



What is APlus®?

Mastercam partner CAMufacturing Solutions has developed APlus, an Add-On to Mastercam developed specifically for AM. Using the same interface Mastercam users are familiar with, APlus customers can program, backplot, and simulate their 3D printing scenarios just like they would with traditional toolpaths in Mastercam.

APlus by CAMufacturing Solutions is designed for AM using Direct Energy Deposition (DED) and has toolpaths developed specifically to handle any geometry in AM, as well as features and utilities designed to remove uncertainty out of the process and to improve efficiency. APlus can be used with Mastercam Mill, Lathe, or Router licenses (except for Entry).

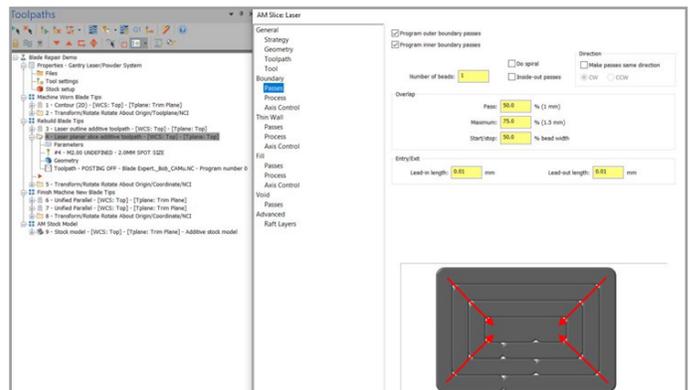
Hybrid manufacturing provides users with the versatility to build parts from scratch, add features to an existing part, or to repair a worn or damaged part. APlus integrates seamlessly with Mastercam to allow users to generate additive manufacturing toolpaths, as well as visualize the additive and machining outcome.

Since AM is not simply reversing machining toolpaths that Mastercam users have become accustomed to, all features and toolpaths are designed and developed to ensure users experience efficient and practical results for the additive and hybrid manufacturing processes.

Why Should I Invest in APlus?

Typical use of APlus is primarily seen in Government, R&D, and Educational institutions, but is a growing technology that will work side-by-side with traditional subtractive manufacturing. As mentioned above, APlus is great for R&D, repair work on existing parts, and creation of parts that any tool in the subtractive world could not reach.

A key example of the benefit of APlus is a blade repair scenario. Where you can see some wear along the tips of individual blades below, to repair the part the user will machine off the worn tips using a suitable toolpath in Mastercam. Then, using APlus you can 3D print, or deposit material onto the machined surfaces to near net shape. Finally, you machine the printed sections to the desired specs. This can dramatically lower costs when compared to buying or machining a new blade, or even stocking spare parts.

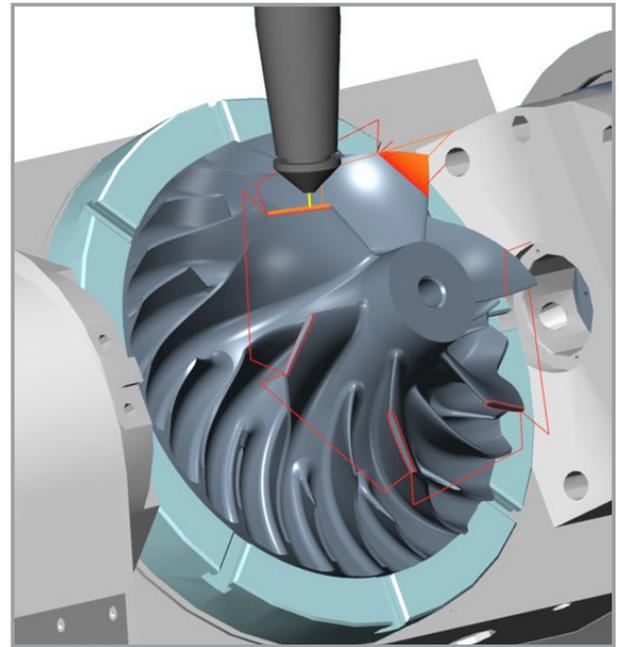


Everything is done in one familiar graphical interface, with one part file, using the same model for both traditional toolpath programming as well as additive visualization and stock model generation, so you can accurately simulate the entire manufacturing process.



APlus Features and Benefits:

- APlus supports programming and simulation of additive manufacturing processes in Mastercam.
- It is an elegant, seamless integration into Mastercam with a familiar interface.
- It is optimized for Direct Energy Deposition (DED), interwoven into traditional cutting strategies which provide support for Hybrid machining.
- It is a modular software design to support new additive manufacturing processes.
- It fits seamlessly into the Mastercam toolpath generation flow, but it will take time to master the additive specific parameters.
- Some of the new concepts are molecular metallurgy, heat management, and material deposition rates.



Mastercam APlus® comes with unparalleled support from the world's #1 CAD/CAM community.

For more information, visit [Mastercam.com/solutions/APlus](https://www.mastercam.com/solutions/APlus).

To gain the benefits of APlus®, contact your local Mastercam Reseller at [Mastercam.com/Resellers](https://www.mastercam.com/Resellers).



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Mastercam®

671 Old Post Road
Tolland, CT 06084 USA