Installation Xilinx ISE 14.7 und ModelSim PE Student Edition 10.4 auf Windows 10

Vorbemerkungen und Problematik

Download und Lizensierung:

- Die Nutzung der kostenlosen WebPack-Version der FPGA Design Suite Xilinx ISE 14.7 erfordert eine Lizenzdatei, die im Zuge des Softwaredownloads und der anschließenden Installation von Xilinx bereitgestellt wird. Diese besitzt eine unbegrenzte Gültigkeitsdauer. https://www.xilinx.com/products/design-tools/ise-design-suite/ise-webpack.html
- Der VHDL/Verilog-Simulator ModelSim PE Student Edition (aktuelle Version 10.4a) der Fa. Mentor Graphics ist nur als 32-Bit-Version verfügbar. https://www.mentor.com/company/higher_ed/modelsim-student-edition
- ModelSim PE Student Edition erfordert eine Lizenzdatei, die im Zuge des Softwaredownloads und der anschließenden Installation bei Mentor Graphics kostenlos herunter geladen werden kann. Diese Lizenz besitzt eine Gültigkeit von 180 Tagen.
- Die FPGA Design Suite Xilinx ISE 14.7 muss aus Kompatibilitätsgründen ebenfalls in der 32-Bit-Version genutzt werden.
- Vorteile des ModelSim VHDL Simulators gegenüber dem Xilinx ISIM Simulator
 - Strengere Prüfung der VHDL
 - Analoge Signaldarstellung
 - Höhere Geschwindigkeit bei großen Designs?

Nutzung unter Windows 10:

- Die Xilinx ISE 14.7 ist nur für Windows 7 zertifiziert. Für die Nutzung unter Windows 10 sind nach der Installation gegebenefalls manuelle Eingriffe in das Installationsverzeichnis erforderlich.
- Die ModelSim PE Student Edition 10.4a ist unter Windows 10 lauffähig.
- ModelSim PE Student Edition 10.4a ist ein Multi-Language Simulator, d.h. es können sowohl VHDL- als auch Verilog-Projekte simuliert werden, aber keine gemischten VHDL/Verilog-Projekte. Es ist kein Mixed-Language Simulator.

Integration von ModelSim in die Xilinx ISE:

- Xilinx ISE 14.7 ist für die Nutzung der ModelSim PE Student Edition vorbereitet.
- Da ModelSim aber nicht komplett in die Xilinx ISE integriert ist, sind einige manuelle Eingriffe in die Xilinx- und die ModelSim-Umgebung erforderlich, um ein sauberes Zusammenspiel zu ermöglichen.
- Um Xilinx-Projekte mit ModelSim simulieren zu können müssen die Xilinx-Baugruppenbibliotheken in das von ModelSim benötigte ausführbare Format compiliert werden.
 - Dazu greift der Xilinx Simulation Library Compilation Wizard auf Routinen aus der ModelSim PE Installation zu. Dazu müssen beide Programme auf entsprechende Datei-Pfade zugreifen.
 - Leider kann die Xilinx ISE mit dem feinen Namensunterschied zwischen der ModelSim PE (Vollversion) und der ModelSim PE Student Edition im Namen und den zugehörigen Verzeichnissen nicht umgehen. Deshalb ist hierzu die manuelle Manipulation einiger Xilinx-Dateien und der ModelSim.ini erforderlich.

Installation von Xilinx ISE 14.7 WebPack und ModelSim PE Student Edition 10.4a

- 1. Installation von Xilinx ISE 14.7 WebPack
 - 1.1. Download: Full Installer for Windows (TAR/GZIP 6.18 GB)
 - 1.2. Installation: https://www.xilinx.com/support/documentation/sw_manuals/xilinx14_1/iil.pdf Im Installationsprozess sind folgende Eingaben erforderlich:

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	SE Design Suite DSP Edition SE Design Suite System Edition
	C Lab Tools - Standalone Installation
ISE 14.7 Installer	
Welcome Accept License Agreements	Disk Space Required : 17480 MB
-> Select Products to Install Select Installation Options Select Destination Directory	Description of ISE WebPACK
Installation	ISE WebPACK contains the most important tools you need for designing CPLDs and small to medium-sized FPGAs. Includes: ISE Design Tools (w/reduced device support), PlanAhead, Connectivity DSP IP: ChipScope Pro and The Embedded Development Kit will also be installed with WebPACK but are licensed separately (not included in a WebPACK license file).
Copyright (c) 1995-2013 Xilinx, Inc. All rights reserved. XILINX, the Xilinx logo and other designated brands included herein are trademarks of Xilinx, Inc. All other trademarks are the property of their respective ovvers.	

- Auswahl der Installationsoptionen: License Key anfordern

- Die anderen Häkchen können entfernt werder
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💷 ISE 14.7 Installer	- 🗆 X					
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ISE 14.7 Installer Welcome Accept License Agreements Select Products to Install >> Select Installation Options Select Destination Directory Installation	Select/Deselect All Select/Deselect All Cable drivers are required to ensure proper operation of the parallel and USB cables when configuring Xilinx devices. Please disconnect any Xilinx cables from your machine prior to driver installation.					
Copyright (c) 1995-2013 Xilinx, Inc. All rights reserved. XILINX, the Xilinx logo and other designated brands included herein are trademarks of Xilinx, Inc. All other trademarks are the property of their respective owners.						

Xilinx License Configuration Manager
Acquire a License Manage Licenses Borrow/Restore Licenses Return Licenses Internet Settings
Select one of the following options
C Start Nowl - 30 Day Trial (No Bitstream)
© Get Free Vivado/ISE WebPack License
C Start 30 Day Evaluation
C Get My Purchased License(s)
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Get a free Vivado/ISE WebPack license and start using your Xilinx software. You will be taken to the Xilinx website where you can generate a license for Vivado/ISE WebPack. Incense and start using your Xilinx software. You will be taken to the Xilinx website where you can generate a license for Vivado/ISE WebPack. Incense and start using your Xilinx software. You will be taken to the Xilinx website where you can generate a license for Vivado/ISE WebPack. Conce your license file is generated, the "Manage Xilinx Licenses" ta builgo ne to enable you to configure your system to use the license. For more information on Vivado/ISE WebPack, Including suppreted devices and applications, please vist www.xilinx.com. Note: WebPack License using a device contained in WebPACK License und install preference when a bitstream is generated using the WebPACK license is available, the WebPACK License will always be used. To change this, please see Answer Record 34746.

- Es wird ein auf den gerade genutzten PC zugeschnittenes kostenloses Lizenz-File erstellt (notelocked license file).



- Das Lizenz-File wird per Email zugesandt.

1.3. Installation des Lizenz-Files

Variante 1:

Beim ersten Start von Xilinx wird der Xilinx License Configuration Manager geöffnet. Dort unter Load License das Lizenz-File einbinden.

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Instructors: Cick the "Load License" button to either load a response XML file into XLCM to activate your machine for Xilinx tools and IP, or copy a certificate based lennes (Lic Rie) into the local Xilinx directory. Inixia applications automatically detect valid, inde-locked licenses (".k.c) residing in the local Xilinx directory. Load License							
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Variante 2:

=> siehe obige Installationsanleitung

(https://www.xilinx.com/support/documentation/sw_manuals/xilinx14_1/iil.pdf)

Seite 31 (Node Lock License Installation)

Installing Your License Key File

The following subsections describe installing different types of licenses.

Node Lock License Installation

After generating a license file, you will receive an e-mail from 'xilinx notification@entitlenow.com'

- 1. Save the license file attached to the e-mail to a temporary directory on your local
- system. 2. Run the Xilinx License Configuration Manager:
- For Windows: Select Start > All Programs > Xilinx ISE Design Suite 14.1 > Accessories > Manage Xilinx Licenses.
- For Linux: Type x1cm in a command-line shell.
- 3. Click Copy License at the top of the Manage Xilinx Licenses tab.
- 4. Browse to your license file (Xilinx.lic) and click Open.
- This copies the license file to the C:\.Xilinx (Windows) or <Home>/.Xilinx directory of your computer where it will be automatically found by the Xilinx tools.

When the Copy License operation is complete, the table on the Manage Xilinx Licenses tab is updated with licensing information from the license file.

- 7. Click Close to exit the Xilinx License Configuration Manager.
- 1.4. Anpassung der Xilinx Installation an Windows 10

Da Xilinx offiziell nur Windows 7 unterstützt, liefert Xilinx für die Nutzung unter Windows 10 mit dem Support Artikel AR# 62380

ISE Install - Guide to Installing and Running ISE 10.1 or 14.7 on a Windows 8.1 or Window 10 machine

eine ausführliche Anleitung:

https://www.xilinx.com/support/answers/62380.html

Die notwendigen Änderungen beziehen sich aber nur auf die 64-Bit Version des ISE Projekt Navigators und des Plan Ahead Tools. Für die hier genutzte 32-Bit Version sind keine Anpassungen nötig.

- 2. Installation der ModelSim PS Student Edition
 - 2.1. Download, Installation und Lizensierung sind hier beschrieben: <u>https://www.mentor.com/company/higher_ed/modelsim-student-edition</u> Oder hier:

https://www.google.de/url?sa=t&rct=j&q=&esrc=s&source=web&cd=6&ved=0ahUKEwi7pO fVr9vUAhWEvRoKHS-

<u>3AhUQtwIIUDAF&url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3DzdRt0_Oe9s</u> <u>A&usg=AFQjCNFxHb92tusYPqIyWwOyQA6Na7qfUw</u>

Ein paar Bilder aus diesem Prozess:



Der erste Schritt besteht aus einer Anmeldung bei Mentor Graphics. Dann folgt der Download:



Dieser startet automatisch bei Aufruf obiger Adresse.

Installation:



Anschließend startet automatisch die Lizenzbeantragung. Auch hier erscheint wieder ein Anmeldefenster.

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ModelSim PE Student Edition – License Request								
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Address *	Address 2							
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Country * UNITED STATES	Zip/PostCode *							
Please tell us about yourself								
Please specify your University, College, School, or Insti	tute: *							
Are you a Student or Instructor? *								
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If you are a student:								
Please indicate your grade or position: *								
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Das mit folgender Meldung quittiert wird:

Thank you for downloading and installing ModelSim PE Student Edition.

Enclosed is your license key. In order to complete the installation you will need to carry out the FINAL INSTALLATION INSTRUCTIONS detailed below.

NOTE - Please note that this license key will only work on the host computer on which you ran the product installation; it is not transferable to any other computer.

FINAL INSTALLATION INSTRUCTIONS

1) Save the attached file with the name 'student_license.dat' to the top level installation directory for ModelSim PE Student Edition (e.g., c:/modeltech_pe_edu). This is the directory that contains that sub-directory 'win32pe_edu.'

2) Do not edit the file 'student_license.dat' in any way, or the license will not work.

3) You should now be able to run ModelSim PE Student Edition.

2.2. Setzen einer Environment-Variablen auf die ModelSim.ini Datei • MODELSIM Pfad: C: \Modeltech pe edu 10.4a\modelsim.ini

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- 2.3. Schreibrechte für die Modelsim.ini freischalten.
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Im Datei-Explorer => Ansicht => Ordner- und Suchoptionen

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- 2.4. Ergänzende Nacharbeiten an der ModelSim Installation
 - ⇒ Übersetzen der Xilinx Bauelemente-Simulationsbibliotheken in das vom Simulator ModelSim benötigte Format mit dem Xilinx Simulation Library Compilation Wizard:

Start > Alle Apps > Xilinx Design Tools > Simulation Library Compilation Wizard

Achtung:

Es muss der **Simulation Library Compilation Wizard in der** 32-Bit Version genutzt werden.

Erläuterung:

Im Startmenü von Windows 10 werden die Apps nicht mit Verzeichnis-Hierarchie aufgelistet und im Aufrufnamen ist die Information zur 32/64-Bit Version nicht enthalten.



Erst ein Klick mit der **rechten** Maustaste auf den Programmaufruf zeigt den vollständigen Pfad des Programmaufrufs:

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	Withow Simulation Library Compilation Wizard - Indicate the HDLs supported by your simulator Select HDL(b) used for simulation Beth VHDL and Verlog VHDL Verlog Please ensure that simulator is licensed for selected HDL(b). After compilation, the following types of simulations: can be performed - Behavioral Simulation in VHDL - Behavioral Simulation in VHDL - Timeg Simulation in VHDL - Timeg Simulation in VHDL	- Next >	Cancel			





Wichtigster Teil des Protokolls:

Die Fehlerfreiheit der generierten Bibliotheken. Die Warnungen stören nicht.

🚳 Xilinx Simulation Library Compilation Wizard - Start Compilation 🦳 🗆									
Compiling Simulation Libraries									
Restart									
END_COMPILATION_MESSAGES(mti_pe:vhdl:coolrunner)		^							
> Log file 'C:\Xilinx\14.7\ISE_D\$\ISE\vhdl\mti_pe\10.4a\nt/cpld/.cx1.vhdl.coolrunner.cpld.nt.log' general compxlib[vhdl.coolrunner]: 0 error(s), 1 warning(s), 100.00 % complete	ed								
Copying setup file 'modelsim.ini' to 'C:\Xilinx\14.7\ISE_DS\ISE\verilog\mti_pe\10.4a\nt/modelsim.ini'									
* COMPILATION SUMMARY *									
* Simulator used: mti_pe * * Compiled on: Tue Jun 27 13:27:50 2017 *									
······									
* Library Lang Mapped Name(s) Err‡(s) Warn‡(s) *									
* secureip verilog secureip 0 1 *									
* unisim vhdl unisim 0 4 *									
* simprim vhdl simprim 0 3 *									
* xilinxcorelib vhdl xilinxcorelib 0 358 *									
* coolrunner vhdl cpld 0 1 *									
\$		>							
More Info	Ca	ancel							

Die generierten Dateien liegen im folgenden Pfad:

> <mark>C:\Xilinx\14.7\ISE_DS\ISE\vhdl\mti_pe\10.4a\<mark>nt</mark></mark>

Der Protokollauszug enthält u.a. den Text:

WARNING:Compxlib:312 - Output directory

'C:\Xilinx\14.7\ISE_DS\ISE\vhdl\mti_pe\10.4a\nt' does not exist, it will be created. Directory 'C:\Xilinx\14.7\ISE_DS\ISE\vhdl\mti_pe\10.4a\nt' is created.

⇒ In diesem Verzeichnis werden die compilierten Libraries abgelegt!

Library vhdl.unisim will be compiled, because no precompiled info.

--> Compiling vhdl.unisim library ...

> vhdl.unisim library compiled from C:/Xilinx/14.7/ISE_DS/ISE/vhdl/src/unisims

> vhdl.unisim library compiled to C:\Xilinx\14.7\ISE_DS\ISE\vhdl\mti_pe\10.4a\nt/unisim

	Datei Start F	reigeb	en Ansicht						-	× ~ (2)
	← → ~ ↑ 📙	« Lo	kaler Datenträger (C:)	Xilinx > 14.7 >	ISE_DS > ISE > vhdl > mt	i_pe → 10.4a →	nt >	~ Ō	"nt" durchsuchen	Q
l	📌 Schnellzugriff		Name	^	Änderungsdatum	Тур	Größe			
	Desktop	*	📙 cpld		27.06.2017 13:36	Dateiordner				
	Downloads	*	📙 simprim		27.06.2017 13:35	Dateiordner				
1	Dokumente	*	unimacro		27.06.2017 13:34	Dateiordner				
L	Pilder	<u>_</u>	🔄 unisim		27.06.2017 13:34	Dateiordner				
Т	Bilder	7	🔄 xilinxcorelib		27.06.2017 13:36	Dateiordner				
L	a OneDrive									
	📃 Dieser PC									
	DVD-Laufwerk (D:) VI								
	💣 Netzwerk									

Beachte: Falls der Verzeichnisname

C:\Xilinx\14.7\ISE_DS\ISE\vhdl\mti_pe\10.4a\nt64 lautet, wurde der falsche Simulation Library Compilation Wizard (64-Bit Version) genutzt. Mit diesen Dateien kann die 32-Bit ModelSin PE Student Version nicht umgehen.

2.5. Überprüfen der Pfade zu den compilierten Simulationsbibliotheken in der ModelSim.ini Datei: => Pfad: C:\Modeltech_pe_edu_10.4a\modelsim.ini



Falls die Pfade zu den compilierten Simulationsbibliotheken nicht in der C:\Modeltech_pe_edu_10.4a\modelsim.ini angekommen sind, sind sie höchstwahrscheinlich in der Datei: C:\Xilinx\14.7\ISE_DS\ISE\modelsim.ini gelandet

In diesem Fall müssen sie von Hand in die gewünschte Zieldatei übertragen werden. Dabei unbedingt die richtige Position beachten.

- 3. Verknüpfung von ModelSim PE Student Edition mit der Xilinx ISE Entwicklungsumgebung
 - 3.1. In den Projekteinstellungen des zu bearbeitenden Xilinx-Projektes muss ModelSim-PE VHDL als Simulator eingestellt werden.

Pr	oje	ct >	Design Properties		
>	ISE Pro	ject Navig	gator (P.20131013) - C:\Xiilinx_Test\Test1\Test1.xise	Design Properties	×
File	e Edit	View	Project Source Process Tools Window Layout Help	Name: Test	1
1 🗌) 彦 🛙		📑 New Source 🖉 🖉 🖉 🖉 🎘 🔁 🗖 🗁	Location: C:V	Glinx_Test\Test1
Desi	an		🔏 Add Source	Working directory: C:V	(linx_Test\Test1
T#	View: (• 🔯 In	Add Copy of Source	Description:	
	Hierar	chy	New VHDL Library		
8	ė- 📖	xc3s100	Manual Compile Order	Project Settings	
-			Import Custom Compile File List	Property Name	Value
d d				Top-Level Source Type	HDL 🗸
Æ		The vie	Disable Hierarchy Reparsing		
		tou car	Force Hierarchy Reparse	Evaluation Development Board	None Specified 🗸 🗸
		from th		Product Category	All
		using th	Cleanup Project Files	Family	Spartan3 🗸
		Librarie	Archive	Device	XC3S1000
		Lines	Archive	Package	FG320 🗸
		use:	Generate Tcl Script	Speed	-5 🗸
		1	Design Goals & Strategies	Synthesis Tool	XST (VHDL/Verilog)
				Simulator	Modelsim-PE VHDL
	8 C5	o Process	Design Summary/Reports	Preferred Language	VHDL
-			Design Properties	Property Specification in Project Fi	ile Store all values
ΨĘ	No sir	ngle desiğ	n moaule is selected.	Manual Compile Order	
	🖻 - 🎾	Desig	gn Utilities	VHDL Source Analysis Standard	VHDL-93
(The					
2				Enable Message Filtering	
					OK Cancel Help

3.2. Eintragen des Pfades zur Modelsim.exe

> ISE Project Navigator (P.20131013) - C:\Xilinx_Test\Te	Test1\Test1.xise			
File Edit View Project Source Process Tool	ols Window Layout Help			
🚺 🕼 Undo Ctrl+Z	» 🖉 🖉 🖉 🖉 🦉 🖉 Р 🖉 🖉 🦉 🦉 🦉 и			
Design Cal Redo Ctrl+Y				
Cut Ctrl+X				
Copy Ctrl+C				
🔄 🗋 Paste Ctrl+V				
Delete Del				
E Find Ctrl+F		Preferences - Integrated Tools Options		2
Find Next F3		Category	Set the paths for the integrated tools you have installed.	
Find Previous Shift+F3		- Console A	Model Tech Simulator:	
		⊕- ISE General	C:\Modeltech_pe_edu_10.4a\win32pe_edu\modelsim.exe Defa	sult
Show Next Result Ctrl+58		Design Goals & Strategies Editors	Sympliny:	
Show Previous Result Ctrl+Shift+F8		Process Completion Notification	Defa	suit
A Language Templates		- ISE Text Editor	Symplify Pro:	
		RTL/Technology Viewers	Defa	ult
Select All Ctrl+A		- New Object Colors	Predsion:	
Preferences		- Object Colors - User Color Rules	DanAhanda	uit
		Schematic Editor Chack	C:\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	wit
Start RC Deson C Firs C Libraries		Colors Device Families Layout Printing Smed Sizes Symbol Editor Colors Timing Analyzer Web Talk V		
Console			OK Cancel Apply H	Help
			or our reprint	

Edit > Preferences > ISE General Options > Integrated Tools

3.3. Beheben des Versionskonfliktes zwischen der Xilinx ISE und der ModelSim PE Student Edition beim Start des Simulators aus der Xilinx ISE

Die Xilinx ISE 14.7 unterstützt nur die Integration der Vollversion von ModelSim PE. Zur Integration der ModelSim PE Student Version ist ein manueller Eingriff in einige .rpt-Dateien der Xilinx-Installation erforderlich.

Ohne diese manuellen Eingriffe erscheint die folgende Fehlermeldung:

The simulation libraries were compiled for the 'MTI_PE 10.4a' version, but the selected simulator is 'MTI_PE Edition'. Please recompile the libraries for the selected simulator version or change the simulator selection.

Ursache: Die während der Compilierung der Simulationsbibliotheken eingetragene Simulatorversion lautet '10.4a' (als Bestandteil des Stings ' MTI_PE 10.4a'. Der Simulator weist aber den folgenden String auf: 'MTI_PE Edition 10.4a', wodurch beim Aufruf des Simulators als zweites Element des Stings 'Edition' extrahiert wird. Lösung:

In einigen Dateien der compilierten Simulationsbibliotheken müssen die für den Vergleich genutzten Strings von '10.4a' auf 'Edition' geändert werden.



Im folgenden Verzeichnis befinden sich die compilierten Simulationsbibliotheken:

Die gesuchten Dateien lassen sich über die Suchmaske rechts oben finden:

Eingabe in die Suchmaske: *.r	<mark>ot</mark>	
IIII Suchtools *.rpt	- Suchergebnisse in "nt" — 🗆	×
Datei Start Freigeben Ansicht Suchen		~ 🕐
← → ∽ ↑ 🗐 > Suchergebnisse in "nt" >	√ [O]rpt	×
Schnellzugriff Schnellzugriff C:\Xilinx\14.7\ISE_DS\ISE\vh	d.nt.rpt All.nti.pe\10.4a\nt\cpld Typ: RPT-Datei Größe: 637 Bytes	
Downloads Downloads C:\Xilinx\14.7\ISE_DS\ISE\vh	linxcorelib.nt.rpt Änderungsdatum: 27.06.2017 13:36 dl\mti.pe\10.4a\nt\xilinx Typ: RPT-Datei Größe: 707 Bytes Größe: 707 Bytes	
Bilder C:\Xilinx\14.7\ISE_DS\ISE\vh	im.nt.rpt Änderungsdatum: 27.06.2017 13:35 dl\mti.pe\10.4a\nt\simp Typ: RPT-Datei Größe: 646 Bytes	
Dieser PC .cxl.vhdl.secureip_vhdl_ C:\Xilinx\14.7\JSE_DS\JSE.vh	simprim.simprim.nt.rpt Änderungsdatum: 27.06.2017 13:35 dl\mti.pe\10.4a\nt\simp Typ: RPT-Datei Größe: 701 Bytes	
Netzwerk Interpretation Netzwerk Interpretation I	unisim.nt.rpt Anderungsdatum: 27.06.2017 13:34 dl\mti_pe\10.4a\nt\unisi Typ: RPT-Datei Größe: 687 Bytes	
.cxl.vhdl.unisim.unisim. C:\Xilinx\14.7\ISE_DS\\SE\vh	nt.rpt Ånderungsdatum: 27.06.2017 13:34 dl\mti.pe\10.4a\nt\unisi Typ: RPT-Datei Größe: 636 Bytes	
.cxl.vhdl.unimacro.unin C:\Xilinx\14.7\ISE_DS\ISE\vh	acro.nt.rpt Ånderungsdatum: 27.06.2017 13:34 df\mti_pe\10.4a\nt\uni Typ: RPT-Datei Große: 655 Bytes	

Diese Dateien am besten mit einem Editor z.B. Notepad++ öffnen und in Zeile 6 die Simulatorversion von "10.4a" in "Edition" ändern.

C:\Xilinx\14.7\ISE_DS\ISE\vhdl\mti_pe\10.4a\nt\cpld\...xl.vhdl.coolrunner.cpld.nt.rpt - Notepad++

Datei Bearbeiten Suchen Ansicht Kodierung Spachen Einstellungen Werkzeuge Makro Ausführen Erweiterungen Fenster ? change.log 🛛 🔚 .cxl.vhdl.coolrunner.cpld.nt.rpt 🛛 CxlResult:C:\Xilinx\14.7\ISE_DS\ISE\vhdl\mti_pe\10.4a\nt/cpld/.cxl.vhdl.coolrunner.cpld.nt.rpt = ExecutionPlatform = nt , SourceLibrary = coolrum er SourceLibrary = coolrunrer, SourcePath = C:/Xilinx/4.7/ISE_DS/ISE/vhdl/src/iSE/cpld, Simulator = mti_pe, SimulatorVersion = 10.4a CompiledLibrary = cpld, CompiledPath = C:\Xilinx\14.7\ISE_DS\ISE\vhdl\mti_pe\10.4a\nt/cpld, 8 Timestamp = Tue Jun 27 13:27:50 2017 , 10 Time = 1498562870 , Language = vhdl , XilinxBuildNumber = P.20131013 , 13 XilinxVersion = 14.7 LogFile = C:\Xilinx\14.7\ISE_DS\ISE\vhdl\mti_pe\10.4a\nt/cpld/.cxl.vhdl.coolrunner.cpld.nt.log , 14 15 NumOfErrors = 0 16 17 NumOfWarnings = 1 18

Details dazu finden sich unter

- http://www-classes.usc.edu/engr/ee-0 s/201/Fall2011/Running_compxlib_ISE13.1_mti_pe_student_10.0a_USC.pdf in den Punkten 2.16 ... 2.18
- Im Youtube-Video https://youtu.be/YMc9AAOnreQ ab dem Zeitpunkt 4:20

3.4. Viel Erfolg beim Arbeiten mit Xilinx ISE 14.7 und Modelsim PE Student Edition!