

Release Notes 2020

MIKE 3

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Introduction

Welcome to MIKE 3 Release 2020.

In this Release Note, you will find information about new features of MIKE 3, and what you need to know in order to install and get started with Release 2020.

MIKE 3 is a complete 3D modelling package for estuaries, coastal areas, and seas. It covers a wide range of hydrodynamic, environmental and sediment transport processes.

System requirements

The recommended minimum system requirements are:

| | |
|---|---|
| Fully supported Windows operating systems * | Windows 10 Pro, version 1903 (64 bit) Windows Server 2016 Standard (64 bit) Windows Server 2019 Standard (64 bit) |
| Processor | x64, 2.2 GHz (or higher) |
| Memory (RAM) | 2 GB (or higher) |
| Hard disk | 40 GB (or higher) |
| Monitor | SVGA, resolution 1024x768 in 16-bit color |
| Graphics adapter | 64 MB RAM (256 MB RAM or higher recommended), 32-bit true color ** |
| File system | NTFS |
| Software requirements | Microsoft .NET Framework 4.7.2 or later |

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- * Fully supported operating systems are systems that have been tested in accordance with MIKE's Quality Assurance procedures and where warranty and software maintenance agreement conditions apply.
- ** MIKE 21 Flow Model FM utilizing GPU requires a Nvidia graphics card with compute capability 3.0 or higher. Please note that some of these graphics' cards have varying performance in single compared to double precision calculations. The GPU functionality is based on version 9.2 of the Nvidia® CUDA® Toolkit.

Installation

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DHI License Management - If you are installing on a computer or server where you will also install the license file, please also install the DHI License Manager. It must be downloaded separately.

To install MIKE 3, please go to the MIKE Zero product folder and execute the setup.exe file either on the MIKE 2020 USB or from the downloaded, un-zipped installation files. Press the 'Install' button to begin installation.

The setup program will automatically install all necessary files and folders on your computer. Additionally, an entry is created in the Start Menu for MIKE Zero.

Important information: Please be aware that all MIKE software on the same computer must be installed with the same service pack. This is due to the dependencies between MIKE software products and the ability for the software to use the latest feature and systems updates.

License file and dongle

To use MIKE software in licensed mode, please refer to the DHI License Manager Release Notes. ([License Manager Release Notes](#))

Product invocation

Launch 'MIKE Zero' from the Windows Start menu. Then you can select MIKE 3 from within the MIKE Zero Shell.

Starting any MIKE Zero application without a DHI configured hardware key and valid license files will cause the program to run in demo mode. If this happens, a message box will inform you during program initialization. When running in demo mode, the MIKE Zero installation supplies full access to all editors, computational engines and editing facilities. However, restrictions apply to the setups that can be executed as a model simulation.

Support

For general support, please refer to our [FAQ](#).

If you experience any difficulties, or if you have questions, please contact our Customer Success team by e-mail or phone:

Customer Success

DHI A/S
Agern Allé 5
DK-2970 Hørsholm
Denmark

mike@dhigroup.com

Tel: +45 4516 9333

You can also contact your local Customer Success team for support in your local language. You can find the list [here](#).

New features and fixed issues

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Every new release of MIKE 3 consists of new modules, new features and/or corrections to problems or significant inconsistencies discovered in previous releases. Please find short descriptions of the most significant improvements below.

New features

| Module/type | New feature |
|------------------------------------|--|
| MIKE 3 Flow Model FM Hydrodynamics | GPU acceleration for Temperature and Salinity calculations and second order k- ϵ Turbulence calculations has been added. |
| MIKE 3 ECO Lab FM | Google Earth (KML) output format for particle tracks in Particle Tracking, ABM Lab and Oil Spill modules added. |
| MIKE 3 ECO Lab FM | Preview release of MIKE ECO Lab 0D engine. |
| MIKE 3 ECO Lab FM | New Flexible Mesh user examples for Oil Spill & Particle Tracking added. |
| MIKE 3 Classic | MIKE 3 Classic, including the MIKE 3 Toolbox (Digitising tool) has been fully decommissioned and is no longer available. Support will be provided until November 2020. |

Fixed issues

| Module/type | Error/Inconvenience |
|------------------------------------|---|
| MIKE 3 Flow Model FM Hydrodynamics | An option for a variant of the HLLC Riemann solver in z-level calculations has been added. |
| MIKE 3 Flow Model Mud Transport | Calculation of bed shear stress has been improved. |
| MIKE 3 Flow Model FM Hydrodynamics | Various improvements have been made to the GPU version (for example, improved calculation fluxes over a structure, consideration of multiple sources or source distribution points in the same water column, improvements in flooding and drying areas when using k-epsilon, improved calculation of concentrations when using k-epsilon, and improved calculation for AD fluxes in line structures under k-epsilon). |
| MIKE 3 Flow Model FM Hydrodynamics | The calculation of computed evaporation has been improved. |
| MIKE 3 Flow Model FM Hydrodynamics | An illegal storage error has been fixed when using Density as a function of Salinity in combination with heat exchange. |
| MIKE 3 Flow Model FM Hydrodynamics | An issue has been fixed where calculations of concentrations may be impacted by the ordering of elements. |