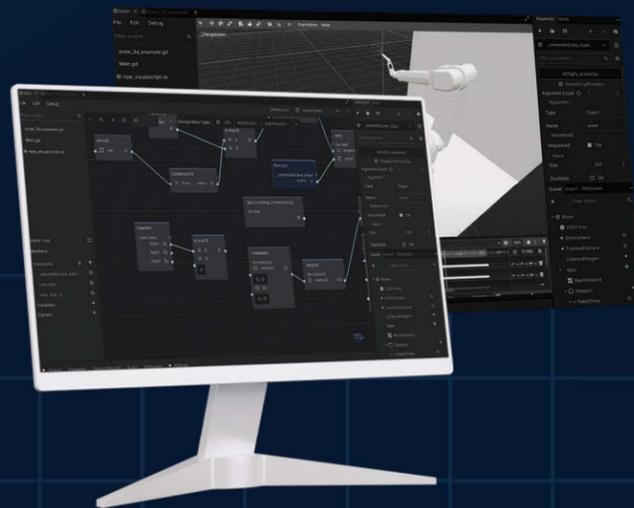
- The ability to overcome labor shortages by training robots to work the way skilled workers do
- Improved productivity and efficiency of production
- Reduced waste, rework and rejection
- Reduced energy and consumables consumption
- Environmental benefits and better quality of life at work
- Maintain the same consistency and reliability that robots are already known for

If you are looking to automate in a High-Mix environment, you may be onto an opportunity to use AutonomyOS™. In order to deploy a system, your robotics engineering team or preferred integrator will get comfortable with AutonomyStudio™ first.

## What is AutonomyStudio™?

AutonomyStudio™ is Omnirobotic's Integrated Development Environment for autonomous robotic applications. Using principles similar to CAD systems, its scene builder and behavior editor make it easy to build and configure autonomous robotic systems that function for an unlimited number of parts.

Within AutonomyStudio™, the user can define robot behaviors that replicate the thought process of skilled workers. This visual programming language allows you to describe the role and goals of the autonomous robotic system that fit your own High-Mix production. It doesn't just replace Offline Programming Software, it replaces robot programming.



## How does the OmniBrain™ Work?

Any autonomous robotic system needs a significant amount of processing power in order to provide real-time reconstruction, task planning, motion planning and streaming motion to a robot controller. Omnirobotic's OmniBrain™ is stacked to the gills with the power needed to get the job done. It can operate one or multiple robots as needed and is rented to end users at the price of \$10 per hour of individual robot operation - a major win considering today's skilled labor burden rates.



## What are the steps in the process?

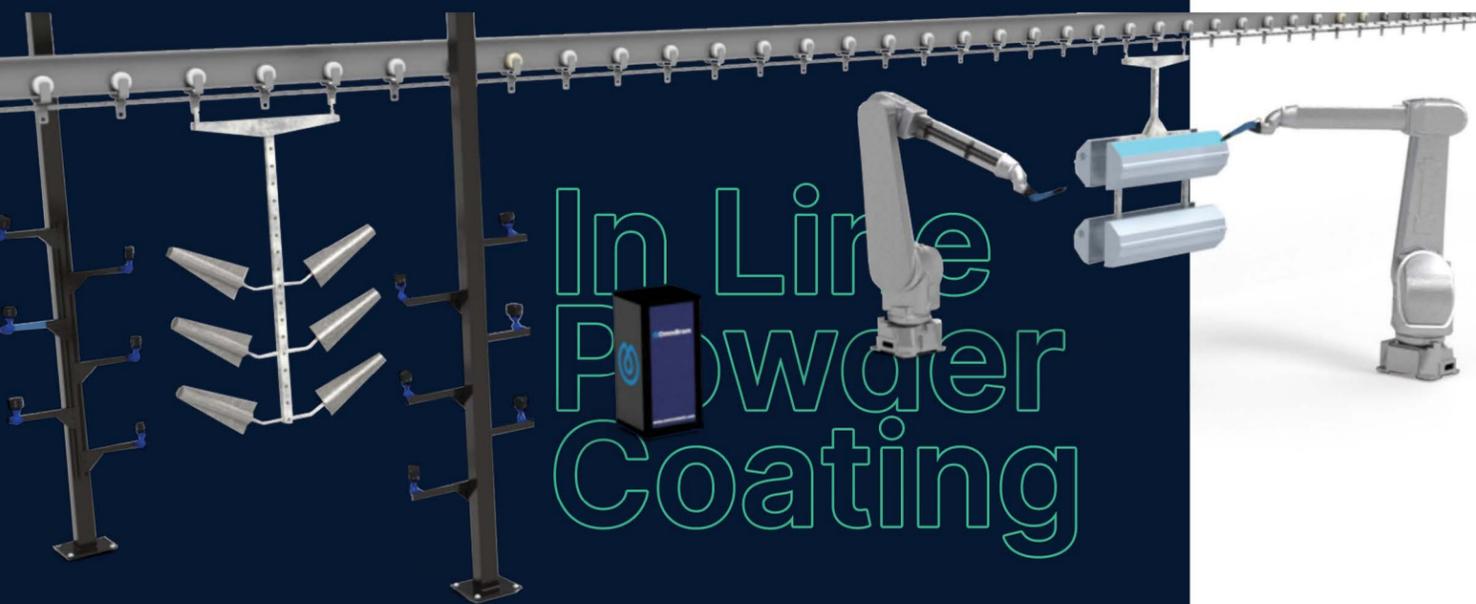
Autonomous robotics and automation for High-Mix are fundamentally new fields. For both integrators and end-users, understanding the value of the technology and knowing it is reliable is key. With that in mind, Omnirobotic leverages a few tools within our own sales process to ensure both customers and integrators are sufficiently satisfied.

- Intense application qualification to ensure proposed solutions function within the scope of AutonomyOS™
- Standardized payback calculation and template demos to establish clarity on both use case and business case
- Thorough data collection meetings with our engineering services team to develop firm solution hypotheses
- Value-added application studies that ensure unique requirements can be met before any equipment is bought or deployed (provided at cost)
- For more rigorous customers, either Omnirobotic or the integrators can offer a Behavior Acceptance Test. This test uses existing templated behaviors on a sample run of parts to verify that the function of a final system can meet the end-users' general High-Mix needs. This service must be provided at cost where existing templates are not sufficient to the customer objective.

AutonomyOS™

AutonomyStudio™

OmniBrain™



# In Line Powder Coating



# Sanding



# Deburring



# Batch Painting

## What applications can be supported?

AutonomyOS™ has no fundamental limit to applications that can be supported – whether it's painting, powder coating, other spray processes, or other value-added processes like welding, deburring, sanding, machining or metrology and inspection.

While these fundamental limits – as well as collaboration with robot manufacturers – are hardly fixed, Omnirobotic currently supports hardware from ABB, FANUC, and Universal Robots. We also offer an Application-Specific Template for In-Line Powder Coating that allows for repeatable, continuous coating function in both High-Mix and High-Volume production.



If you'd like to learn more about our powder coating template, check out this video here! <https://youtu.be/K9GPqSk-tOY>



# Welding



# Metrology

# How can you get started?

Contact Us

450.231.1074

[sales@omnirobotic](mailto:sales@omnirobotic)

Visit Us

[omnirobotic.com](http://omnirobotic.com)



Omnirobotic's autonomous manufacturing technology allows manufacturing engineers and system integrators to build their own autonomous robotic systems. Using a virtual environment to define their equipment and 3D Perception to drive real-time vision, AI can be tuned and optimized (through a process known as "Behavior Editing") to help you achieve your production goals. With a robust and ever-growing suite of software features, this promises to make Robot Autonomy more accessible in the long term, while empowering existing productions to rapidly deploy application-specific templates that enable mass manufacturing efficiency in unstructured or High-Mix environments - all the way down to Lot-Size One automation!

