

FORCESPRO 4.2 Release

FORCESPRO

Performance improvement for embedded systems and support for new platform

- **Single precision callback functions**: With the latest FORCESPRO 4.2, you can now use single precision callback functions, e.g. for evaluation of cost function and model derivatives. This new FORCESPRO feature allows more customers to deploy their solvers on hardware with limited computation power. It improves the calculation time of the algorithm on the embedded system and reduces the memory consumption. Custom-made functions, CasADi v3.5.1 generated functions and functions from the [Symbolic Math Toolbox](#) by The MathWorks, Inc. are supported.
- **Enhanced debugging tool**: The 4.2 release strengthens customer support by advancing our debugging functionalities. Our dump tool allows you to easily save, load and share the formulation and actual data of an optimization problem. It facilitates the debugging and testing workflow. Besides support for MATLAB and Python, the tool can now be used directly from C code to dump problem data in a binary format. This enables users to obtain exact problem data dumps straight from their embedded platforms.



- **New hardware**: FORCESPRO now comes with support for National Instruments CompactRIO. Generated solvers can be easily deployed on this embedded target and exploit the capabilities of the computation hardware. You can find a full list of hardware supported by FORCESPRO [here](#).

You can find a list of all algorithmic improvements in the [Release Notes of FORCESPRO 4.2](#).

Existing users can easily switch to the new version by using our [auto-update function](#).

Alternatively, you can use the new server at: <https://forces-4-2-0.embotech.com/>

Please note that support for CasADi v2.4.2 is getting depreciated. As a first step, it is being replaced by CasADi v3.5.1 as default AD tool starting with release 5.0 of FORCESPRO.

You can find a list of settings for maintaining codeoptions of old FORCESPRO versions in the [backward compatibility list](#).

Note: Version 3.0 will go offline as of March 15, 2021.

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