



INCA V7.3-SP4 – What's New

Changes / Extensions done in this Service Pack

INCA V7.3-SP4 – 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



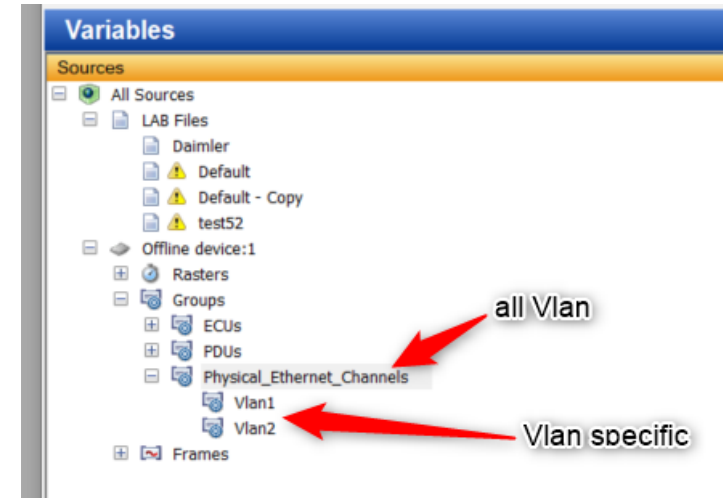
INCA V7.3-SP4 – What's New

Functionality



AUTOSAR - Support of additional group filter

- An Autosar file can describe several physical Ethernet channels in one file.
- The user wants to see only the signals of the physically connected Ethernet cable.
- In the INCA variable selection dialog the user can now filter for the different physical ethernet channel and sees only the corresponding signals.
- Different physical ethernet channel are having different Vlan identifier typically.



INCA V7.3-SP4 – What's New

Functionality



XCP – AUTOSAR Single Pointer Method – single page, checksum by INCA

Supports now

- XCP one page concept
- No original pointer table available

One Page Concept: XCP SET_CAL_PAGE

Different Cal_Groups

Cal_Groups

Single Pointered

CALIBRATION_METHOD AUTOSAR_SINGLE_POINTERED			
Size	Start	End	PointeredTable
0x18	[0x800000 .. 0x800017]		(1 / 6 entries)
Size	Start	End	PoolRAM fill level
0x2000	[0x880000 .. 0x881FFF]		(24 Bytes 0%)
Flash	PoolRAM	Size % Fill	Groupname
0x76567D10	0x880000	0x18	0 P_S32_1_APT_Cal_Measure_PtrTabGrp

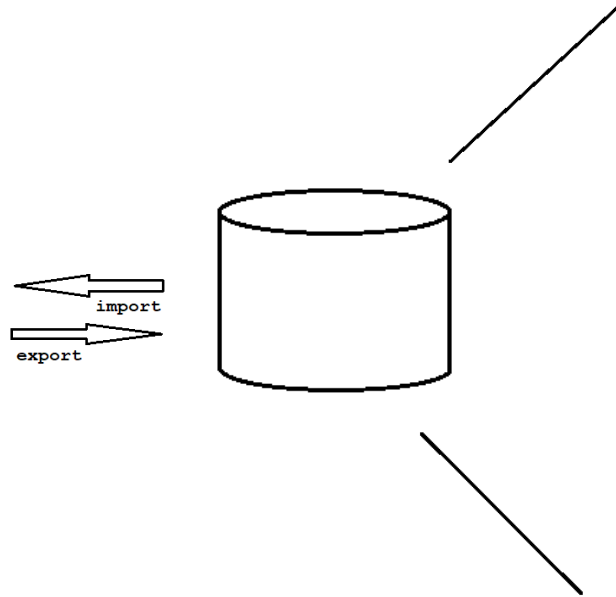
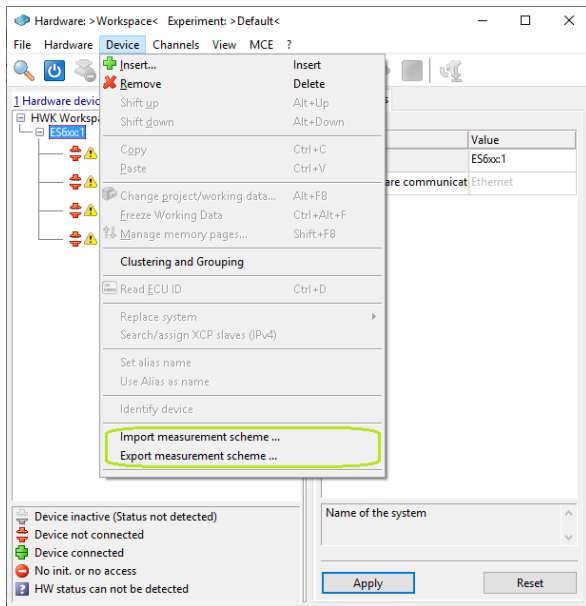
INCA V7.3-SP4 – What's New

Functionality



Import ES6xx module parameters from Excel (CSV)

- Import / Export device parameters
- Import / Export channel parameters



```
Version = 1.0 FieldSeparator = ; FloatSeparator = , Declaration information

#DeviceType;#MItemName;#etasSerialNumber;#MItemAliasName; Device header Device Info 1
ES630;ES610 / AD;1;;;

#Index;#Name;#Unit;#Rate;#FilterFrequencyMode;#FilterFrequency;#PhysMin; ... Channel table
1;AC1_AD2;V;10;predefined;auto;0.0;10.0;0.0;10.0;off;;;0.0;10.0;
2;AC1_AD2;V;10;predefined;auto;0.0;10.0;0.0;10.0;off;;;0.0;10.0;
3;AC1_AD3;V;10;predefined;auto;0.0;10.0;0.0;10.0;off;;;0.0;10.0;
:

#DeviceType;#MItemName;#etasSerialNumber;#MItemAliasName; Device header Device Info 2
ES611;ES611 / AD;1;;;

#Index;#Name;#Unit;#Rate;#FilterFrequencyMode;#FilterFrequency;#PhysMin; ... Channel table
1;AC1_AD2;V;10;predefined;auto;0.0;60.0;0.0;60.0;off;;;0.0;60.0;on;
2;AC1_AD2;V;10;predefined;auto;0.0;60.0;0.0;60.0;off;;;0.0;60.0;on;
3;AC1_AD3;V;10;predefined;auto;0.0;60.0;0.0;60.0;off;;;0.0;60.0;on;
:

#DeviceType;#MItemName;#etasSerialNumber;#MItemAliasName; Device header Device Info 3
ES620;ES620 / Thermo;1;;;

#Index;#Name;#Unit;#Rate;#SensorType;#SensorOffsetMode;#PhysReferenceValue; ... Channel table
1;TCL_Th3;C;1000;K;off;;;0.0;10.0;
2;TCL_Th2;C;1000;K;off;;;0.0;10.0;
3;TCL_Th3;C;1000;K;off;;;0.0;10.0;
4;TCL_Th4;C;1000;K;off;;;0.0;10.0;
:

#DeviceType;#MItemName;#etasSerialNumber;#MItemAliasName; Device header Device Info 4
ES608;ES608 / AD;Thermo;1;;;

#Index;#Name;#Unit;#Rate;#FilterFrequencyMode;#FilterFrequency;#PhysMin; ... Channel table
1;DCL_AD2;V;10;predefined;auto;0.0;10.0;0.0;10.0;off;;;0.0;10.0;
2;DCL_AD2;V;10;predefined;auto;0.0;10.0;0.0;10.0;off;;;0.0;10.0;
3;DCL_AD3;V;10;predefined;auto;0.0;10.0;0.0;10.0;off;;;0.0;10.0;
:
9;DCL_Th1;C;1000;K;off;;;0.0;10.0;K;
10;DCL_Th2;C;1000;K;off;;;0.0;10.0;K;
11;DCL_Th3;C;1000;K;off;;;0.0;10.0;K;
:
```

INCA V7.3-SP4 – What's New

Functionality



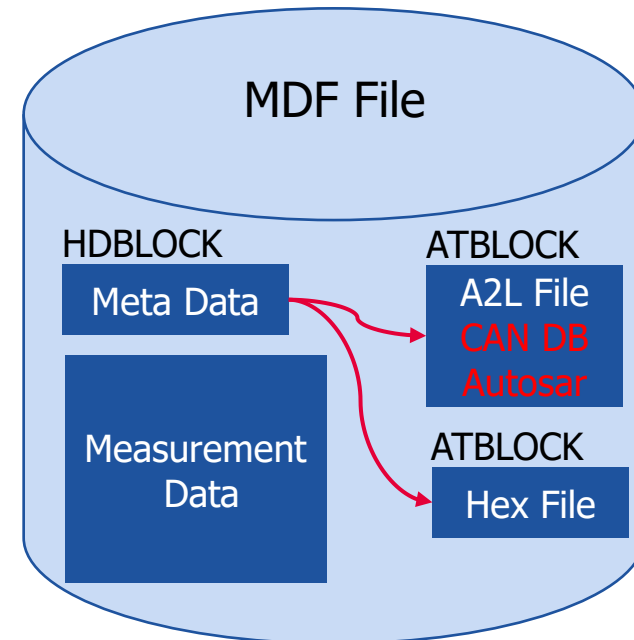
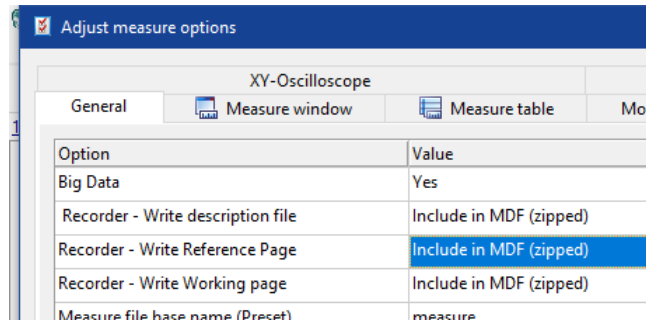
Recorder – Add Calibration Info to support Big Data - Monitoring devices

Add description files to the recorded data on which base the measurement was done

- ECU software description (A2L File)
- Data sets loaded to the ECU (Hex File)
- **New: Bus description files (CAN DB, Autosar)**

With the links in the Meta Data the description files are linked to the related measurements.

INCA adds the description files optionally.



INCA V7.3-SP4 – What's New

Functionality



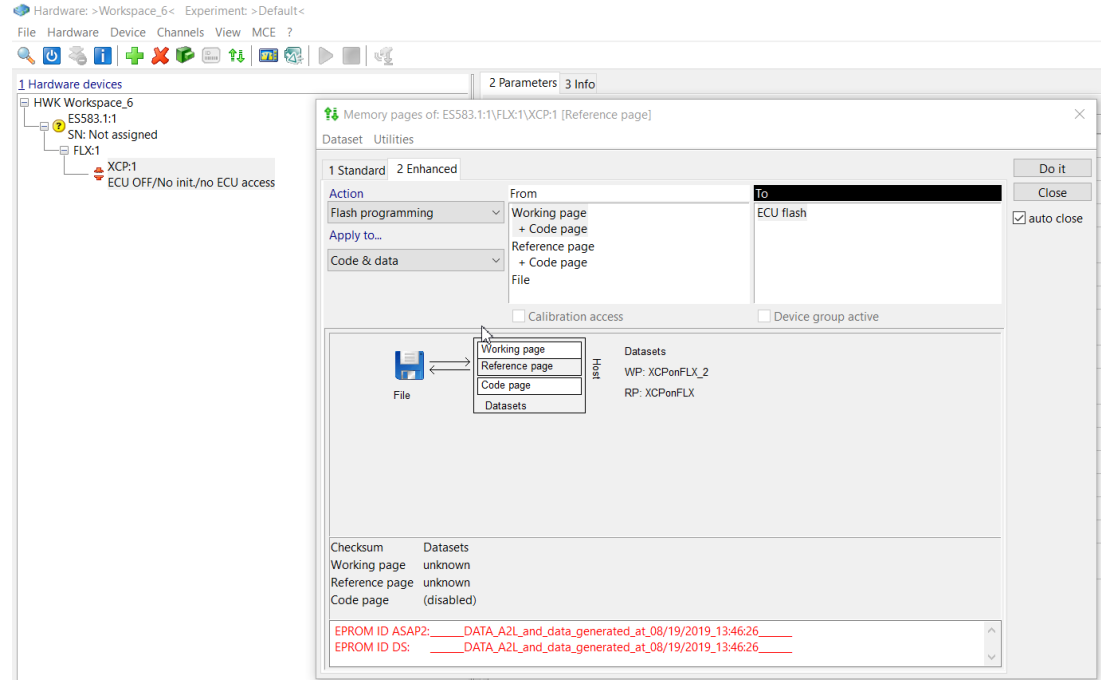
Prof – XCP on FlexRay Flashing

Prerequisites

- A2I file for XCP on FlexRay description
- Autosar file with PDUs and Frames for XCP
- Prof Configuration

Supported XCP communication modes

- XCP handshake mode
- XCP block mode with $MIN_ST_PGM = 0$



INCA V7.3-SP4 – What's New



Functionality

Updated OBD and WWH-OBD ODX projects according to latest SAEJ1979-DA 2019-05:

Mode 1 and 2: New PIDs \$AA - \$B0 and changes to PIDs \$51, \$8B, \$95-9C, \$A4, \$A8

Mode 6: New MIDs \$3E and \$3F and changes to MIDs \$51 - \$54

Mode 6: New Unit and Scaling IDs \$93 and \$AA and changes to IDs \$3D, \$85, \$86, \$8A, \$8D, \$8E, \$FC, \$FD

Mode 8: New Test Routine \$03

Mode 9: New InfoTypes \$40 - \$78 and changes to InfoTypes \$0A and \$18

- All new Mode 1 and Mode 2 PIDs and Mode 9 InfoTypes with physical response values are available as Measurement Signals in the Variable Selection Dialog
- The OBD Window displays all new data (if supported by the vehicle) when used with the new ODX project

The new ODX projects get installed with the INCA-ODX Addon into the folder ETASData\ODX7.3\Projects:

- OBDOnCAN_ETAS_SAEJ1979_2019-05.pdx
- WWH_OBD_ETAS_SAEJ1979_2019-05.pdx
- To use the new functionality, the new ODX projects have to be imported into INCA and assigned to a Workspace with an OBDOnCAN device (or an UDS device for WWH-OBD)

INCA V7.3-SP4 – 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-SP4 – What's New

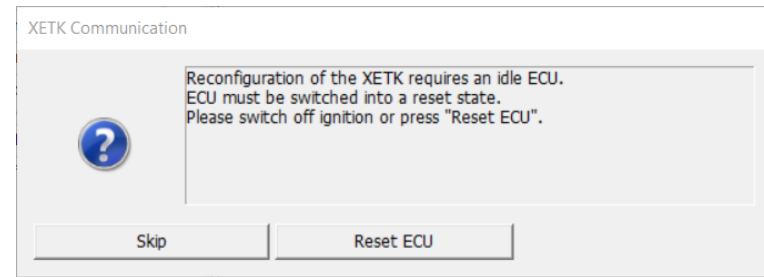
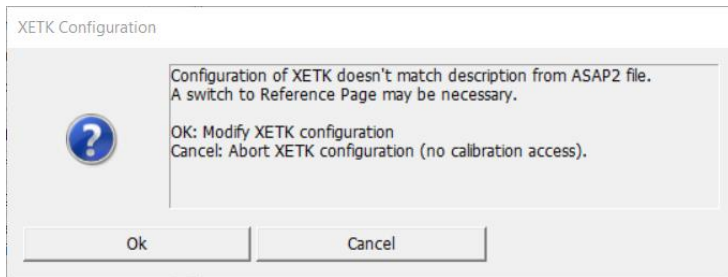


Hardware Support

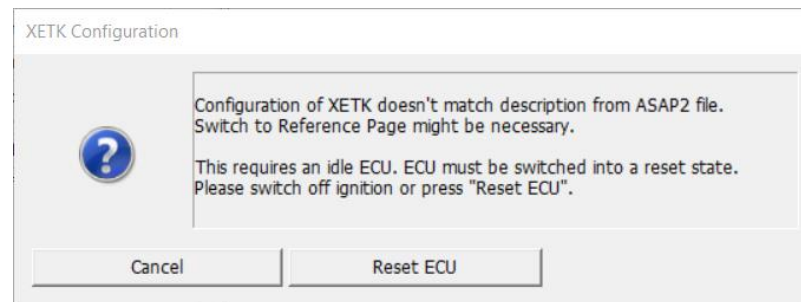
Reconfiguration of XETK/FETK during Hardware Initialization

During hardware initialization a reconfiguration of the connected XETK/FETK might be necessary. This also might require an ECU reset.

- In previous INCA versions the handling of two consecutive dialogs was necessary



- INCA displays only one dialog in that case.



INCA V7.3-SP4 – 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



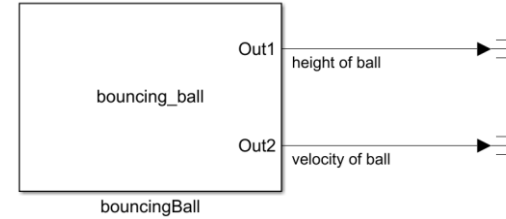
INCA V7.3-SP4 – What's New

Functionality



INCA-SIP - Basic Support of FMU-Blocks

- Masked parameters of FMU blocks in Simulink® models can now be measured and calibrated.
- Due to limitations of the current FMI specification, all parameters are modelled as scalar calibrations in INCA. Multi-dimensional calibration arrays/maps are not supported.
- This feature is supported from MATLAB® 2017B onwards.



Block Parameters: bouncingBall
bouncing_ball [Model Exchange, v2.0]
FMU Block
Simulation of a Bouncing Ball. This is a simulation of a hybrid dynamic system.
[Open FMU Documentation File](#)

Parameters Simulation Input Bus Output Bus

Filter by name or description

Parameter	Value	Unit	Description
Param1	9.81		Param1: Param1: a...
Param2	0.7		Param2: Param2: c...

OK Cancel Help Apply

Calibration Window [1]

bouncingBall.Param1	9.81000	[]
bouncingBall.Param2	1.70000	[]

INCA V7.3-SP4 – 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-SP4 – What's New

Functionality



INCA – Migration of machine based FNP licenses to FNE licenses

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

INCA 7.3 accepts for "PC based" licenses FNE license types in parallel to the existing FNP licenses.

To use the INCA "PC based" licenses also in the future the available FNP licenses can be exchanged by FNE licenses. This can be done online in the INCA license portal.

The possibility to exchange licenses starts now!

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

INCA V7.3-SP4 – What's New

Functionality



Support of Windows Server as OS

INCA^{*)}, MDA and HSP are now installable on Windows Server 2016 / 2019

Usage

- Only one INCA instance can be used at a time
- Only one MDA instance can be used at a time
- Only one HSP instance can be used at a time

^{*)}INCA Flow, INCA RDE is not released for Windows Server

INCA V7.3-SP4 – 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-SP4 – 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

INCA V7.3-SP4 – 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-SP4 – What's New

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-SP4 – 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-SP4 – 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.

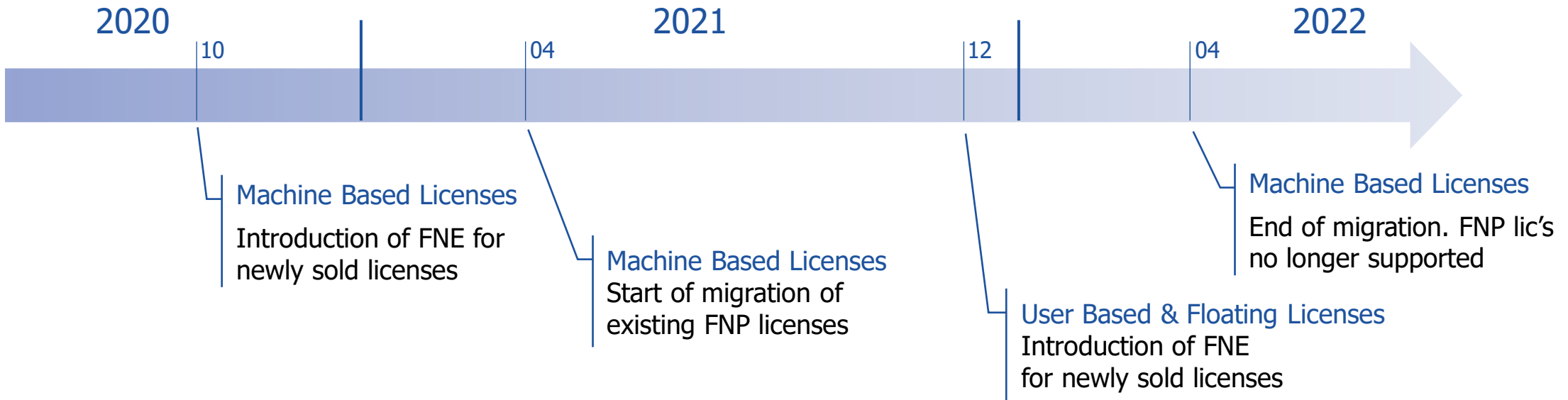
INCA V7.3-SP4 – What's New



Licensing

Shift from FlexNet Publisher to FlexNet Embedded Licenses

Step-by-step migration, for a smooth migration



Machine	FNP	FNP & FNE		FNE
User / Floating		FNP	FNP & FNE	FNE

INCA V7.3-SP4 – 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-SP4 – What's New



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⁾
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>	



Thank you