



# INCA V7.3-SP7 – What's New

Changes / Extensions done in this Service Pack

# INCA V7.3-SP7 – 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



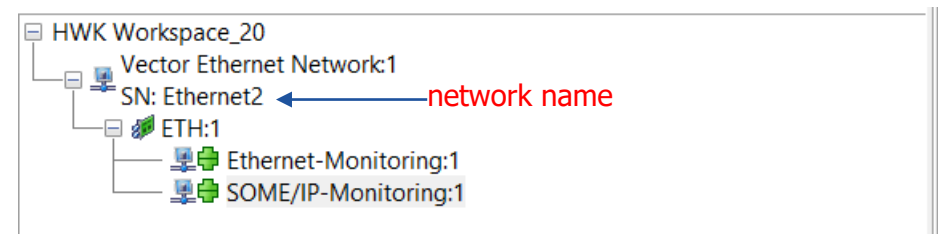
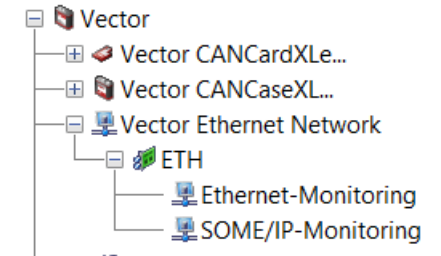
# INCA V7.3-SP7 – What's New

## Functionality



## Vector Ethernet Network Support (Network-based mode), enabling SomeIP and PDU (Ethernet) Monitoring

- The Network-based mode is an abstraction of a network via a unique network name, no single channels anymore. The complete access to the network is done via the network name.
- All configuration settings like ports settings must be done in advance in the Vector Hardware Configuration tool, in INCA there is no possibility to change the setup.
- In INCA such networks are represented as Vector Ethernet Network system.
- INCA uses the network name as unique identifier in the serial number field.
- The XCP support is planned for Q1/2022.
- A valid SW license is required.
- Supported HW: All Vector hardware supporting the Network-Based mode.
- Tested Vector HW: VN5240, VN5610(A), VN5620, VN5640 and VN5650.



# INCA V7.3-SP7 – What's New

## Functionality



### XCP – Resume Mode support via Tool API

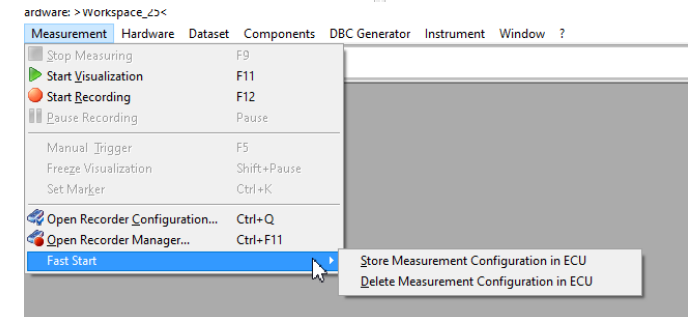
INCA allows remote control of the XCP Resume Mode via its COM-API

- INCA re-uses the already supported COM-API methods of CCP Resume Mode

#### WorkBaseDevice

- QuickStart\_Disable()
- QuickStart\_Enable()
- QuickStart\_IsQuickStartModeConfiguredInHWC()
- QuickStart\_StoreMeasurementConfigurationInECU()
- QuickStart\_DeleteMeasurementConfigurationInECU()

Option	Value
Name	XCP:1
Meas. failure behavior	Abort after failure
Time stamp quantization	Off
Connection behavior	Reinitialize automatically
Project working data	APT\Folder\XCP1DonCAN - Copy
Reference Data	Upload\Upload_2
Differences (bytes)	0
Log out behavior	No Automatic Flash Back
ECU Description Handling	ASAP2
Seed'n Key DLL	
Seed'n Key Privileges	0 DMQ, 0 CAL/PAG, 0 STM, 0 PGM
Checksum DLL	
Fast Start	Fast start enabled: No
ECU Connect Mode	NORMAL
Prof Flash Funct	CAN1 (CAN1) / ESS1:1
Confirm page switch	Yes
DAQ optimization	disabled
Project CAN baud rate (Baud)	1250000
Check memory pages at initialization	Always check





### COM-API – New Methods to control the Default Recorder

The new API methods support the date/time, auto increment variables in the recording file name template

- `string IncaOnlineExperiment.GetRecordingFileNameTemplate()`
- `bool IncaOnlineExperiment.SetRecordingFileNameTemplate(string fileNameTemplate)`

The new API methods allow saving the recording files

- ... with the name generated from the file name template
  - `bool Experiment.StopRecordingAndSave()`
  - `bool OnlineExperiment.StopMeasurementAndSave()`
- ... with the specified name (the file name template stays unchanged):
  - `bool Experiment.StopRecordingAndSaveAs(string filePathAndName)`
  - `bool OnlineExperiment.StopMeasurementAndSaveAs(string filePathAndName)`

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## Functionality

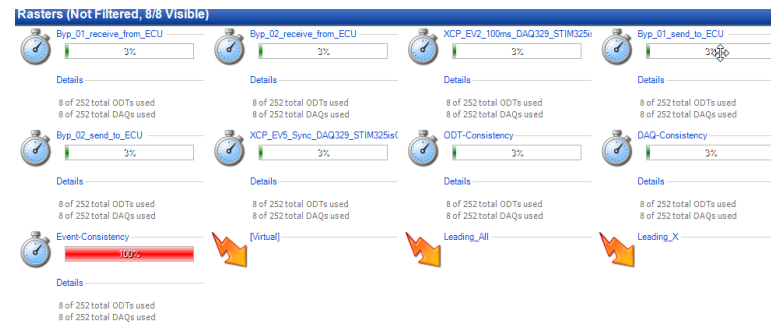
### XCP V1.0 – Minimum Raster Check for Dynamic DAQ

- INCA checks that not more than MAX\_EVENT\_CHANNEL EVENTS can be used in the “Variable Selection Dialog”.
- INCA shows the number of used ODTs and DAQs for each EVENT.



All Sources (Not Filtered, 19007/19007 Visible)

Name	Role	Address	Bytes
element_of_data_folder_will_be_removedGd_Measure		0x155972C	0x[1]
BB_Sm116_P_BB_BM_Test		0x31625	0x2
BB_Sm116_BB_00_Extens_HEFLDM_Test		0x31605	0x2[0]
BB_Sm116_BB_00_Intern_HEFLDM_Test		0x31615	0x2[0]
BB_Sm116_BB_01_Extens_HEFLDM_Test		0x31605	0x2[1]
BB_Sm116_BB_01_Intern_HEFLDM_Test		0x31615	0x2[1]
BB_Sm116_BB_02_Extens_HEFLDM_Test		0x31605	0x2[2]
BB_Sm116_BB_02_Intern_HEFLDM_Test		0x31615	0x2[2]
BB_Sm116_BB_03_Extens_HEFLDM_Test		0x31605	0x2[3]
bl_Sm116_Bit_03_Intern_MEM_Bit_Test		0x11615	0x[3]
bl_Sm116_Bit_04_Extens_MEM_Bit_Test		0x11605	0x[4]
bl_Sm116_Bit_04_Intern_MEM_Bit_Test		0x11615	0x[4]
bl_Sm116_Bit_05_Extens_MEM_Bit_Test		0x11605	0x[5]
bl_Sm116_Bit_05_Intern_MEM_Bit_Test		0x11615	0x[5]
bl_Sm116_Bit_06_Extens_MEM_Bit_Test		0x11605	0x[6]
bl_Sm116_Bit_06_Intern_MEM_Bit_Test		0x11615	0x[6]
bl_Sm116_Bit_07_Extens_MEM_Bit_Test		0x11605	0x[7]
bl_Sm116_Bit_07_Intern_MEM_Bit_Test		0x11615	0x[7]
bl_Sm116_Bit_08_Extens_MEM_Bit_Test		0x11605	0x[8]
bl_Sm116_Bit_08_Intern_MEM_Bit_Test		0x11615	0x[8]
bl_Sm116_Bit_09_Extens_MEM_Bit_Test		0x11605	0x[9]
bl_Sm116_Bit_09_Intern_MEM_Bit_Test		0x11615	0x[9]
bl_Sm116_Bit_10_Extens_MEM_Bit_Test		0x11605	0x[10]
bl_Sm116_Bit_10_Intern_MEM_Bit_Test		0x11615	0x[10]



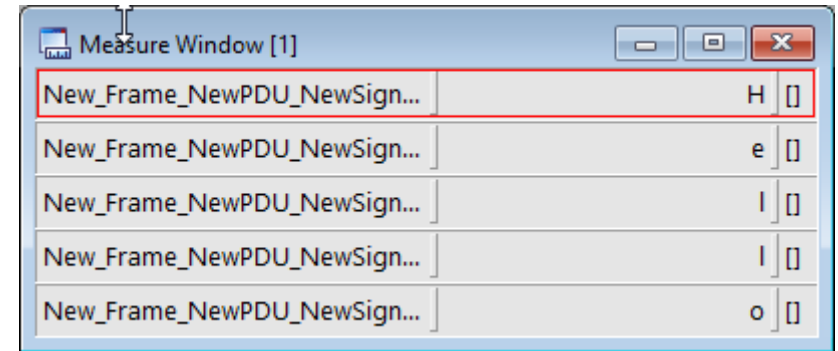
# INCA V7.3-SP7 – What's New

## Functionality



### AUTOSAR – I-SIGNAL Array Support (ISO8859-1 encoding)

- INCA 7.3.3 supports byte arrays with no encoding
- For Autosar COM Transformer based monitoring devices
  - Can(Fd), FlexRay and Ethernet PDU Monitoring
- INCA doesn't support encodings for measurements
  - ISO 8859-1 is a single byte encoding
  - Encoding is mapped on a VTAB compu method in INCA database
  - Compu methods defined in AUTOSAR are ignored for these signals



# INCA V7.3-SP7 – What's New

## Functionality



## Recorder – MDF V4 – Add Signal precision by ASAP2 Format information

### ASAP2 Format

Not all signals need the same precision. To show the needed precision the format information can be used

- INCA adds the format information from the ASAP2 description to the MDF file
- INCA uses the format from the ASAP2 COMPU\_METHOD
- If the ASAP2 file states additional FORMAT information INCA adds this too



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# INCA V7.3-SP7 – What's New



## Hardware Support

### ES850 – Measurement Module for A/D and Thermo Channels

The ES850 extends the ES800 stack with measurement capabilities for 16 A/D and 16 Thermo signals with configurable sample rates of 10 and 100kSamples/s for the A/D channels.



#### Performance

- **Stackable** feature of the ES8xx device family
- **32 Channels** (16 A/D + 16 Thermo) per module
- **100kSamples/s** for the A/D channels
- **1 Gbit/s** data transmission to HOST



#### Standard

- **XCP 1.4 standard support**
  - Support of "Package MODE". It reduces the BUS load by packing the signal values conform to XCP standard
  - Generation of ASAP2 (A2L) description file



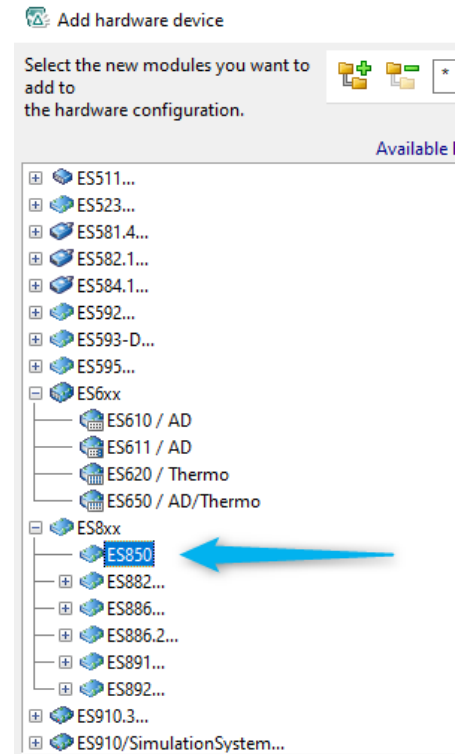
#### Accuracy

- Precise **Time Synchronization** through standard IEEE1588/PTP
- Measurement values synchronized with other signals in the stack
- Correlation and Correction of the sampling time points with the impulse response time
- **Higher accuracy** of 500Hz for the AC voltage measurement



#### Ease of Use

- Device can easily be identified using Config Tool in combination of LED status on the front blend of device
- **Standalone Configuration Tool** + Standalone capability through **Advanced analog and digital filters**

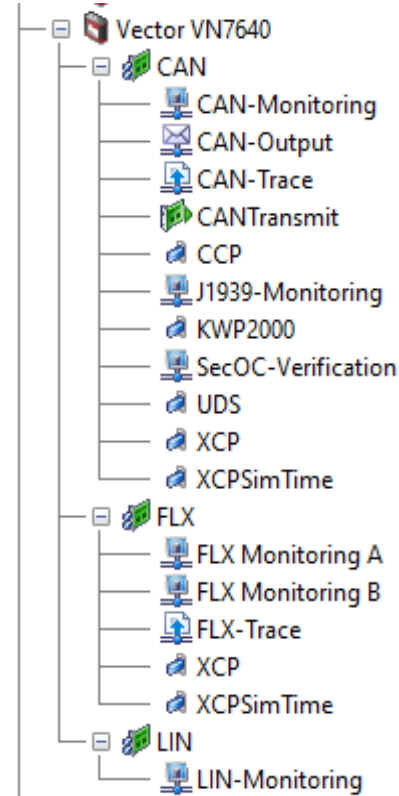


# INCA V7.3-SP7 – What's New

## Hardware Support

### VN7640 Support

- Host interface to PC: Ethernet or USB
- Supported Interfaces: CAN, LIN and FLX
- Maximum number of devices: 4
- Licensing: Only SW Licensing, no Etas Enable Bit available



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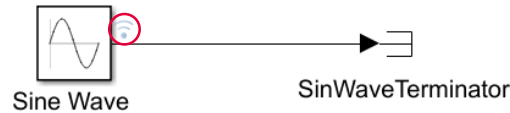
# INCA V7.3-SP7 – What's New

## Add-ons



### INCA-SIP – MDF-Write functionality

With the MDF-Write functionality INCA-SIP can write MDF-files directly out of Simulink<sup>®</sup> using the 'signal logging' feature.



The 'signal logging' data generated by the Simulink<sup>®</sup> model can be written/exported as an MDF-file and afterwards be analysed in MDA.

# INCA V7.3-SP7 – What's New

## Add-ons

### **MATLAB – Support of MATLAB 2021B**

- INCA-SIP & INCA-MIP



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## INCA Product Family



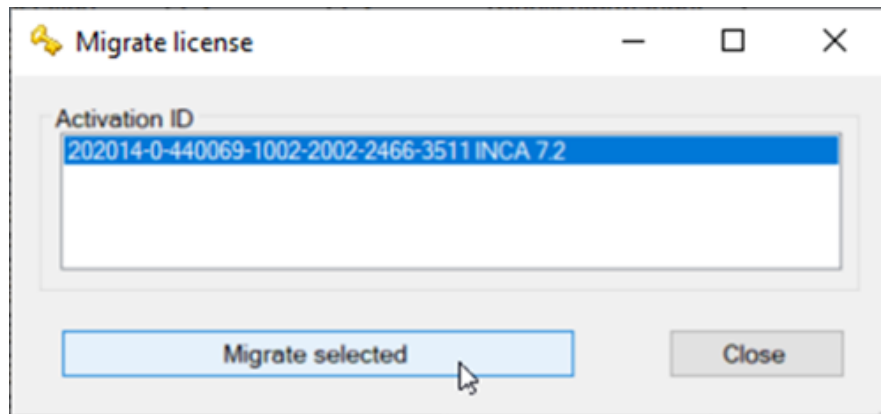
### ETAS License Manager - Migration wizard for new license technology

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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# INCA V7.3-SP7 – What's New

## 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.

# INCA V7.3-SP7 – 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-SP7 – 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.

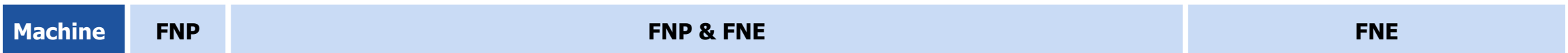
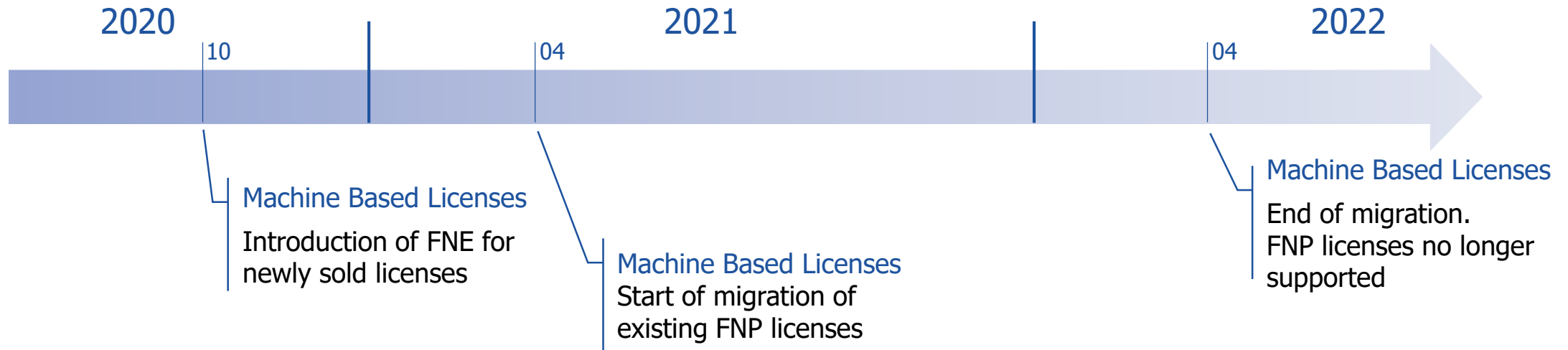
# INCA V7.3-SP7 – What's New



## 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

# INCA V7.3-SP7 – 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)
- Windows Server 2016 64Bit / 2019 64Bit

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



# INCA V7.3-SP7 – What's New



## General Notes

Additionally Installed Components	INCA V7.3
.Net-Runtime-Environment	V4.8 <sup>1)</sup>
VCxRedist (Vcredist_x86 / Vcredist_x64)	VC9 <sup>6)</sup> + VC10 <sup>6)</sup> + VC14 + VC16 <sup>6)</sup>
JAVA SDK Version j2sdk1.4.2_11	X <sup>2)</sup>
Perl V5.30.0	X
ETAS Certificate	X
Direct X	V9 (or higher)
ETASShared	13
Windows 8.1 64Bit	X <sup>3)</sup> 5)
Windows 10 64Bit	X <sup>3)</sup>
Windows Server 2016 64Bit / 2019 64Bit	X <sup>4)</sup>
<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 <a href="#">.NET V4.8</a>)</p> <p>6) INCA V7.3 SP7: VC9, VC10 removed and VC16 added</p>	



Thank you