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# INCA-FLOW V4.8

## Release Notes

Release: December 2019

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## 1 Introduction

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### 1.1 Definitions and Abbreviations

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Term/Abbreviation	Definition
EHI	ETAS Help Desk International
HSP	Hardware Service Pack
HW	Hardware
KIR	Known Issue Report – For severe Problem Reports which occur after a release, ETAS has introduced the Known Issue Report to inform affected customer immediately. The current Known Issues of former versions can be found on the ETAS website: <a href="http://www.etas.com/kir">http://www.etas.com/kir</a>
PR	Problem Report
SW	Software

### 1.2 Conventions

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The following typographical conventions are used in this document:

Choose **File→Open**.

Menu commands are shown in boldface.

Click **OK**.

Buttons are shown in boldface.

Press <ENTER>.

Keyboard commands are shown in angled brackets.

The "Open File" dialog box is displayed.

Names of program windows, dialog boxes, fields, etc. are shown in quotation marks.

Select the file setup.exe

Text in drop-down lists on the screen, program code, as well as path- and file names are shown in the Courier font.

A *distribution* is always a one-dimensional table of sample points.

General emphasis and new terms are set in italics.

## 2 Product Definition

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### 2.1 Functions at a Glance

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INCA-FLOW is used for documentation and automation of recurring calibration processes. By modeling the calibration task in the form of a flowchart the calibration engineer is able to design a graphic image of the manual calibration task.

INCA-FLOW enables the calibration engineer to focus on its key task of the modeling and implementation of a calibration methodology and not on the syntax of a programming language. The tool allows the calibration engineer without programming knowledge to implement an calibration process / methodology.

INCA-FLOW provides a library of base methods which can be used by the calibration engineer by drag-and- drop to build his process step by step. The parameters of each base method are graphically interactive and intuitive to use. These so-called basic methods have the most diverse tasks:

- Reading and writing parameters
- Input and output methods
- Design methods (e.g. Polyfit )
- optimization methods (e.g. simplex algorithm )
- iteration methods
- Condition Queries ( bits variables)
- bypass methods (e.g. freely configurable controller )
- stimuli generator (e.g. sine, square waves , APRBS )
- cycle generator (e.g. FTP75 cycle)
- Interface to Matlab
- Mathematical/Statistical methods (formula editor, FFT, filtering, histogram, mean value, min/max, standard deviation, etc.)
- Visualization methods (measurement channels over time , histograms , visualization and production of maps and characteristics)

The involvement of external measurement equipment such as thermal scanning , AD and lambda scan is guaranteed by the link to INCA.

#### Project and Process Configuration

Calibration processes can be modeled and exports and thus passed from one engineer to another engineer. The application programmer has the ability to create for recurring similar processes of several basic methods, so-called library methods. These are then automatically managed in a separate library and can as the base methods with drag and drop be installed in the flow chart. They can also be imported and exported. Calibration and measurement parameters are to be defined as the variables themselves own centrally managed in the database.

## 2.2 General Description

### 2.2.1 Safety Notice

Calibration activities influence the behavior of the ECU and the systems controlled by the ECU. This may result in unexpected behavior of the vehicle and thus can lead to safety critical situations. Only well trained personnel should be allowed to perform calibration activities.

Sending CAN messages influences the behavior of the CAN bus network and the systems connected to it. This may result in unexpected behavior of the vehicle and thus can lead to safety critical situations. Only well trained personnel should be allowed to perform CAN message sending activities.

Calibrate measurement (Write to RAM) activities influence the behavior of the ECU and the systems controlled by the ECU. This may result in unexpected behavior of the vehicle and thus can lead to safety critical situations. Only well trained personnel should be allowed to perform calibrate measurements activities.

### 2.2.2 System Prerequisites

Certain system requirements must be fulfilled to install and work with INCA-FLOW.

The minimum system requirements for using INCA-FLOW are as follows:

- > 1600 MHz CPU
- > Operating systems: Microsoft WINDOWS 10
- > 1 GB RAM
- > Hard disk with a minimum of 500 GB of free space
- > XGA graphics card with XGA monitor and a resolution of at least 1024 x 768 with 16 bit colors

The recommended system requirements for using INCA-FLOW are as follows:

- > 2 GHz dual-core CPU
- > Operating systems: Microsoft WINDOWS 10
- > 2 GB RAM
- > Hard disk with 1 GB of free space
- > CD-ROM drive for installation
- > SXGA graphics card with SXGA monitor and a resolution of at least 1280 x 1024 with 32 bit colors

#### 2.2.4 Software Prerequisites

None

#### 2.2.5 Restrictions

None

#### 2.2.6 Miscellaneous

None

### 2.3 Delivery

The INCA-FLOW software is delivered on DVD. The DVD contains an installation routine including INCA-FLOW software, documentation. All software documentation is available in the Portable Document Format (PDF), which requires Adobe® Reader®. You find the installation link in the Tools & Utilities directory on the installation DVD.

#### 2.3.1 Used 3rd Party Software

The 3rd Party Software used by INCA-FLOW is listed in the documentation in the folder ...\  
OpenSourceSoftware.

### 2.4 Installation

For details on installation or licensing see the separate installation instructions document.

### 2.5 Licensing

INCA-FLOW is protected via electronic licensing. In order to run and use the products, a license file is required. The license needs to be installed via the ETAS License Manager. The license manager is opened during the installation and can also be started at a later point as an external program located in the ETAS program folder in the Start menu. The license file can be obtained through a self-service portal on the ETAS website by using the software entitlement you received during the order process or it is provided by your tool coordinator.

### 2.6 Open Source Software

INCA-FLOW contains some open source components, which are listed in the Open Source attribution document. This can be found in the Documentation part of the CD under OpenSourceSoftware.

### 3 Changes

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This chapter describes changes with respect to INCA-FLOW V4.7

#### 3.1 What's new with INCA-FLOW V4.8

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##### New methods:

- *ASCMO ODCM* New ASCMO interface Methods for ODCM (Online DOE with Constraint Modeling)
- *Event Monitor* New Testbench Method for limit monitoring with debounce functionality

##### Changes in methods:

- *MDF read* Assignment for signals for MDF Read with lab file
- *MDF read* Identical signals name assignment just as for mdf4 and mdf3 files

##### Other:

- *License Model* Change license model to allow EDT, TDT and Testbench connector to be executed in combination with runtime-license
- *Variable Management* Easy configuration for different ECU platforms and hardware
- *Variable Management* New system variable \$POSITION for string identifying the current interpreter position
- *TDT Placeholder* New input option to add environmental data
- *TDT Format selection* Selection of only one configuration format for respective online or offline case

##### Improvements

- *Version compatibility* Improved import/export handling in different INCA-FLOW versions and portability of processes to other projects

Please refer to the INCA-FLOW V4.8 what's new presentation for more details.



### 3.2 Fixed Problems

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This section describes the set of fixed problems of the previous INCA-FLOW V4.7.

#### **Calls fixed in INCA-FLOW V4.8**

605857	Problems of Start spark controller
605871	Excel write method writes empty data.
608836	Import of project configuration leads to database error
596145	Device is not added to the project configuration if the device name has space.
603452	The warning message of interpreter shows the incorrect warning.
605724	Global reference names of MDF read does not work on standalone interpreter.
615444	After Closing the Library Browser - it cannot be reopened
615465	Could not find a part of the path 'd:\wltc.xml'.
621362	Negative offset for 'Spark advance' does not work
621849	Wrong behavior of governor P-part.
622938	Text in a process is changed to a reference name after the project is imported.
620740	INCA-FLOW TDT: Online Process – time shift in online visualization
619870	INCA-FLOW EDT viewer: crash error window when " Compare to" is clicked
618711	INCA-FLOW EDT: IF process disappears when EDT block is reached
621418	INCA-FLOW EDT: after comparison, create diagram makes an exception
620731	INCA-FLOW-EDT Viewer - Unhandled Exception
620346	INCA-FLOW-EDT deletes the content of %TEMP% folder (i.e. C:\Users\%UserName%\AppData\Local\Temp)
605336	INCA-FLOW EDT Unable to deselect options
605345	INCA-FLOW EDT All signal assignments removed when attempting to remove single assignment

### 3.3 Known Issue Reports

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If a product issue develops, ETAS will prepare a Known Issue Report (KIR) and post it on the internet. The report includes information regarding the technical impact and status of the solution. Therefore you must check the KIR applicable to this ETAS product version and follow the relevant instructions prior to operation of the product.

The Known Issue Report (KIR) can be found here:

<http://www.etas.com/kir>

### 3.4 Known Issues

This section describes the set of known problems of INCA-FLOW V4.8

#### 3.4.1 Software related Items

622958	Trigger functions of Start recording don't work regular
626553	MF4 File Ending Issue with INCA FLOW
626670	Filter Settings in MDF Read disappears after importing into INCA FLOW
626356	Error in in INCA FLOW Search Function
592222	Standalone Interpreter Issue
606709	Array Variables name not consistent with INCA

## 4 Hints

None

## 5 Hotfix Information

None

## 6 Contact, Support and Problem Reporting

For details of your local sales office as well as your local technical support team and product hotlines, take a look at the ETAS website:

ETAS subsidiaries                      WWW: [www.etas.com/en/contact.php](http://www.etas.com/en/contact.php)

ETAS technical support                WWW: [www.etas.com/en/hotlines.php](http://www.etas.com/en/hotlines.php)