



INCA V7.3-SP6 – What's New

Changes / Extensions done in this Service Pack

INCA V7.3-SP6 – 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



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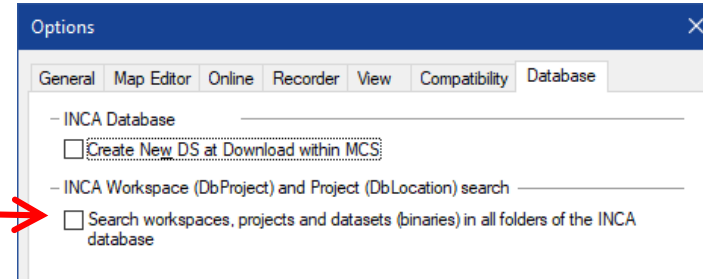
Functionality



MCE – iLinkRT V3: Change Workspace / Hex File

RT_GET_AVAILABLE_DEVICE_SETS

- Allows to request the Workspaces available
- Search is extendable



RT_SELECT_DEVICE_SET

- Allows to open a different Workspace
 - The currently open workspace is closed
 - A different INCA workspace is opened
- Allows to close a Workspace
 - INCA Options that require a closed Workspace can be set

RT_CHANGE_HEX_FILE

- Allows to replace the working page

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Functionality



Support of multiple Autosar ECU extract files – Some IP Monitoring

- Merging ECU extract files now supports all cluster types which are supported by INCA
- CAN
- CAN-FD
- SecOC (CAN/CAN-FD)
- Flexray
- Ethernet Monitoring
- Some/IP Monitoring (new)

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Functionality



XCP – DAQ configuration optimization - optimize ODT entries to save RAM

- With this option enabled INCA tries to combine measurements to one ODT entry if possible to get a smaller configuration for the Ecu.
- Prerequisite (a2l file):
 - Optimization mode: default
 - Address extension: free
 - no gaps between measurements
- Default setting:
 - Disabled

Hardware: >Workspace_3< Experiment: >NewExp<
File Hardware Device Channels View MCE ?

1 Hardware devices
HWK Workspace_3
Ethernet-System:1
XCP:1
ECU OFF/No init./no ECU access

2 Parameters 3 Info
XCP

| Option | Value |
|--------------------------|--|
| Name | XCP:1 |
| Meas. failure behavior | Abort after failure |
| Time stamp quantization | Off |
| Connection behavior | Reinitialize automatically |
| Project working data | Example for A2L incl. ECU Documentation\XCP_Test_File Empty Dataitem_1 |
| Reference Data | Empty Dataitem |
| Differences (bytes) | 0 |
| Transport Layer Instance | IPv4 |
| Ethernet Address (IPv4) | 127.0.0.1 |
| Destination Port | 9001 |
| Source Port | |
| Ethernet Protocol Type | UDP-IP |
| Log out behavior | No Automatic Flash Back |
| ECU Description Handling | ECU |
| Seed'n Key DLL | |
| Seed'n Key Privileges | 0 DAQ, 0 CAL/PAG, 0 STIM, 0 PGM |
| Checksum DLL | |
| Fast Start | Fast start enabled: No |
| ECU Connect Mode | NORMAL |
| Confirm page switch | Yes |
| DAQ optimization | ODT entries |
| Counter Consistency Mode | one counter for all CTOs+DTOs |
| Name of the device | |

Device inactive (Status not detected)
Device not connected
Device connected
No init. or no access
HW status can not be detected

Apply

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Functionality



Recorder Configuration – Date/Time, Index, short comment as variables for measure file name (COM-API extensions will be excluded)

- It is possible to use variables for
 - date: dd, MM, yyyy, yy
 - time: hh, HH, mm, ss, tt
 - file counter: CNTx (CNT1, CNT2, ..., CNT10)
- User can type-in the variables or insert the predefined variables sequences with the new UI controls
- The existing experiments will be automatically converted
- The existing COM-API methods are compatible (with limitations)
- New COM-API methods are planned for the new SP
- The file incrementing was changed, so that the „short comment“ is possible on the right of CNTx

Output File Recording Triggers MDA

File

Path: C:\ETASData\INCA7.3\Measure &[MEASUREPATH] ...

File: measure-09-08-2021 04 42 31 PM.mf4
measure-&[dd]-&[MM]-&[yyyy] &[hh]_&[mm]_&[ss] &[tt] ...

Insert date/time into file name

Format: dd-mm-yyyy +

Insert auto increment into file name

Increment digits: 1 +



Enhanced A2L/Autosar check for Flexray buffer configuration XCP Master

- INCA still checks if the XCP frame/slot configuration between Autosar file and a2l fits together.
- No special XCP master node is needed anymore.
- At least one FLX controller of the cluster has to describe the FLX frames and PDUs, and it doesn't matter whether for the XCP master or for the XCP slave. Now INCA extracts the relevant data from the Autosar file and creates its own internally configuration. The user can select any controller of the cluster to get XCP on FLX running.

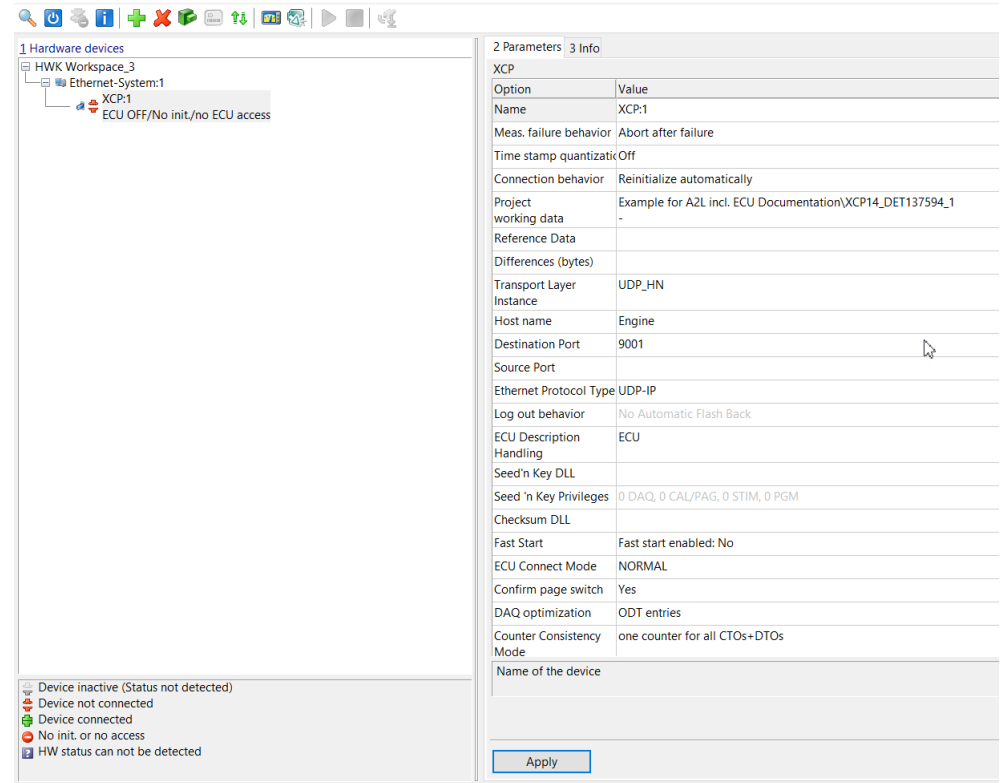
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Functionality



XCP – Support of HOST_NAME keyword

- The XCP standard allows to define either an IPv4, IPv6 or the Host name of the Ecu in the a2I file for XCP on Ethernet.
- In the HWC INCA shows the Host name from the a2I and allows to change the Host name manually.
- INCA checks the Host name against the RFC952/1123 specification.
- To resolve the IP address from the Ecu INCA uses the MS OS mechanism.
- Limitation: The result of resolving the IP address has to be unique. IPv4 or IPv6.



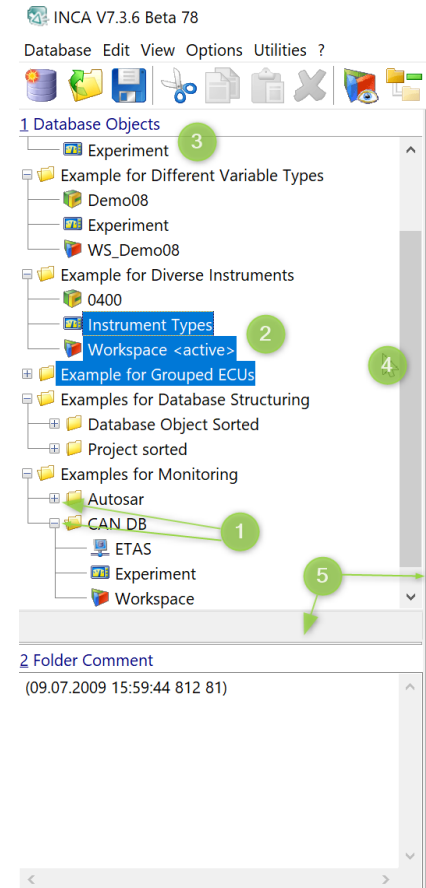
INCA V7.3-SP6 – What's New

Functionality



Store the Database Tree view for each Database

- INCA saves the view state per database
- INCA saves:
 1. expand/collapse state of the database objects
 2. selection of the database objects
 3. which database object is on top
 4. the scrollbar positions
 5. the split bar positions



INCA V7.3-SP6 – What's New

Functionality

ETK – Advanced Code Check

If the Advance Code Check fails while ETK initialization, the ECU software and the INCA project do not fit together. **Every further ECU access must be avoided** in order to avoid unpredictable and possible serious failures ⁽¹⁾.

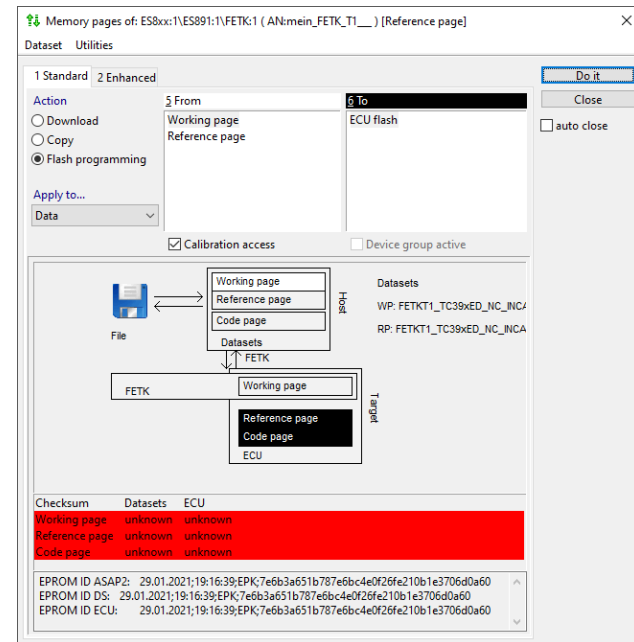
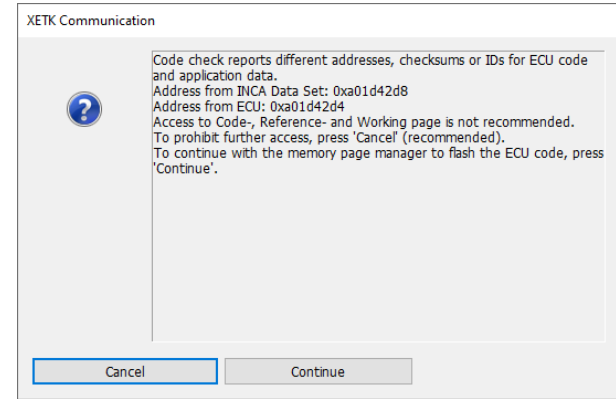
The user has now two possibilities:

Cancel stops further initialization and interaction with the ECU. Use this to change the INCA project.

Continue stops further access to the ECU but opens the memory page manager in order to flash the ECU according the INCA project.

In this case **no** checksum calculation (read access) is performed.

⁽¹⁾ Older INCA versions ignore this upon pressing Continue, which lead to an unpredictable result.



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INCA Product Family



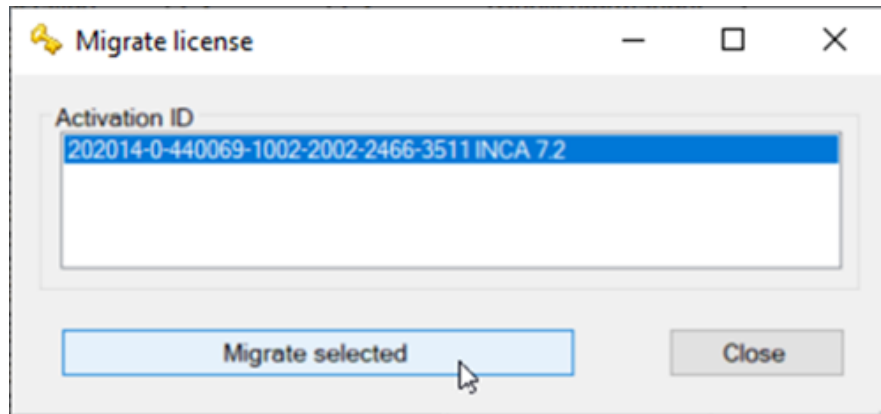
ETAS License Manager - Migration wizard for new license technology

ETAS switches from FlexNet Publisher (FNP) to FlexNet Embedded (FNE) license technology.

The first step was done by introducing the new technology for **machine based** licenses:

- INCA 7.3 accepts both FNE licenses and FNP licenses.
- INCA 7.4 will accept FNE licenses only (Release in 03/2022)

To assist you with this, ETAS License Manager offers a wizard which migrates your machine based FNP licenses to FNE licenses.



Note:

- ETAS License Manager > 1.8.2 and a valid service contract are required
- New bought machine based INCA licenses are automatically based on FlexNet Embedded.
- User based or Floating licenses are still based on FlexNet Publisher. Further information on introducing FNE for these will follow.

For details please see [Time Line](#) and further info in [ETAS License Management FAQ](#)

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Phase Out Information

Announcement concerning "HW Enable Bits"

- The ETAS enable bits functionality for Supported Vector hardware will be phased out
- QA5 Sales stop is planned for Q1/2022
- QA6 Service stop is planned for Q1/2025

For already supported Vector devices and all newly integrated Vector devices INCA supports now a SW license (Machine-Based, User-Based and Floating)!

All Vector devices with active Enable Bit will be supported by INCA at least till QA6 of the hardware.

- INCA checks for the enable bit first
- If no enable bit is available INCA will check for the SW license

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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.

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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>

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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.

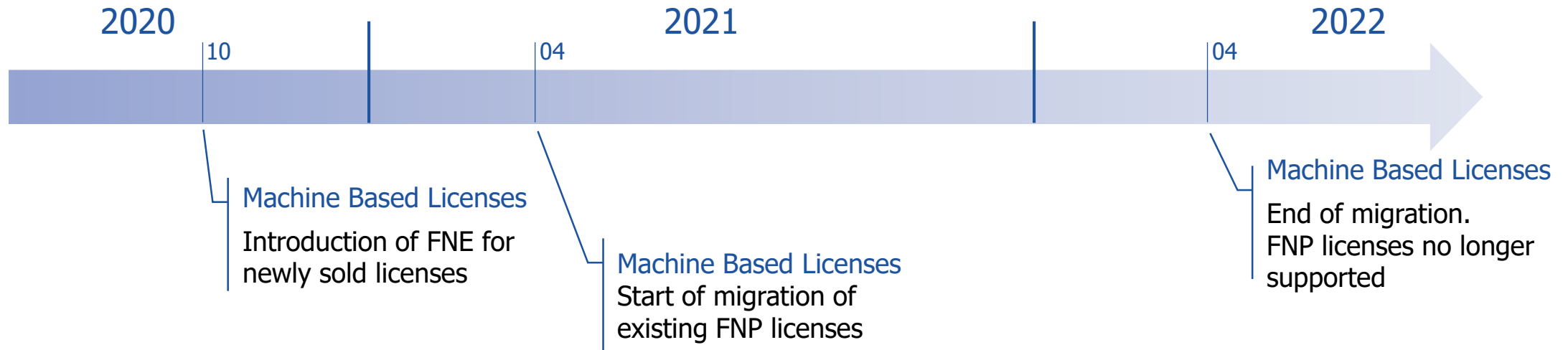
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Licensing

Machine Based Licenses – Shift from FlexNet Publisher to FlexNet Embedded

Step-by-step for a smooth migration



Further information about User Based and Floating licenses will be published in the course of this year

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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)
- Windows Server 2016 64Bit / 2019 64Bit

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

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General Notes

| Additionally Installed Components | INCA V7.3 |
|---|--------------------|
| .Net-Runtime-Environment | V4.8 ¹⁾ |
| VCxRedist (Vcredist_x86 / Vcredist_x64) | VC9+VC10 +VC14 |
| JAVA SDK Version j2sdk1.4.2_11 | X ²⁾ |
| Perl V5.30.0 | X |
| ETAS Certificate | X |
| Direct X | V9 (or higher) |
| ETASShared | 13 |
| Windows 8.1 64Bit | X ³⁾ 5) |
| Windows 10 64Bit | X ³⁾ |
| Windows Server 2016 64Bit / 2019 64Bit | X ⁴⁾ |
| <p>1) 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>2) This component is installed only with ODX LINK</p> <p>3) For hardware driver support see release notes</p> <p>4) Starts with INCA V7.3 SP4; INCA FLOW, INCA RDE is not released for Windows Server</p> <p>5) .NET V4.8 needed (available from Microsoft Support .NET V4.8)</p> | |



Thank you