Release Notes 2022

MIKE 3

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Introduction

Welcome to MIKE 3 2022

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 2022.

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

Operating systems

Fully supported Windows operating systems *	Windows 10 Pro, version 21H1 (64 bit) Windows Server 2016 Standard, version 1607 Windows Server 2019 Standard, version 1809
Non-supported but partially tested operating systems **	Windows 11 Pro, version 21H2 (64 bit) Windows Server 2022, version 21H2

* 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.

** Non-supported but partially tested operating systems are systems, which are not officially supported by the MIKE software products. These operating systems have only undergone very limited testing for the purpose of MIKE software, but the software and key features are likely to work. Installation of MIKE software on a non-supported operating system is done so at the user's own risk. The MIKE software warranty and software maintenance agreement conditions do not apply for unsupported operating systems and DHI is under no obligation to provide assistance or troubleshooting for cases where the software is being used on a non-supported operating system.

Please note that single user installations are not allowed on server operating systems. Also, when running a fully supported operating system as a 'guest operating system' on a virtualization platform, it is automatically downgraded to a non-supported operating system under the conditions provided above.

Minimum hardware/software requirements

Processor	compatible with x64 instruction set, 2.2 GHz or higher

Memory (RAM)	4 GB or higher *
Storage	64 GB or higher *
Display	resolution 1024 x 720 (High-Definition) or higher, 24-bit color (true color)
Graphics adapter	64 MB RAM (256 MB RAM or higher recommended), 32-bit true color **
Software requirements	Microsoft .NET Framework 4.7.2 or higher

* The actual required amount of memory and disk space depend on the usage (application, model setup, size of data files etc.)

* * MIKE 3 Flow Model FM utilizing GPU requires a Nvidia graphics card with compute capability 5.2 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 11.1.1 of the Nvidia® CUDA® Toolkit.

Installation

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To install MIKE 3, please go to the MIKE Zero product folder and execute the setup.exe file either on the MIKE 2022 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

Please Note that when using the local or network license option, which require a license file and a dongle, then

- the DHI License Manager must installed separately.
- all licensed applications included in MIKE 2022 require a 2022 version of the DHI License Manager.
- a new license file format (file extension dhilic2) has been introduced with MIKE 2022 and these license files can only be used together with a DHI License Manager 2022.

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 Care team by e-mail or phone:

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

mike@dhigroup.com
Tel: +45 4516 9333

You can also contact your local Customer Care team for support in your local language. You can find the list here.

New features and fixed issues

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Release 2022

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 below short descriptions of the most significant news.

New features

Module/type	New feature
MIKE Zero	New tab-based navigation between editors, including 'tear-off' functionality to support multiple monitor setups, has been added to the MIKE Zero user interface.
MIKE Zero	Time Series editor has been extended and improved with new import and export functionality. Additional options now include import from Excel and KMD files.
MIKE 3 Flow Model FM	A new sea bed (ground) to water heat transfer based upon the ground equilibrium temperature, depth of ground equilibrium temperature and the conductivity of soil or rock has been added.
MIKE 3 Wave Model FM	The turbulence modelling in MIKE 3 Wave Model FM has been extended with the option to use a k-omega model, after Wilcox (2008), for improved flow calculation near structures. In addition, limiters for both k-omega and k-epsilon turbulence models have been improved.
MIKE 3 Wave Model FM	At closed (land) boundaries, wall friction can now be applied in MIKE 3 Wave Model FM. This new functionality has been applied to both k-omega and k-epsilon turbulence models.
MIKE 3 Flow Model FM	The turbulence modelling in MIKE 3 Flow Model FM (Navier-Stokes formulation) has been extended with the option for using a k-omega model, after Wilcox (2008), for improved flow calculation near structures. In addition, limiters for both k-omega and k-epsilon turbulence models have been improved.
MIKE 3 Flow Model FM	At closed (land) boundaries, wall friction can now be applied in MIKE 3 Flow Model FM (Navier-Stokes formulation). This new functionality has been applied to both k-omega and k-epsilon turbulence models.

Fixed issues

Module/type	Error/Inconvenience
General	Numerous corrections, stability and performance fixes.
MIKE Zero	Performance of short notation map projection string handling has been improved.
MIKE Zero	Performance of colour legends overlay has been significantly improved.
MIKE Zero	An error specifically related to Belgian map projections has been corrected.
MIKE 3 Flow Model FM	A rare issue related to the of the Navier-Stokes formulation with geographical domains has been rectified.
MIKE 3 Wave Model FM	Output of cumulated statistics has been improved.
MIKE 3 Flow Model FM – MIKE ECO Lab	Handling of particle releases on dry elements has been improved.
MIKE 3 Flow Model FM – MIKE ECO Lab	Handling of molar concentrations in particle sources has been improved.