



# INCA V7.3 – What's New

Changes / Extensions done in this Version

# INCA V7.3 – What's New

## Overview

### 1. Product information (Use cases, Sample applications, Customer value)

- Performance

- **Functionality**

- Standards

- Usability

- HW support

- Add-ons

### 2. INCA Product Family

### 3. Phase out information

### 4. General Notes

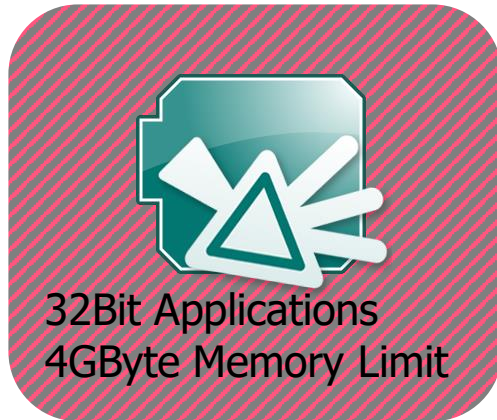


# INCA V7.3 – What's New

## Functionality



### INCA as native 64Bit Windows Application



64Bit Applications  
Full Memory access

- There is no more restriction for usage of PC memory. INCA can utilize all the memory provided by an 64Bit PC / Windows OS
- Caching of huge data is possible. No reload necessary
- Big measure data buffers



### Recorder - Add Calibration Info to support Big Data

Add meta data to the recorded data on which base the measurement was done

- ECU software description (A2L file)
- Data sets loaded to the ECU
- Checksum to quickly identify differences
- File / Node ID to get a reference to the database with calibration data

```
<common_properties>
  <tree name="ASAM Target Description">
    <tree name="targets">
      <tree name="XCP:1">        <!-- unique target name -->
        <e name="name">Engine</e>
        <e name="type">Software</e>
        <tree name="description">
          <e name="description file">engine.a2l</e>
          <e name="checksum ecu side">0x1EF3</e> <!-- code part -->
          <e name="checksum tool side">0x1EF4</e> <!-- code part -->
          <e name="file id">897E2A</e>
          <e name="node id">93A64B</e>
        </tree>
      <tree name="dataset rp">
        <e name="description file">engine.hex</e>
        <e name="checksum ecu side">0x42F1</e> <!-- data part -->
        <e name="checksum tool side">0x56A3</e> <!-- data part -->
        <e name="file id">8734BC</e>
        <e name="node id">93A64B</e>
      </tree>
      <tree name="dataset wp">
        <e name="description file">engine_1.hex</e>
        <e name="checksum ecu side">0x34C1</e> <!-- data part -->
        <e name="checksum tool side">0x34C1</e> <!-- data part -->
        <e name="file id">66D723</e>
        <e name="node id">93A64B</e>
      </tree>
    </tree>
  </tree>
</common_properties>
```

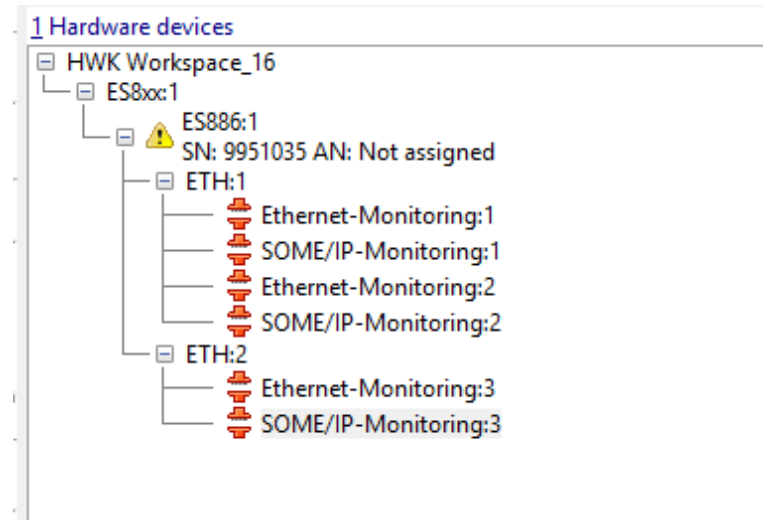
# INCA V7.3 – What's New

## Functionality



### Multi Session Support on Ethernet ports

- Supported for ES886, VN56x0
- Configuration of multiple instances of SOME/IP and Ethernet Monitoring in parallel below an ETH(x) node in the HWC.
- Main use case: Measuring of SOME/IP and Ethernet Monitoring in parallel



# INCA V7.3 – What's New

## Functionality



### **“Download Differences” is possible when Reinitializing Automatically with WP Download**

Precondition: INCA supports “Download Differences” for the used protocol in the memory page manager dialog.

- If the workspace in INCA is configured to reinitialize automatically with download of the working page, INCA now checks whether it is possible to download differences only or to execute a complete download of the full WP dataset (previous default behavior).
- INCA checks if the checksums of RP(INCA), RP(ECU) and WP(ECU) are identical to detect which bytes have to be downloaded.
- Faster re-init behavior of INCA for manual usage, testbeds and HIL use cases.

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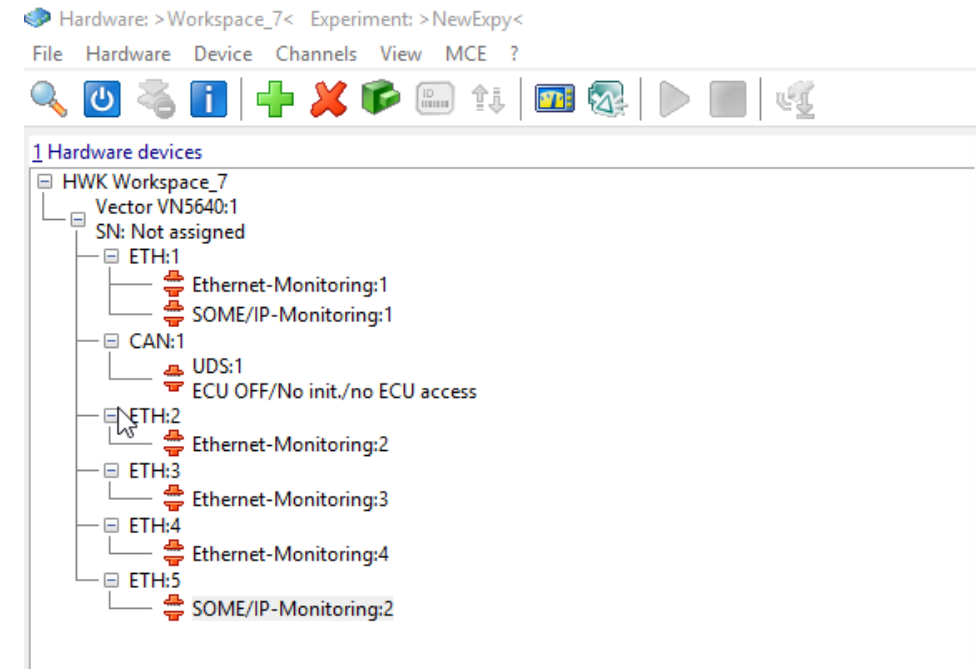


# INCA V7.3 – What's New

## Functionality

### VN5640 – Support for Automotive Ethernet & BR-XETK

- 2 x CAN(-FD) ports
- 4 x GE ports
- 12 x AE ports (6 x AE + 6 x GAE) or (12 x AE)
- Support of different TAP configuration
- Enable bit (F-00K-112-086)
- Support of Ethernet Monitoring and SOME/IP Monitoring
- Support of UDP
- Support of IPv4 and IPv6 (without header extension)
- Some usability restrictions due to missing functionality in the Vector XL API
- New driver "Network-Base-Mode" not yet supported





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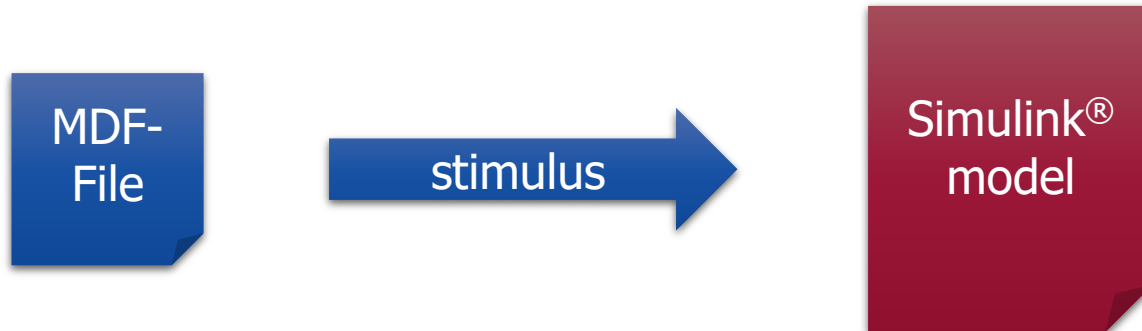
# INCA V7.3 – What's New

## Functionality



### **INCA-SIP – Support MDF-Files as Input Stimuli in Simulink®**

- The user can define an MDF-File as signal stimulus for a Simulink® Model.
- Thus, a simulation can be run using pre-recorded measurement files as input



# INCA V7.3 – What's New

## Functionality



### **INCA-SIP – Support Additional Standard Simulink® Blocks**

- New Search function has been added to support the Simulink® Block 'Manual Switch'
- Improvements to mask parameter now allow INCA-SIP to read and write values to mask parameters of type 'promote'. This automatically added the support of more Simulink® blocks, for example:
  - PID Controller
  - PID Controller (2DOF)
  - Discrete PID Controller
  - Discrete PID Controller (2DOF)
  - Bitwise Operator

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## Phase Out Information



## Hardware that is no longer supported by INCA V7.3

Hardware / Modules	Hardware QA6 Dates
ES520	10/2017
Kvaser HW	06/2019
ES690	02/2011
ES590/ES591 (incl. K-Line)	06/2020
SMB/SMB-COM (Connected via RS232)	06/2020
Output COM	Driver for output data via RS232 interface
E-Target: ES1000.3, ES1130, ES1135, VADI, VADI2, VDAI, KID, ASCET-RS	06/2020
VADI Test Device	Test device for ES1000
XCP on USB	No hardware released
ES580 CAN-Link	07/2019
ES581.3	01/2018
OHI_CAN (incl. EtasCan2Boa & EtasCan2Sic)	Driver for OHI, replaced by BOA drivers
ES720 (a workaround via INCA export for INCA V7.2 is possible)	10/2019

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## General Data Protection Regulation



### Compliance to General Data Protection Regulation

Please note that personal data is processed when using INCA. As the controller, the purchaser undertakes to ensure the legal conformity of these processing activities in accordance with Art. 4 No. 7 of the General Data Protection Regulation (GDPR). As the manufacturer, ETAS GmbH is not liable for any mishandling of this data.

### Data categories

Please note that INCA particularly records the following personal data (categories), and/or data (categories) that can be traced back to a specific individual, for the purposes of assisting with troubleshooting

- Communication data: IP address, date and time
- User data: The user's Windows UserID

Further information to this topic is available in the INCA installation handbook and the INCA online help.

# INCA V7.3 – What's New



## INCA Training

### **Seminars offered at ETAS locations worldwide or at customer site**

Deep skills and sound knowledge are essential prerequisites for handling software tools of ever-rising complexity. Our trainers are highly experienced engineers in the field of engineering and support, who relish sharing knowledge on ETAS products and development processes. Target groups for the trainings are beginners, advanced users and those who wish to expand their existing knowledge.

### **INCA – Calibration (3 days)**

- Practical operation of the software and the knowledge of the INCA fundamentals
- Get to know the advantages and disadvantages of various calibration concepts

### **INCA - Advanced Calibration Techniques (2 days)**

- Advanced functionalities in INCA, Tips & Tricks. INCA experience is required
- Workshop part, bring in your own problem statement

### **INCA - FLOW Coaching**

- Using your own calibration tasks to see the benefits of INCA-Flow in your daily work

Some ETAS local offices have their own training programs which are specialized for the local needs. Please contact our local office of your area for the details: <https://www.etas.com/en/trainings.php>



# INCA V7.3 – What's New

## Virtual Machines



### Usage of virtual PC machines

The usage of INCA on a virtual machine (VM) is restricted and not recommended:

- The VM needs sufficient working memory (RAM), otherwise the performance of INCA goes down
- Access to sufficient graphic card memory (Direct X) is necessary, otherwise the oscilloscope representation of measurement signal is not possible
- Access to hardware interfaces Ethernet, USB, PCMCIA, ... is necessary, otherwise INCA cannot use the connected hardware
- Measure samples may be lost and the accuracy of time stamps is not guaranteed as the higher task priority for hardware access (Target Server) is not given
- ETAS does no special tests concerning VM machines

ETAS recommends to use real PC hardware.

# INCA V7.3 – What's New

## System Requirements



### Minimum System Requirements

- 2 GHz Processor, 2 GB RAM, and DVD-ROM drive \*)
- Graphics: at least 1024x768, 256MB RAM, 16bit color and DirectX 9

### Recommended System Requirements

- 3 GHz Quad-Core Processor, 16 GB RAM, and DVD-ROM drive \*)
- Graphics: at least 1280x1024, 1GB RAM, 32bit color and DirectX 9
- Windows 10 64Bit
- Investigation on performance showed
  - More Memory improves execution time of repetitive operations
  - SSD Hard disks improve the file access times

### Supported OS

- Windows 8.1 64Bit
- Windows 10 64Bit (version 1803 or higher)
- Windows 10 64Bit Enterprise (LTSC 2016 or higher)

\*) Needed for installation via DVD only  
Not necessary when installing via network

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Additionally Installed Components	INCA V7.3
.Net-Runtime-Environment	V4.8 <sup>1)</sup>
VCxRedist (Vcredist_x86 / Vcredist_x64)	VC9+VC10 +VC14
JAVA SDK Version j2sdk1.4.2_11	X <sup>2)</sup>
Perl V5.8.6	X
ETAS Certificate	X
Direct X	V9 (or higher)
ETASShared	13
Windows 8.1 64 bit	X <sup>3)</sup>
Windows 10 64bit	X <sup>3)</sup>
<p><sup>1)</sup> This component is installed only when no or an older version is installed. If a newer version is already installed, it will not be touched. This is checked by a Microsoft installation routine.</p> <p><sup>2)</sup> This component is installed only with ODX LINK</p> <p><sup>3)</sup> For hardware driver support see release notes</p>	



Thank you