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XTP025 (v4.3) October 21, 2013

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**Note:** As of Vivado Design Suite 2013.1, all new Vivado release notes for IP will be handled by answer records. See [http://www.xilinx.com/support/index.html/content/xilinx/en/supportNav/design\\_tools.html](http://www.xilinx.com/support/index.html/content/xilinx/en/supportNav/design_tools.html). XTP025 will continue to document IP updates for ISE Design Suite only.

Xilinx Intellectual Property (IP) cores, including LogiCORE™ IP for the Connectivity, DSP and Embedded application spaces, are provided in the Xilinx Vivado™ Design Suite and ISE® Design Suite software. The Design Suite software enables you to generate these IP on your desktop.

New IP and IP versions are provided in each Design Suite release. Detailed listings of these new IP and IP versions can be accessed on release-specific IP Update information pages linked from the Xilinx.com [Intellectual Property](#) area ([www.xilinx.com/ipcenter/coregen/updates.htm](http://www.xilinx.com/ipcenter/coregen/updates.htm)). The latest Design Suite releases are available from the [Xilinx Download Center](#).

This document contains a listing of release note tables, one for each IP core. Within each release note table you will find a list of links to multiple answer records. Release note information for a particular version of a core is provided in an IP-specific answer record.

A given version of an IP core is intended to be used with a specific version of Design Suite software. The release note tables in xtp025 display the version of Design Suite software which can be used with a particular IP core version.

Please note that this hypertext document is intended for online use only.

["List of IP Cores"](#)

[ISE® CORE Generator™ IP Updates - Installation Instructions](#)

[Archived IP Downloads](#)

["CORE Generator Software Known Issues"](#)

## List of IP Cores

### Automotive

- "CAN"
- "FlexRay™"
- "MOST® NIC"

### AXI Infrastructure

- "AXI4-Stream Interconnect"
- "AXI Bus Function Model (BFM)"
- "AXI Central Direct Memory Access (CDMA)"
- "AXI DataMover"
- "AXI Direct Memory Access (DMA)"
- "AXI Interconnect"
- "AXI Video Direct Memory Access (VDMA)"
- "AXI Virtual FIFO Controller"
- "ChipScope AXI Monitor"

### Communications and Networking

- "Aurora 8B10B for Virtex®-4 FPGA"
- "Aurora 8B10B (AXI)"
- "Aurora 8B10B"
- "Aurora 64B/66B"
- "General Framing Procedure (GFP)"
- "Tri-Mode Ethernet MAC"
- "Gigabit Ethernet MAC"
- "Ethernet 1000BASE-X PCS/PMA or SGMII"
- "QSGMII"
- "10-Gigabit Ethernet MAC"
- "10-Gigabit Ethernet PCS/PMA (10GBASE-R/10GBASE-KR)"
- "RXAUI"
- "XAUI"
- "Embedded Tri-Mode Ethernet MAC Wrapper (Virtex-4 FX Family)"
- "Virtex-5 FPGA Embedded Tri-Mode Ethernet MAC Wrapper"
- "Virtex-6 FPGA Embedded Tri-Mode Ethernet MAC Wrapper"
- "Ethernet Statistics"
- "Ethernet AVB Endpoint"
- "Fibre Channel Pt. to Pt."
- "Fibre Channel Arbitrated Loop"
- "SPI-3 PHY"
- "SPI-3 Link Layer Interface, Multi-channel"
- "SPI-4.2"

### DSP Digital Communications

- "3GPP Downlink Chip Rate"
- "3GPP LTE Channel Estimator"
- "3GPP LTE MIMO Decoder"
- "3GPP LTE MIMO Encoder"
- "3GPP LTE Turbo Decoder"
- "3GPP LTE Turbo Encoder"
- "3GPP RACH Preamble Detector"
- "3GPP Searcher"
- "3GPP Turbo Convolutional Code Decoder"
- "3GPP Turbo Convolutional Code Encoder"
- "3GPP2 Turbo Convolutional Code Decoder"
- "3GPP2 Turbo Convolutional Code Encoder"
- "802.16E Convolutional Turbo Code (CTC) Decoder"
- "802.16E Convolutional Turbo Code (CTC) Encoder"
- "Additive White Gaussian Noise Generator (AWGN)"
- "Convolutional Encoder"

- "Digital Pre-Distortion (DPD) (AXI)"
- "DVB-S.2 FEC Encoder"
- "G.975.1 EFEC 1.7 Encoder/Decoder"
- "JESD204"
- "Interleaver/De-interleaver"
- "LDPC 802.16 Encoder"
- "LTE Fast Fourier Transform (FFT)"
- "LTE DL Channel Encoder"
- "LTE UL Channel Decoder"
- "LTE UL PUCCH Receiver"
- "LTE RACH Detector"
- "Mixed Mode Turbo Decoder (AXI)"
- "Peak Cancellation Crest Factor Reduction"
- "Reed-Solomon Decoder"
- "Reed-Solomon Encoder"
- "Turbo Product Code (TPC) Decoder"
- "Viterbi Decoder"

### DSP Horizontal

- "Accumulator"
- "Adder/Subtractor"
- "Binary Counter"
- "Cascaded Integrator Comb Compiler (CIC Compiler)"
- "Complex Multiplier"
- "CORDIC"
- "Direct Digital Synthesizer Compiler (DDS Compiler)"
- "Divider"
- "Discrete Fourier Transform (DFT)"
- "DSP48 Macro"
- "DUC/DDC Compiler"
- "Fast Fourier Transform (FFT)"
- "FIR Compiler"
- "Floating-Point Operator"
- "Multiplier"
- "Multiply Accumulator (MACC)"
- "Multiply Adder"
- "RAM-based Shift Register"
- "Sine Cosine Look-Up Table (Sin Cos LUT)"
- "VLYNQ™"

### DSP MVI

- "Asynchronous Sample Rate Converter"
- "AXI4-Stream to Video Out"
- "Chroma Resampler"
- "Color Correction Matrix"
- "Color Filter Array Interpolation"
- "Defective Pixel Correction"
- "DisplayPort"
- "Gamma Correction"
- "H.264 Deblocking Filter"
- "H.264 CABAC Encoder"
- "H.264 Motion Estimation Engine"
- "Image Characterization"
- "Image Edge Enhancement"
- "Image Noise Reduction"
- "Image Processing Pipeline"
- "Image Statistics Engine"

## List of IP Cores (continued)

- "Motion Adaptive Noise Reduction"
- "MPEG-4 Part 2 Simple Profile Decoder (MPEG-4 Part 2 SP)"
- "MPEG-4 Part 2 Simple Profile Encoder (MPEG-4 Part 2 SP)"
- "Object Segmentation"
- "RGB to YCrCb Color-Space Converter (RGB2YCrCb)"
- "SMPTE SD/HD/3G-SDI"
- "SMPTE2022-5/6 Video Over IP Receiver"
- "SMPTE2022-5/6 Video Over IP Transmitter"
- "Spartan-6 FPGA Triple-Rate SDI"
- "Virtex-6 FPGA Triple-Rate SDI"
- "Video Deinterlacer (AXI)"
- "Video Deinterlacer"
- "Video Into AXI4-Stream"
- "Video Scaler"
- "Video Timing Controller"
- "Video Direct Memory Access"
- "Video On-Screen Display"
- "YCrCb to RGB Color-Space Converter (YCrCb2RGB)"

### Embedded

- "Embedded IP"
- "MicroBlaze Microprocessor Control System"

### FPGA Features and Design

- "7 Series FPGA Transceiver Wizard"
- "Clocking Wizard"
- "RocketIO™ GT11 Transceiver Wizard (Virtex-4 FX Family)"
- "RocketIO GTP Transceiver Wizard (Virtex-5 LXT or SXT Platform)"
- "RocketIO GTX Transceiver Wizard (Virtex-5 FXT Platform)"
- "Soft Error Mitigation"
- "Virtex-6 FPGA GTX Transceiver Wizard"
- "Virtex-6 FPGA GTH Transceiver Wizard"
- "SelectIO Interface Wizard"

- "Spartan-6 FPGA GTP Transceiver Wizard"
- "System Monitor Wizard"
- "XADC Wizard"

### Memories and Storage Elements

- "Block Memory Generator"
- "Content Addressable Memory (CAM)"
- "Distributed Memory Generator"
- "FIFO Generator"
- "Packet Queue"
- "Memory Interface Generator (MIG) 7 Series"
- "Memory Interface Generator (MIG) Virtex-6 and Spartan-6"
- "Memory Interface Generator (MIG)"

### Standard Bus Interfaces

- "7 Series Integrated Block for PCI Express"
- "AXI Bridge for PCI Express"
- "Virtex-7 FPGA Gen3 Integrated Block for PCI Express"
- "Virtex-6 FPGA Integrated Block for PCI Express"
- "Spartan-6 FPGA Integrated Block for PCI Express"
- "Endpoint Block Plus Wrapper for PCI Express"
- "Endpoint Block Wrapper for PCI Express"
- "Endpoint for PCI Express (Soft IP Implementation)"
- "Endpoint PIPE for PCI Express (Soft IP Implementation)"
- "Initiator/Target for PCI™ v3"
- "Initiator/Target for PCI v4"
- "Initiator/Target for PCI-X™ v5"
- "Initiator/Target for PCI-X v6 (Virtex-5 FPGA)"
- "UCF Generator for PCI/PCI-X"
- "Serial RapidIO"
- "Serial RapidIO Gen2"

### Wireless

- "CPRI™"
- "OBSAI"

## CORE Generator Software Known Issues

Release Version	Release Note
13.x	<a href="#">40493</a>
12.1	<a href="#">35214</a>
11.3	<a href="#">32288</a>
11.2	<a href="#">32288</a>
11.1	<a href="#">32288</a>
10.1	<a href="#">30291</a>
9.2i	<a href="#">29193</a>
9.1i	<a href="#">24408</a>
8.2i	<a href="#">23396</a>
8.1i	<a href="#">22609</a>
7.1i	<a href="#">20491</a>

## Automotive IP

### CAN

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Version	Release Note	Initial Release	Date
v5.0	<a href="#">54449</a>	Vivado 2013.1	April 3, 2013
v4.1	<a href="#">37994</a>	12.3	October 5, 2010
v3.2	<a href="#">35176</a>	12.1	May 3, 2010
v2.1	<a href="#">32262</a>	11.1	April 27, 2009
v1.5	<a href="#">25451</a>	9.2i IP Update 1	August 15, 2007
v1.4	<a href="#">23876</a>	8.2i IP Update 2	October 3, 2006
v1.3	<a href="#">22342</a>	8.1i IP Update 1	January 18, 2006
v1.2*	<a href="#">22412</a>	7.1i IP Update 3	August 31, 2005
v1.1	<a href="#">21937</a>	7.1i IP Update 3	August 31, 2005

*\*v1.2 was an asynchronous update also released for 7.1i IP Update 3.*

### FlexRay™

**Note:** This core has been discontinued.

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Version	Release Note	Initial Release	Date
v1.1	<a href="#">25142</a>	9.1i IP Update 3	May 2007

### MOST® NIC

**Note:** This core has been discontinued. Use the XPS version available in EDK.

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Version	Release Note	Initial Release	Date
v1.4	<a href="#">31555</a>	10.1 IP Update 3	September 19, 2008
v1.2	<a href="#">25452</a>	9.2i IP Update 1	August 2007
v1.1	<a href="#">25141</a>	9.1i IP Update 3	May 2007

## AXI Infrastructure

### AXI4-Stream Interconnect

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Version	Release Note	Initial Release	Date
v1.1	<a href="#">54813</a>	Vivado 2013.1	April 3, 2013
v1.1	<a href="#">47407</a>	14.2	July 25, 2012
v1.0	<a href="#">47407</a>	14.1	May 8, 2012

### AXI Bus Function Model (BFM)

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Version	Release Note	Initial Release	Date
v4.0	<a href="#">54678</a>	Vivado 2013.1	April 3, 2013
v2.1	<a href="#">47649</a>	14.1/Vivado 2012.1	May 8, 2012

### AXI Central Direct Memory Access (CDMA)

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Version	Release Note	Initial Release	Date
v4.0	<a href="#">54685</a>	Vivado 2013.1	April 3, 2013
v3.03.a	<a href="#">47650</a>	14.1	May 8, 2012

### AXI DataMover

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Version	Release Note	Initial Release	Date
v5.0	<a href="#">54684</a>	Vivado 2013.1	April 3, 2013
v4.02.a	<a href="#">47651</a>	14.3/Vivado 2012.3	October 23, 2012
v4.01.a	<a href="#">47651</a>	14.2	July 25, 2012
v3.0.a	<a href="#">47651</a>	14.1	May 8, 2012

### AXI Direct Memory Access (DMA)

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Version	Release Note	Initial Release	Date
v7.0	<a href="#">54682</a>	Vivado 2013.1	April 3, 2013
v.6.02.a	<a href="#">47652</a>	14.3/Vivado 2012.3	October 23, 2012
v6.01.a	<a href="#">47652</a>	14.2	July 25, 2012
v6.0.a	<a href="#">47652</a>	14.1	May 8, 2012

### AXI Interconnect

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Version	Release Note	Initial Release	Date
v1.06.a	<a href="#">54453</a>	Vivado 2013.1	April 3, 2013
v1.06.a	<a href="#">47653</a>	14.1/Vivado 2012.1	May 8, 2012

## AXI Video Direct Memory Access (VDMA)

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Version	Release Note	Initial Release	Date
v6.0	<a href="#">54448</a>	Vivado 2013.1	April 3, 2013
v5.03.a	<a href="#">47654</a>	14.3/Vivado 2012.3	October 23, 2012
v5.02.a	<a href="#">47654</a>	14.2	July 25, 2012
v5.01.a	<a href="#">47654</a>	14.1	May 8, 2012

## AXI Virtual FIFO Controller

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Version	Release Note	Initial Release	Date
v2.0	<a href="#">54809</a>	Vivado 2013.1	April 3, 2013
v1.1	<a href="#">47655</a>	14.2/Vivado 2012.2	June 25, 2012

## ChipScope AXI Monitor

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Version	Release Note	Initial Release	Date
v3.05.a	<a href="#">47656</a>	14.2	July 25, 2012
v5.01.a	<a href="#">47656</a>	14.1	May 8, 2012

## Communications and Networking

### Aurora 8B10B for Virtex®-4 FPGA

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Version	Release Note	Initial Release	Date
v3.1	<a href="#">32234</a>	11.1	April 27, 2009
v3.0	<a href="#">31521</a>	10.1 IP Update 3	September 19, 2008
v2.9	<a href="#">31396</a>	10.1 Initial IP Update	March 24, 2008
v2.8	<a href="#">29367</a>	9.2i IP Update 2	October 17, 2007
v2.7	<a href="#">25067</a>	9.1i IP Update 3	May 17, 2007
v2.6	<a href="#">24596</a>	9.1i IP Update 1	March 5, 2007

### Aurora 8B10B (AXI)

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Version	Release Note	Initial Release	Date
v9.0	<a href="#">54368</a>	Vivado 2013.1	April 3, 2013
v8.3	<a href="#">52311</a>	14.3/Vivado 2012.3	October 23, 2012
v8.2	<a href="#">44596</a>	Vivado 2012.2	July 25, 2012
v8.1	<a href="#">47702</a>	14.1/Vivado 2012.1	May 8, 2012
v7.1	<a href="#">44596</a>	13.3	October 26, 2011
v6.2	<a href="#">42586</a>	13.1	March 1, 2011
v6.1	<a href="#">38409</a>	12.3	October 5, 2010

### Aurora 8B10B

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Version	Release Note	Initial Release	Date
v5.3	<a href="#">45672</a>	13.4	January 18, 2012
v5.2	<a href="#">42585</a>	12.2	July 23, 2010
v5.1	<a href="#">35372</a>	12.1	May 3, 2010
v4.2	<a href="#">32745</a>	11.2	June 24, 2009
v4.1	<a href="#">32235</a>	11.1	April 27, 2009
v3.0	<a href="#">31084</a>	10.1 IP Update 2	June 27, 2008
v2.9	<a href="#">30781</a>	10.1 Initial IP Update	March 24, 2008
v2.8	<a href="#">29368</a>	9.2i IP Update 2	October 17, 2007
v2.7	<a href="#">25068</a>	9.1i IP Update 3	May 17, 2007
v2.6	<a href="#">24595</a>	9.1i IP Update 1	March 5, 2007

### Aurora 64B/66B

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Version	Release Note	Initial Release	Date
v8.0	<a href="#">54367</a>	Vivado 2013.1	April 3, 2013
v7.3	<a href="#">52313</a>	14.3/Vivado 2012.3	October 23, 2012



Version	Release Note	Initial Release	Date
v7.2	<a href="#">50615</a>	Vivado 2012.2	July 25, 2012
v7.1	<a href="#">47704</a>	14.1/Vivado 2012.1	May 8, 2012
v6.2	<a href="#">45671</a>	13.4	January 18, 2012
v6.1	<a href="#">42804</a>	13.2	July 6, 2011
v4.2	<a href="#">42624</a>	13.1	March 1, 2011
v4.1	<a href="#">35371</a>	12.1	May 3, 2010
v3.1	<a href="#">33248</a>	11.3	September 16, 2009
v2.1	<a href="#">32233</a>	11.1	April 27, 2009
v1.3	<a href="#">31520</a>	10.1 IP Update 3	September 19, 2008
v1.2	<a href="#">31085</a>	10.1 IP Update 2	June 27, 2008
v1.1	<a href="#">30670</a>	10.1 Initial IP Update	March 25, 2008

## General Framing Procedure (GFP)

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Version	Release Note	Initial Release	Date
v2.1.1	<a href="#">30640</a>	10.1 IP Update 3	September 19, 2008
v2.1	<a href="#">30640</a>	10.1 IP Update 1	April 25, 2008

## Soft Error Mitigation

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Version	Release Note	Initial Release	Date
v4.0	<a href="#">54642</a>	Vivado 2013.1	April 3, 2013
v3.5	<a href="#">44541</a>	14.5	April 3, 2013
v3.4	<a href="#">44541</a>	14.4	December 18, 2012
v3.3	<a href="#">44541</a>	14.2	October 23, 2012
v3.2	<a href="#">44541</a>	14.1	May 8, 2012
v3.1	<a href="#">44541</a>	13.3	October 26, 2011
v2.1	<a href="#">42519</a>	13.2	July 6, 2011
v1.3	<a href="#">40444</a>	13.1	March 1, 2011
v1.2	<a href="#">39372</a>	12.4	December 20, 2010
v1.1	<a href="#">37934</a>	12.3	October 5, 2010

## Tri-Mode Ethernet MAC

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Version	Release Note	Initial Release	Date
v6.0	<a href="#">54251</a>	Vivado 2013.1	April 3, 2013
v5.5	<a href="#">47695</a>	14.4/Vivado 2012.4	December 18, 2012
v5.4	<a href="#">47695</a>	14.2/Vivado 2012.2	July 25, 2012
v5.3	<a href="#">47695</a>	14.1	May 8, 2012
v5.2	<a href="#">45707</a>	13.4	January 18, 2012
v5.1	<a href="#">40624</a>	13.1	March 1, 2011

Version	Release Note	Initial Release	Date
v4.6	<a href="#">47694</a>	14.1	May 8, 2012
v4.5	<a href="#">40623</a>	13.1	March 1, 2011
v4.4	<a href="#">35279</a>	12.1	April 23, 2010
v4.3	<a href="#">33307</a>	11.3	September 16, 2009
v4.2	<a href="#">32762</a>	11.2	June 24, 2009
v4.1	<a href="#">32204</a>	11.1	April 27, 2009
v3.5	<a href="#">30146</a>	10.1 Initial IP Update	March 24, 2008
v3.4	<a href="#">25488</a>	9.2i IP Update 1	August 15, 2007
v3.31	<a href="#">24591</a>	9.1i IP Update 2	April 2, 2007
v3.3	<a href="#">24591</a>	9.1i IP Update 1	March 5, 2007
v3.2	<a href="#">23921</a>	8.2i IP Update 2	October 3, 2006
v3.1	<a href="#">23500</a>	8.2i IP Update 1	July 19, 2006
v2.2	<a href="#">22328</a>	8.1i IP Update 1	January 18, 2006
v2.1	<a href="#">21044</a>	7.1i IP Update 1	May 12, 2005
v1.2	<a href="#">19882</a>	6.3i IP Update 3	September 30, 2004

## Gigabit Ethernet MAC

**Note:** This core has been discontinued.

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Version	Release Note	Initial Release	Date
v8.5	<a href="#">32205</a>	11.1	April 27, 2009
v8.4	<a href="#">30145</a>	10.1 Initial IP Update	March 24, 2008
v8.3	<a href="#">25487</a>	9.2i IP Update 1	August 15, 2007
v8.2.1	<a href="#">23919</a>	9.1i IP Update 2	April 2, 2007
v8.2	<a href="#">23919</a>	9.1i IP Update 1	March 5, 2007
v8.1	<a href="#">23919</a>	8.2i IP Update 2	October 3, 2006
v8.0	<a href="#">23498</a>	8.2i IP Update 1	July 19, 2006
v7.0	<a href="#">22326</a>	8.1i IP Update 1	January 18, 2006
v6.0	<a href="#">21043</a>	7.1i IP Update 1	May 12, 2005
v5.0	<a href="#">19878</a>	6.3i IP Update 3	September 30, 2004

## Ethernet 1000BASE-X PCS/PMA or SGMII

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Version	Release Note	Initial Release	Date
v12.0	<a href="#">54667</a>	Vivado 2013.1	April 3, 2013
v11.5	<a href="#">47524</a>	14.4/Vivado 2012.4	December 18, 2012
v11.4	<a href="#">47524</a>	14.2/Vivado 2012.2	July 25, 2012
v11.3	<a href="#">47524</a>	14.1	May 8, 2012
v11.2	<a href="#">45677</a>	13.4	January 18, 2012
v11.1	<a href="#">40625</a>	13.1	March 1, 2011
v10.5	<a href="#">36674</a>	12.2	July 23, 2010

Version	Release Note	Initial Release	Date
v10.4	<a href="#">35280</a>	12.1	April 23, 2010
v10.3	<a href="#">33306</a>	11.3	September 16, 2009
v10.2	<a href="#">32761</a>	11.2	June 24, 2009
v10.1	<a href="#">32206</a>	11.1	April 27, 2009
v9.1	<a href="#">30144</a>	10.1 Initial IP Update	March 24, 2008
v9.0	<a href="#">25486</a>	9.2i IP Update 1	August 15, 2007
v8.1.1	<a href="#">24590</a>	9.1i IP Update 2	April 2, 2007
v8.1	<a href="#">24590</a>	9.1i IP Update 1	March 5, 2007
v8.0	<a href="#">24041</a>	8.2i IP Update 2 Virtex-5 LXT Supplement	October 26, 2006
v7.1	<a href="#">23502</a>	8.2i IP Update 1	July 19, 2006
v7.0	<a href="#">22327</a>	8.1i IP Update 1	January 18, 2006
v6.0	<a href="#">21045</a>	7.1i IP Update 1	May 12, 2005
v5.0	<a href="#">19880</a>	6.3i IP Update 3	September 30, 2004

## QSGMII

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Version	Release Note	Initial Release	Date
v2.0	<a href="#">54668</a>	Vivado 2013.1	April 3, 2013
v1.4	<a href="#">45711</a>	14.3/2012.3	October 23, 2012
v1.3	<a href="#">45711</a>	14.2/Vivado 2012.2	July 25, 2012
v1.2	<a href="#">45711</a>	14.1	May 8, 2012
v1.1	<a href="#">45711</a>	13.4	January 18, 2012

## 10-Gigabit Ethernet MAC

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Version	Release Note	Initial Release	Date
v12.0	<a href="#">54252</a>	Vivado 2013.1	April 3, 2013
v11.6	<a href="#">47697</a>	14.5	April 3, 2013
v11.5	<a href="#">47697</a>	2012.4	December 18, 2012
v11.4	<a href="#">47697</a>	14.2/Vivado 2012.2	July 25, 2012
v11.3	<a href="#">47697</a>	14.1	May 8, 2012
v11.2	<a href="#">44476</a>	13.3	October 26, 2011
v11.1	<a href="#">40628</a>	13.1	March 1, 2011
v10.3	<a href="#">47696</a>	14.1	May 8, 2012
v10.2	<a href="#">40627</a>	13.1	March 1, 2011
v10.1	<a href="#">35244</a>	12.1	April 23, 2010
v9.3	<a href="#">33304</a>	11.3	September 16, 2009
v9.2	<a href="#">32764</a>	11.2	June 24, 2009
v9.1	<a href="#">32207</a>	11.1	April 27, 2009
v8.6	<a href="#">31513</a>	10.1 IP Update 3	September 19, 2008

Version	Release Note	Initial Release	Date
v8.5	<a href="#">30965</a>	10.1 IP Update 2	June 27, 2008
v8.4	<a href="#">30142</a>	10.1 Initial IP Update	March 24, 2008
v8.3	<a href="#">25456</a>	9.2i IP Update 1	August 15, 2007
v8.2	<a href="#">24588</a>	9.1i IP Update 1	March 5, 2007
v8.1	<a href="#">23920</a>	8.2i IP Update 2	October 3, 2006
v8.0	<a href="#">23501</a>	8.2i IP Update 1	July 19, 2006
v7.0	<a href="#">22330</a>	8.1i IP Update 1	January 18, 2006
v6.0	<a href="#">21046</a>	7.1i IP Update 1	May 12, 2005
v5.0	<a href="#">19879</a>	6.3i IP Update 3	September 30, 2004

## 10-Gigabit Ethernet PCS/PMA (10GBASE-R/10GBASE-KR))

[Product Page](#)

Version	Release Note	Initial Release	Date
v3.0	<a href="#">54669</a>	Vivado 2013.1	April 3, 2013
v2.6	<a href="#">47698</a>	14.4/2012.4	December 18, 2012
v2.5	<a href="#">47698</a>	14.3/Vivado 2012.3	October 23, 2012
v2.4	<a href="#">47698</a>	14.2/Vivado 2012.2	July 25, 2012
v2.3	<a href="#">47698</a>	14.1	May 8, 2012
v2.2	<a href="#">44477</a>	13.3	October 26, 2011
v2.1	<a href="#">40629</a>	13.1	March 1, 2011
v1.2	<a href="#">35267</a>	12.1	April 23, 2010
v1.1	<a href="#">33738</a>	11.4	December 2, 2009

## RXAUI

[Product Page](#)

Version	Release Note	Initial Release	Date
v3.0	<a href="#">54249</a>	Vivado 2013.1	April 3, 2013
v2.4	<a href="#">47692</a>	14.3/Vivado 2012.3	October 23, 2012
v2.3	<a href="#">47692</a>	14.1	May 8, 2012
v2.2	<a href="#">45706</a>	13.4	January 18, 2012
v2.1	<a href="#">40630</a>	13.1	March 1, 2011
v1.2	<a href="#">35243</a>	12.1	April 23, 2010
v1.1	<a href="#">33311</a>	11.3	September 16, 2009

## XAUI

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Version	Release Note	Initial Release	Date
v11.0	<a href="#">54666</a>	Vivado 2013.1	April 3, 2013
v10.4	<a href="#">47684</a>	14.2/Vivado 2012.2	July 25, 2012
v10.3	<a href="#">47684</a>	14.1	May 8, 2012
v10.2	<a href="#">45705</a>	13.4	January 18, 2012

Version	Release Note	Initial Release	Date
v10.1	<a href="#">40631</a>	13.1	March 1, 2011
v9.2	<a href="#">35239</a>	12.1	April 23, 2010
v9.1	<a href="#">33302</a>	11.3	September 16, 2009
v8.2	<a href="#">32759</a>	11.2	June 24, 2009
v8.1	<a href="#">32208</a>	11.1	April 27, 2009
v7.4	<a href="#">31514</a>	10.1 IP Update 3	September 19, 2008
v7.3	<a href="#">30143</a>	10.1 Initial IP Update	March 24, 2008
v7.2	<a href="#">25484</a>	9.2i IP Update 1	August 15, 2007
v7.1	<a href="#">24589</a>	9.1i IP Update 1	March 5, 2007
v7.0	<a href="#">24043</a>	8.2i IP Update 2 Virtex-5 LXT Supplement	October 26, 2006
v6.2	<a href="#">23497</a>	8.2i IP Update 1	July 19, 2006
v6.1	<a href="#">22331</a>	8.1i IP Update 1	January 18, 2006
v6.0	<a href="#">21047</a>	7.1i IP Update 1	May 12, 2005
v5.0	<a href="#">19881</a>	6.3i IP Update 3	September 30, 2004

### Embedded Tri-Mode Ethernet MAC Wrapper (Virtex-4 FX Family)

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Version	Release Note	Initial Release	Date
v4.8	<a href="#">34940</a>	12.1	April 23, 2010
v4.7	<a href="#">32209</a>	11.1	April 27, 2009
v4.6	<a href="#">30148</a>	10.1 Initial IP Update	March 24, 2008
v4.5	<a href="#">25439</a>	9.2i IP Update 1	August 15, 2007
v4.4	<a href="#">24587</a>	9.1i IP Update 1	March 5, 2007
v4.3	<a href="#">23922</a>	8.2i IP Update 2	October 26, 2006
v4.2	<a href="#">23503</a>	8.2i IP Update 1	July 19, 2006
v4.1	<a href="#">22332</a>	8.1i IP Update 1	January 18, 2006
v3.1	<a href="#">21903</a>	7.1i IP Update 3	August 31, 2005
v2.1	<a href="#">21049</a>	7.1i IP Update 1	May 12, 2005
v1.0	<a href="#">20193</a>	6.3i IP Update 4	November 11, 2004

### Virtex-5 FPGA Embedded Tri-Mode Ethernet MAC Wrapper

[Product Page](#)

Version	Release Note	Initial Release	Date
v1.8	<a href="#">40632</a>	13.1	March 1, 2011
v1.7	<a href="#">34968</a>	12.1	April 23, 2010
v1.6	<a href="#">32210</a>	11.1	April 27, 2009
v1.5	<a href="#">31511</a>	10.1 IP Update 3	September 19, 2008
v1.4	<a href="#">30149</a>	10.1 Initial IP Update	March 24, 2008
v1.3	<a href="#">25441</a>	9.2i IP Update 1	August 15, 2007
v1.2	<a href="#">24593</a>	9.1i IP Update 1	March 5, 2007

Version	Release Note	Initial Release	Date
v1.1	<a href="#">24042</a>	8.2i IP Update 2 Virtex-5 LXT Supplement	October 26, 2006

## Virtex-6 FPGA Embedded Tri-Mode Ethernet MAC Wrapper

[Product Page](#)

Version	Release Note	Initial Release	Date
v2.3	<a href="#">47365</a>	14.1	May 8, 2012
v2.2	<a href="#">44428</a>	13.3	October 26, 2011
v2.1	<a href="#">40634</a>	13.1	March 1, 2011
v1.6	<a href="#">47362</a>	14.1	May 8, 2012
v1.5	<a href="#">40633</a>	13.1	March 1, 2011
v1.4	<a href="#">34972</a>	12.1	April 23, 2010
v1.3	<a href="#">33309</a>	11.3	September 16, 2009
v1.2	<a href="#">32755</a>	11.2	June 24, 2009

## Ethernet Statistics

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Version	Release Note	Initial Release	Date
v3.5	<a href="#">40635</a>	13.1	March 1, 2011
v3.4	<a href="#">35271</a>	12.1	April 23, 2010
v3.3	<a href="#">33303</a>	11.3	September 16, 2009
v3.2	<a href="#">32763</a>	11.2	June 24, 2009
v3.1	<a href="#">32211</a>	11.1	April 27, 2009
v2.5	<a href="#">30147</a>	10.1 Initial IP Update	March 24, 2008
v2.4	<a href="#">25489</a>	9.2i IP Update 1	August 15, 2007
v2.3.1	<a href="#">24592</a>	9.1i IP Update 2	April 2, 2007
v2.3	<a href="#">24592</a>	9.1i IP Update 1	March 5, 2007
v2.2	<a href="#">24040</a>	8.2i IP Update 2 Virtex-5 LXT Supplement	October 26, 2006
v2.1	<a href="#">23499</a>	8.2i IP Update 1	July 19, 2006
v1.2	<a href="#">22325</a>	8.1i IP Update 1	January 18, 2006
v1.1	<a href="#">21055</a>	7.1i IP Update 1	May 12, 2005

## Ethernet AVB Endpoint

[Product Page](#)

Version	Release Note	Initial Release	Date
v3.1	<a href="#">40636</a>	13.1	March 1, 2011
v2.4	<a href="#">36676</a>	12.2	July 23, 2010
v2.3	<a href="#">35203</a>	12.1	April 23, 2010
v2.2	<a href="#">33305</a>	11.3	September 16, 2009
v2.1	<a href="#">32760</a>	11.2	June 24, 2009
v1.2	<a href="#">32212</a>	11.1	April 27, 2009

Version	Release Note	Initial Release	Date
v1.1	<a href="#">31512</a>	10.1 IP Update 3	September 19, 2008

### Fibre Channel Pt. to Pt.

**Note:** This core has been discontinued.

Version	Release Note	Initial Release	Date
v3.5	<a href="#">35263</a>	12.1	April 23, 2010
v3.4	<a href="#">32213</a>	11.1	April 27, 2009
v3.3	<a href="#">30150</a>	10.1 Initial IP Update	March 24, 2008
v3.2	<a href="#">25454</a>	9.2i IP Update 1	August 15, 2007
v3.1	<a href="#">24584</a>	9.1i IP Update 1	March 5, 2007
v2.1	<a href="#">22323</a>	8.1i IP Update 1	January 18, 2006
v2.0	<a href="#">21048</a>	7.1i IP Update 1	May 12, 2005
v1.0	<a href="#">19527</a>	6.3i IP Update 4	November 11, 2004

### Fibre Channel Arbitrated Loop

**Note:** This core has been discontinued.

Version	Release Note	Initial Release	Date
v2.3	<a href="#">30151</a>	10.1 Initial IP Update	March 24, 2008
v2.2	<a href="#">25455</a>	9.2i IP Update 1	August 15, 2007
v2.1	<a href="#">24585</a>	9.1i IP Update 1	March 5, 2007
v1.1	<a href="#">22324</a>	8.1i IP Update 1	January 18, 2006

### SPI-4.2

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Version	Release Note	Initial Release	Date
v13.0	<a href="#">54616</a>	Vivado 2013.1	April 3, 2013
v12.2	<a href="#">50942</a>	Vivado 2012.2	July 25, 2012
v11.2	<a href="#">42612</a>	13.2	July 6, 2011
v10.5	<a href="#">42572</a>	13.2	July 6, 2011
v11.1	<a href="#">40640</a>	13.1	March 1, 2011
v10.4	<a href="#">40638</a>	13.1	March 1, 2011
v10.3	<a href="#">39376</a>	12.4	December 20, 2010
v10.2	<a href="#">38211</a>	12.3	October 5, 2010
v10.1	<a href="#">35109</a>	12.1	May 3, 2010
v9.3	<a href="#">33313</a>	11.3	September 16, 2009
v9.2	<a href="#">32766</a>	11.2	June 24, 2009
v9.1	<a href="#">32197</a>	11.1	April 27, 2009
v8.6	<a href="#">31506</a>	10.1 IP Update 3	September 19, 2008
v8.5	<a href="#">30058</a>	10.1 Initial IP Update	March 24, 2008
v8.4	<a href="#">25427</a>	9.2i IP Update 1	August 15, 2007
v8.3	<a href="#">24557</a>	9.1i IP Update 1	March 5, 2007

Version	Release Note	Initial Release	Date
v8.2	<a href="#">23846</a>	8.2i IP Update 3	December 7, 2007
v8.1	<a href="#">23487</a>	8.2i IP Update 1	July 19, 2006
v7.4	<a href="#">22300</a>	8.1i IP Update 1	January 18, 2006
v7.3	<a href="#">21918</a>	7.1i IP Update 3	August 31, 2005
v7.2	<a href="#">21032</a>	7.1i IP Update 1	May 12, 2005

### SPI-4.2 (Virtex-II Pro Devices Only)

[Product Page](#)

Version	Release Note	Initial Release	Date
v6.3	<a href="#">22301</a>	8.1i IP Update 1	July 19, 2006

### SPI-4.2 Lite

**Note:** This core has been discontinued.

[Product Page](#)

Version	Release Note	Initial Release	Date
v5.2	<a href="#">35138</a>	12.1	May 3, 2010
v5.1	<a href="#">32767</a>	11.2	June 24, 2009
v4.4	<a href="#">32198</a>	11.1	April 27, 2009
v4.3	<a href="#">30970</a>	10.1 IP Update 2	June 27, 2008
v4.2.1	<a href="#">24556</a>	9.1i IP Update 3	May 17, 2007
v4.2	<a href="#">24556</a>	9.1i IP Update 1	March 5, 2007
v4.1	<a href="#">23488</a>	8.2i IP Update 1	July 19, 2006
v3.1	<a href="#">22390</a>	8.1i IP Update 1	January 18, 2006
v3	<a href="#">21919</a>	7.1i IP Update 1	August 31, 2005

### SPI-3 Link Layer Interface, Multi-channel

**Note:** This core has been discontinued.

[Product Page](#)

Version	Release Note	Initial Release	Date
v7.3	<a href="#">39377</a>	12.4	December 10, 2010
v7.2	<a href="#">35141</a>	12.1	May 3, 2010
v7.1	<a href="#">33779</a>	11.4	December 2, 2009
v6.1	<a href="#">33314</a>	11.3	September 16, 2009
v5.2	<a href="#">32199</a>	11.1	April 27, 2009
v5.1	<a href="#">25461</a>	9.1i IP Update 1	March 5, 2007
v4.1	<a href="#">22382</a>	8.2i IP Update 1	July 19, 2006
v4	<a href="#">21921</a>	7.1i IP Update 3	August 31, 2005



**SPI-3 PHY**

**Note:** This core has been discontinued.

Version	Release Note	Initial Release	Date
v5.2	<a href="#">32200</a>	11.1	April 27, 2009
v5.1	<a href="#">25460</a>	9.1i IP Update 1	March 5, 2007
v4.1	<a href="#">22381</a>	8.2i IP Update 1	July 19, 2006
v4	<a href="#">21920</a>	7.1i IP Update 3	August 31, 2005

## Wireless

### CPRI™

[Product Page](#)

Version	Release Note	Initial Release	Date
v7.0	<a href="#">54473</a>	Vivado 2013.1	April 3, 2013
v5.1	<a href="#">36969</a>	14.1	May 8, 2012
v4.1	<a href="#">36969</a>	13.1	March 1, 2011
v3.2	<a href="#">36969</a>	12.2	July 23, 2010
v3.1	<a href="#">36968</a>	12.1	April 19, 2010
v2.3	<a href="#">33310</a>	11.3	September 16, 2009
v2.2	<a href="#">32757</a>	11.2	June 24, 2009
v2.1	<a href="#">32214</a>	11.1	April 27, 2009
v1.2	<a href="#">30060</a>	10.1 Initial IP Update	March 24, 2008
v1.1	<a href="#">29162</a>	9.1i IP Update 1	March 5, 2007

### OBSAI

[Product Page](#)

Version	Release Note	Initial Release	Date
v6.0	<a href="#">54485</a>	Vivado 2013.1	April 3, 2013
v5.1	<a href="#">36971</a>	13.1	March 1, 2011
v4.2	<a href="#">36971</a>	12.2	July 23, 2010
v4.1	<a href="#">36970</a>	12.1	April 19, 2010
v3.3	<a href="#">33308</a>	11.3	September 16, 2009
v3.2	<a href="#">32758</a>	11.2	June 24, 2009
v3.1	<a href="#">32215</a>	11.1	April 27, 2009
v2.1	<a href="#">30969</a>	10.1 IP Update 2	June 27, 2008
v1.2	<a href="#">30061</a>	10.1 Initial IP Update	March 24, 2008
v1.1	<a href="#">29165</a>	9.1i IP Update 1	March 5, 2007

## DSP Horizontal

### Accumulator

[Product Page](#)

Version	Release Note	Initial Release	Date
v12.0	<a href="#">54492</a>	Vivado 2013.1	April 3, 2013
v11.0	<a href="#">32138</a>	11.1	April 27, 2009

### Adder/Subtractor

[Product Page](#)

Version	Release Note	Initial Release	Date
v12.0	<a href="#">54491</a>	Vivado 2013.1	April 3, 2013
v11.0	<a href="#">32139</a>	11.1	April 27, 2009

### Binary Counter

[Product Page](#)

Version	Release Note	Initial Release	Date
v12.0	<a href="#">54493</a>	Vivado 2013.1	April 3, 2013
v11.0	<a href="#">32140</a>	11.1	April 27, 2009

### Cascaded Integrator Comb Compiler (CIC Compiler)

[Product Page](#)

Version	Release Note	Initial Release	Date
v4.0	<a href="#">54494</a>	Vivado 2013.1	April 3, 2013
v3.0	<a href="#">29297</a>	13.2	July 6, 2011
v2.0	<a href="#">29297</a>	12.1	April 23, 2010
v1.3	<a href="#">29297</a>	11.3	September 16, 2009
v1.2	<a href="#">29297</a>	10.1 IP Update 1	April 25, 2008
v1.1	<a href="#">29297</a>	10.1 Initial IP Update	March 24, 2008

### Complex Multiplier

[Product Page](#)

Version	Release Note	Initial Release	Date
v6.0	<a href="#">54495</a>	Vivado 2013.1	April 3, 2013
v5.0	<a href="#">21591</a>	13.1	March 1, 2011
v4.0	<a href="#">21591</a>	12.3	October 5, 2010
v3.1	<a href="#">21591</a>	11.4	December 2, 2009
v3.0	<a href="#">21591</a>	11.1	April 27, 2009
v2.1	<a href="#">21591</a>	7.1i IP Update 0	April 28, 2005

**CORDIC**[Product Page](#)

Version	Release Note	Initial Release	Date
v6.0	<a href="#">54497</a>	Vivado 2013.1	April 3, 2013
v5.0	<a href="#">29570</a>	13.3	October 26, 2011
v4.0	<a href="#">29570</a>	11.1	April 27, 2009
v3.0	<a href="#">29570</a>	6.3i IP Update 1	May 21, 2004

**Direct Digital Synthesizer Compiler (DDS Compiler)**[Product Page](#)

Version	Release Note	Initial Release	Date
v6.0	<a href="#">54498</a>	Vivado 2013.1	April 3, 2013
v5.0	<a href="#">29976</a>	12.3	October 5, 2010
v4.0	<a href="#">29976</a>	11.3	September 16, 2009
v3.0	<a href="#">29976</a>	11.2	June 24, 2009
v2.1	<a href="#">29976</a>	10.1 Initial IP Update	March 24, 2008

**Divider**[Product Page](#)

Version	Release Note	Initial Release	Date
v5.0	<a href="#">54499</a>	Vivado 2013.1	April 3, 2013
v4.0	<a href="#">29120</a>	13.2	July 6, 2011
v3.0	<a href="#">29120</a>	11.2	June 24, 2009
v2.0	<a href="#">29120</a>	10.1 IP Update 2	June 27, 2008
v1.0	<a href="#">29120</a>	8.1i IP Update 1	January 18, 2006

**Discrete Fourier Transform (DFT)**[Product Page](#)

Version	Release Note	Initial Release	Date
v4.0	<a href="#">54475</a>	Vivado 2013.1	April 3, 2013
v3.1	<a href="#">29978</a>	11.4	December 2, 2009
v3.0	<a href="#">29978</a>	10.1 IP Update 2	June 27, 2008
v2.1	<a href="#">29978</a>	10.1 Initial IP Update	March 24, 2008

**DSP48 Macro**[Product Page](#)

Version	Release Note	Initial Release	Date
v3.0	<a href="#">54500</a>	Vivado 2013.1	April 3, 2013
v2.1	<a href="#">33537</a>	13.1	March 1, 2011
v2.0	<a href="#">33537</a>	11.4	December 2, 2009

## DUC/DDC Compiler

[Product Page](#)

Version	Release Note	Initial Release	Date
v3.0	<a href="#">54476</a>	Vivado 2013.1	April 3, 2013
v2.0	<a href="#">36823</a>	13.2	July 6, 2011
v1.1	<a href="#">36823</a>	12.3	October 5, 2010
v1.0	<a href="#">36823</a>	12.2	July 23, 2010

## Fast Fourier Transform (FFT)

[Product Page](#)

Version	Release Note	Initial Release	Date
v9.0	<a href="#">54501</a>	Vivado 2013.1	April 3, 2013
v8.0	<a href="#">29209</a>	12.3	October 5, 2010
v7.1	<a href="#">29209</a>	12.1	April 23, 2010
v7.0	<a href="#">29209</a>	11.2	June 24, 2009
v6.0	<a href="#">29209</a>	10.1 IP Update 3	September 19, 2008
v5.0	<a href="#">29209</a>	9.2i IP Update 2	October 17, 2007

## FIR Compiler

[Product Page](#)

Version	Release Note	Initial Release	Date
v7.0	<a href="#">54502</a>	Vivado 2013.1	April 3, 2013
v6.3	<a href="#">29138</a>	13.3	October 26, 2011
v6.2	<a href="#">29138</a>	13.1	March 1, 2011
v6.1	<a href="#">29138</a>	12.4	December 10, 2010
v6.0	<a href="#">29138</a>	12.3	October 5, 2010
v5.0	<a href="#">29138</a>	11.2	June 24, 2009
v4.0	<a href="#">29138</a>	10.1 IP Update 2	June 27, 2008
v3.2	<a href="#">29138</a>	9.2i IP Update 2	October 17, 2007

## Floating-Point Operator

[Product Page](#)

Version	Release Note	Initial Release	Date
v7.0	<a href="#">54504</a>	Vivado 2013.1	April 3, 2013
v6.1	<a href="#">29598</a>	14.2/Vivado 2012.2	July 25, 2012
v6.0	<a href="#">29598</a>	13.2	July 6, 2011
v5.0	<a href="#">29598</a>	11.2	June 24, 2009
v4.0	<a href="#">29598</a>	10.1 IP Update 1	April 25, 2008
v3.0	<a href="#">29598</a>	8.1i IP Update 2	October 3, 2006

**LTE Fast Fourier Transform (FFT)**[Product Page](#)

Version	Release Note	Initial Release	Date
v2.0	<a href="#">54882</a>	Vivado 2013.1	April 3, 2013
v1.0	<a href="#">36977</a>	12.2	July 23, 2010

**Multiplier**[Product Page](#)

Version	Release Note	Initial Release	Date
v12.0	<a href="#">54506</a>	Vivado 2013.1	April 3, 2013
v11.2	<a href="#">30160</a>	11.3	September 16, 2009
v11.0	<a href="#">30160</a>	11.1	April 27, 2009
v10.1	<a href="#">30160</a>	10.1 IP Update 1	April 25, 2008
v10.0	<a href="#">30160</a>	9.1i IP Update 2	April 2, 2007

**Multiply Accumulator (MACC)**[Product Page](#)

Version	Release Note	Initial Release	Date
v3.0	<a href="#">54509</a>	Vivado 2013.1	April 3, 2013
v2.0	<a href="#">30161</a>	11.1	April 27, 2009

**Multiply Adder**[Product Page](#)

Version	Release Note	Initial Release	Date
v3.0	<a href="#">54507</a>	Vivado 2013.1	April 3, 2013
v2.0	<a href="#">32141</a>	11.1	April 27, 2009

**RAM-based Shift Register**[Product Page](#)

Version	Release Note	Initial Release	Date
v12.0	<a href="#">54508</a>	Vivado 2013.1	April 3, 2013
v11.0	<a href="#">32142</a>	11.1	April 27, 2009

**Sine Cosine Look-Up Table (Sin Cos LUT)**[Product Page](#)

Version	Release Note	Initial Release	Date
v5.0	<a href="#">30162</a>	6.3i IP Update 1	May 21, 2004

## VLYNQ™

[Product Page](#)

Version	Release Note	Initial Release	Date
v1.4	<a href="#">23509</a>	11.1	April 27, 2009
v1.3	<a href="#">23509</a>	10.1 Initial IP Update	March 24, 2008

## DSP Digital Communications

### 3GPP Downlink Chip Rate

[Product Page](#)

Version	Release Note	Initial Release	Date
v1.0	<a href="#">30163</a>	9.2i IP Update 1	August 15, 2007

### 3GPP LTE Channel Estimator

[Product Page](#)

Version	Release Note	Initial Release	Date
v2.0	<a href="#">54467</a>	Vivado 2013.1	April 3, 2013
v1.1	<a href="#">38011</a>	13.3	October 26, 2011
v1.0	<a href="#">38011</a>	12.3	October 5, 2010

### 3GPP LTE MIMO Decoder

[Product Page](#)

Version	Release Note	Initial Release	Date
v3.0	<a href="#">54468</a>	Vivado 2013.1	April 3, 2013
v2.1	<a href="#">33758</a>	13.2	July 6, 2011
v2.0	<a href="#">33758</a>	12.4	December 20, 2010
v1.0	<a href="#">33758</a>	11.4	December 2, 2009

### 3GPP LTE MIMO Encoder

[Product Page](#)

Version	Release Note	Initial Release	Date
v4.0	<a href="#">54469</a>	Vivado 2013.1	April 3, 2013
v3.0	<a href="#">33266</a>	13.4	January 18, 2012
v2.0	<a href="#">33266</a>	11.3	September 16, 2009

### 3GPP LTE Turbo Decoder

[Product Page](#)

Version	Release Note	Initial Release	Date
v2.0	<a href="#">54470</a>	Vivado 2013.1	April 3, 2013
v2.0	<a href="#">30630</a>	11.2	June 24, 2009
v1.0	<a href="#">30630</a>	10.1 IP Update 1	April 25, 2008

### 3GPP LTE Turbo Encoder

[Product Page](#)

Version	Release Note	Initial Release	Date
v5.0	<a href="#">54472</a>	Vivado 2013.1	April 3, 2013
v3.1	<a href="#">30631</a>	12.1	April 23, 2010
v3.0	<a href="#">30631</a>	11.1	April 27, 2009



Version	Release Note	Initial Release	Date
v2.0	<a href="#">30631</a>	10.1 IP Update 3	September 19, 2008
v1.0	<a href="#">30631</a>	10.1 IP Update 1	April 25, 2008

### 3GPP RACH Preamble Detector

[Product Page](#)

Version	Release Note	Initial Release	Date
v1.0	<a href="#">30164</a>	9.2i IP Update 1	August 15, 2007

### 3GPP Searcher

[Product Page](#)

Version	Release Note	Initial Release	Date
v1.0	<a href="#">30165</a>	9.2i IP Update 1	August 15, 2007

### 3GPP Turbo Convolutional Code Decoder

[Product Page](#)

Version	Release Note	Initial Release	Date
v4.1	<a href="#">30166</a>	Vivado 2012.2	July 25, 2012
v4.0	<a href="#">30166</a>	11.2	June 24, 2009
v3.1	<a href="#">30166</a>	9.1i IP Update 3	May 17, 2007

### 3GPP Turbo Convolutional Code Encoder

[Product Page](#)

Version	Release Note	Initial Release	Date
v4.0	<a href="#">30167</a>	11.2	June 24, 2009
v3.1	<a href="#">30167</a>	10.1 Initial IP Update	March 24, 2008

### 3GPP2 Turbo Convolutional Code Decoder

[Product Page](#)

Version	Release Note	Initial Release	Date
v2.1	<a href="#">30168</a>	9.1i IP Update 1	March 5, 2007

### 3GPP2 Turbo Convolutional Code Encoder

[Product Page](#)

Version	Release Note	Initial Release	Date
v2.0	<a href="#">30169</a>	9.1i IP Update 2	April 2, 2007

### 802.16E Convolutional Turbo Code (CTC) Decoder

[Product Page](#)

Version	Release Note	Initial Release	Date
v4.0	<a href="#">29447</a>	11.2	June 24, 2009
v3.1	<a href="#">29447</a>	10.1 IP Update 3	September 19, 2008

Version	Release Note	Initial Release	Date
v3.0	<a href="#">29447</a>	9.2i IP Update 2	October 17, 2007

### 802.16E Convolutional Turbo Code (CTC) Encoder

[Product Page](#)

Version	Release Note	Initial Release	Date
v3.0	<a href="#">30170</a>	11.1	April 27, 2009
v2.1	<a href="#">30170</a>	9.1i IP Update 2	April 2, 2007

### Additive White Gaussian Noise Generator (AWGN)

[Product Page](#)

Version	Release Note	Initial Release	Date
v1.0	<a href="#">30171</a>	Stand Alone	October 30, 2002

### Convolutional Encoder

[Product Page](#)

Version	Release Note	Initial Release	Date
v9.0	<a href="#">54496</a>	Vivado 2013.1	April 3, 2013
v8.0	<a href="#">30172</a>	13.4	January 18, 2012
v7.0	<a href="#">30172</a>	11.2	June 24, 2009
v6.1	<a href="#">30172</a>	9.1i IP Update 3	May 17, 2007

### Digital Pre-Distortion (DPD) (AXI)

[Product Page](#)

Version	Release Note	Initial Release	Date
v6.0	<a href="#">33521</a>	14.3	10/16/2012
v5.0	<a href="#">33521</a>	13.2	July 6, 2011
v4.0	<a href="#">33521</a>	12.3	October 25, 2010
v3.1	<a href="#">33521</a>	12.1	April 23, 2010

### DVB-S.2 FEC Encoder

[Product Page](#)

Version	Release Note	Initial Release	Date
v2.0	<a href="#">30173</a>	11.4	December 2, 2009
v1.4	<a href="#">30173</a>	10.1 IP Update 2	June 27, 2008
v1.3	<a href="#">30173</a>	9.1i IP Update 3	May 17, 2007

### G.975.1 EFEC I.7 Encoder/Decoder

[Product Page](#)

Version	Release Note	Initial Release	Date
v2.0	<a href="#">54479</a>	Vivado 2013.1	April 3, 2013

Version	Release Note	Initial Release	Date
v1.0	<a href="#">52189</a>	14.3/Vivado 2012.3	October 23, 2012

## JESD204

[Product Page](#)

Version	Release Note	Initial Release	Date
v4.0	<a href="#">54480</a>	Vivado 2013.1	April 3, 2013
v2.1	<a href="#">44405</a>	14.1	May 8, 2012
v1.1	<a href="#">44405</a>	13.3	October 26, 2011

## Interleaver/De-interleaver

[Product Page](#)

Version	Release Note	Initial Release	Date
v8.0	<a href="#">54503</a>	Vivado 2013.1	April 3, 2013
v7.1	<a href="#">30174</a>	2012.2	July 25, 2012
v7.0	<a href="#">30174</a>	13.4	January 18, 2012
v6.0	<a href="#">30174</a>	12.1	April 23, 2010
v5.1	<a href="#">30174</a>	10.1 Initial IP Update	March 24, 2008

## Linear Algebra Toolkit

[Product Page](#)

Version	Release Note	Initial Release	Date
v2.0	<a href="#">54505</a>	Vivado 2013.1	April 3, 2013
v1.0	<a href="#">40040</a>	13.1	March 1, 2011

## LDPC 802.16 Encoder

[Product Page](#)

Version	Release Note	Initial Release	Date
v1.0	<a href="#">30175</a>	8.2i IP Update 1	July 19, 2006

## LTE DL Channel Encoder

[Product Page](#)

Version	Release Note	Initial Release	Date
v3.0	<a href="#">54481</a>	Vivado 2013.1	April 3, 2013
v2.2	<a href="#">31421</a>	Vivado 2012.2	July 25, 2012
v2.1	<a href="#">31421</a>	12.1	April 23, 2010
v2.0	<a href="#">31421</a>	11.1	April 27, 2009
v1.0	<a href="#">31421</a>	10.1 IP Update 3	September 19, 2008

**LTE UL Channel Decoder**[Product Page](#)

Version	Release Note	Initial Release	Date
v4.0	<a href="#">54484</a>	Vivado 2013.1	April 3, 2013
v3.0	<a href="#">31422</a>	13.2	July 6, 2011
v2.0	<a href="#">31422</a>	11.2	June 24, 2009
v1.0	<a href="#">31422</a>	10.1 IP Update 3	September 19, 2008

**LTE UL PUCCH Receiver**[Product Page](#)

Version	Release Note	Initial Release	Date
v2.0	<a href="#">54483</a>	Vivado 2013.1	April 3, 2013
v1.0	<a href="#">39974</a>	13.1	March 1, 2011

**LTE RACH Detector**[Product Page](#)

Version	Release Note	Initial Release	Date
v2.0	<a href="#">54487</a>	Vivado 2013.1	April 3, 2013
v1.0	<a href="#">35106</a>	12.1	April 23, 2010

**Mixed Mode Turbo Decoder (AXI)**[Product Page](#)

Version	Release Note	Initial Release	Date
v2.0	<a href="#">55471</a>	Vivado 2013.1	April 3, 2013
v1.0	<a href="#">45594</a>	13.4	January 18, 2012

**Peak Cancellation Crest Factor Reduction**[Product Page](#)

Version	Release Note	Initial Release	Date
v4.0	<a href="#">54486</a>	Vivado 2013.1	April 3, 2013
v3.0	<a href="#">33760</a>	13.2	July 6, 2011
v2.0	<a href="#">33760</a>	11.4	December 2, 2009

**Reed-Solomon Decoder**[Product Page](#)

Version	Release Note	Initial Release	Date
v9.0	<a href="#">54510</a>	Vivado 2013.1	April 3, 2013
v8.0	<a href="#">30176</a>	13.3	October 26, 2011
v7.1	<a href="#">30176</a>	12.2	July 23, 2010
v7.0	<a href="#">30176</a>	11.2	June 24, 2009
v6.1	<a href="#">30176</a>	9.1i IP Update 3	May 17, 2007

## Reed-Solomon Encoder

[Product Page](#)

Version	Release Note	Initial Release	Date
v9.0	<a href="#">54511</a>	Vivado 2013.1	April 3, 2013
v8.0	<a href="#">30177</a>	13.4	January 18, 2012
v7.1	<a href="#">30177</a>	12.2	July 23, 2010
v7.0	<a href="#">30177</a>	11.2	June 24, 2009
v6.1	<a href="#">30177</a>	9.1i IP Update 3	May 17, 2007

## Turbo Product Code (TPC) Decoder

[Product Page](#)

Version	Release Note	Initial Release	Date
v1.1	<a href="#">30178</a>	Stand Alone	January 21, 2003

## Turbo Product Code (TPC) Encoder

[Product Page](#)

Version	Release Note	Initial Release	Date
v1.0	<a href="#">30179</a>	Stand Alone	October 30, 2002

## Viterbi Decoder

[Product Page](#)

Version	Release Note	Initial Release	Date
v9.0	<a href="#">54512</a>	Vivado 2013.1	April 3, 2013
v8.0	<a href="#">29448</a>	13.4	January 18, 2012
v7.0	<a href="#">29448</a>	11.2	June 24, 2009
v6.2	<a href="#">29448</a>	9.2i IP Update 2	October 17, 2007

## DSP MVI

### Asynchronous Sample Rate Converter

[Product Page](#)

Version	Release Note	Initial Release	Date
v2.0	<a href="#">54516</a>	Vivado 2013.1	April 3, 2013
v1.0	<a href="#">47209</a>	14.1	May 8, 2012

### AXI4-Stream to Video Out

[Product Page](#)

Version	Release Note	Initial Release	Date
v3.0	<a href="#">54517</a>	Vivado 2013.1	April 3, 2013.1
v2.01.a	<a href="#">47211</a>	14.3/Vivado 2012.3	October 23, 2012
v2.00.a	<a href="#">47211</a>	14.2/Vivado 2012.2	July 25, 2012
v1.0	<a href="#">47211</a>	14.1	May 8, 2012

## Chroma Resampler

[Product Page](#)

Version	Release Note	Initial Release	Date
v4.0	<a href="#">54518</a>	Vivado 2013.1	April 3, 2013
v3.01.a	<a href="#">44487</a>	14.3/Vivado 2012.3	October 23, 2012
v3.00.a	<a href="#">44487</a>	14.2/Vivado 2012.2	July 25, 2012
v2.00.a	<a href="#">44487</a>	14.1	May 8, 2012
v1.0	<a href="#">44487</a>	13.3	October 26, 2011

## Color Correction Matrix

[Product Page](#)

Version	Release Note	Initial Release	Date
v6.0	<a href="#">54519</a>	Vivado 2013.1	April 3, 2013
v5.01.a	<a href="#">32132</a>	14.3/Vivado 2012.3	October 23, 2012
v5.00.a	<a href="#">32132</a>	14.2/Vivado 2012.2	July 25, 2012
v4.00.a	<a href="#">32132</a>	14.1	May 8, 2012
v3.0	<a href="#">32132</a>	13.3	October 26, 2011
v2.0	<a href="#">32132</a>	12.2	July 23, 2010
v1.0	<a href="#">32132</a>	11.1	April 27, 2009

## Color Filter Array Interpolation

[Product Page](#)

Version	Release Note	Initial Release	Date
v7.0	<a href="#">54520</a>	Vivado 2013.1	April 3, 2013
v6.01.a	<a href="#">32133</a>	14.3/Vivado 2012.3	October 23, 2012
v6.00.a	<a href="#">32133</a>	14.2/Vivado 2012.2	July 25, 2012
v5.00.a	<a href="#">32133</a>	14.1	May 8, 2012
v4.0	<a href="#">32133</a>	13.3	October 26, 2011
v3.0	<a href="#">32133</a>	12.4	December 20, 2010
v2.0	<a href="#">32133</a>	12.2	July 23, 2010
v1.0	<a href="#">32133</a>	11.1	April 27, 2009

## Defective Pixel Correction

[Product Page](#)

Version	Release Note	Initial Release	Date
v7.0	<a href="#">54521</a>	Vivado 2013.1	April 3, 2013
v6.01.a	<a href="#">32134</a>	14.3/Vivado 2012.3	October 23, 2012
v6.00.a	<a href="#">32134</a>	14.2/Vivado 2012.2	July 25, 2012
v5.00.a	<a href="#">32134</a>	14.1	May 8, 2012
v4.0	<a href="#">32134</a>	13.3	October 26, 2011
v3.0	<a href="#">32134</a>	13.1	March 1, 2011
v2.0	<a href="#">32134</a>	12.2	July 23, 2010

Version	Release Note	Initial Release	Date
v1.0	<a href="#">32134</a>	11.1	April 27, 2009

## DisplayPort

[Product Page](#)

Version	Release Note	Initial Release	Date
v4.0	<a href="#">54522</a>	Vivado 2013.1	April 3, 2013
v3.2	<a href="#">33258</a>	14.2/Vivado 2012.2	July 25, 2012
v3.1	<a href="#">33258</a>	14.1	May 8, 2012
v2.3	<a href="#">33258</a>	13.2	July 6, 2011
v2.2	<a href="#">33258</a>	13.1	March 1, 2011
v2.1	<a href="#">33258</a>	12.3	October 5, 2010
v1.3	<a href="#">33258</a>	12.2	July 23, 2010
v1.2	<a href="#">33258</a>	12.1	May 3, 2010
v1.1	<a href="#">33258</a>	11.4	December 2, 2009

## Gamma Correction

[Product Page](#)

Version	Release Note	Initial Release	Date
v7.0	<a href="#">54523</a>	Vivado 2013.1	April 3, 2013
v6.01.a	<a href="#">32135</a>	14.3/Vivado 2012.3	October 23, 2012
v6.00.a	<a href="#">32135</a>	14.2/Vivado 2012.2	July 25, 2012
v5.00.a	<a href="#">32135</a>	14.1	May 8, 2012
v4.0	<a href="#">32135</a>	13.3	October 26, 2011
v3.0	<a href="#">32135</a>	12.3	October 5, 2010
v2.0	<a href="#">32135</a>	12.2	July 23, 2010
v1.0	<a href="#">32135</a>	11.1	April 27, 2009

## H.264 Deblocking Filter

**Note:** This core has been discontinued.

Version	Release Note	Initial Release	Date
v1.0	<a href="#">25253</a>	Stand Alone	May 31, 2007

## H.264 CABAC Encoder

**Note:** This core has been discontinued.

Version	Release Note	Initial Release	Date
v1.0	<a href="#">25254</a>	Stand Alone	May 31, 2007

## H.264 Motion Estimation Engine

**Note:** This core has been discontinued.

Version	Release Note	Initial Release	Date
v1.0	<a href="#">29129</a>	Stand Alone	October 24, 2007

## Image Characterization

[Product Page](#).

Version	Release Note	Initial Release	Date
v3.0	<a href="#">54524</a>	Vivado 2013.1	April 3, 2013
v2.0	<a href="#">34574</a>	13.3	October 26, 2011
v1.1	<a href="#">34574</a>	12.3	October 5, 2010
v1.0	<a href="#">34574</a>	12.1	May 3, 2010

## Image Edge Enhancement

[Product Page](#)

Version	Release Note	Initial Release	Date
v7.0	<a href="#">54525</a>	Vivado 2013.1	April 3, 2013
v5.01.a	<a href="#">33749</a>	14.3/Vivado 2012.3	October 23, 2012
v5.00.a	<a href="#">33749</a>	14.2/Vivado 2012.2	July 25, 2012
v4.00.a	<a href="#">33749</a>	14.1	May 8, 2012
v3.0	<a href="#">33749</a>	13.3	October 26, 2011
v2.0	<a href="#">33749</a>	12.4	December 20, 2010
v1.0	<a href="#">33749</a>	11.4	December 2, 2009

## Image Noise Reduction

[Product Page](#)

Version	Release Note	Initial Release	Date
v6.0	<a href="#">54526</a>	Vivado 2013.1	April 3, 2013
v5.01.a	<a href="#">33750</a>	14.3/Vivado 2012.3	October 23, 2012
v5.00.a	<a href="#">33750</a>	14.2/Vivado 2012.2	July 25, 2012
v4.00.a	<a href="#">33750</a>	14.1	May 8, 2012
v3.0	<a href="#">33750</a>	13.3	October 26, 2011
V2.0	<a href="#">33750</a>	12.4	December 20, 2010
v1.0	<a href="#">33750</a>	11.4	December 2, 2009

## Image Processing Pipeline

**Note:** This core has been discontinued.

[Product Page](#)

Version	Release Note	Initial Release	Date
v1.0	<a href="#">32136</a>	11.1	April 27, 2009

## Image Statistics Engine

[Product Page](#)

Version	Release Note	Initial Release	Date
v6.0	<a href="#">54527</a>	Vivado 2013.1	April 3, 2013
v5.01.a	<a href="#">33748</a>	14.3/Vivado 2012.3	October 23, 2012
v5.00.a	<a href="#">33748</a>	14.2/Vivado 2012.2	July 25, 2012



Version	Release Note	Initial Release	Date
v4.00.a	<a href="#">33748</a>	14.1	May 8, 2012
v3.0	<a href="#">33748</a>	14.1	May 8, 2012
v3.0	<a href="#">33748</a>	13.3	October 26, 2011
v2.0	<a href="#">33748</a>	13.1	March 1, 2011
v1.0	<a href="#">33748</a>	11.4	December 2, 2009

## Motion Adaptive Noise Reduction

[Product Page](#)

Version	Release Note	Initial Release	Date
v6.0	<a href="#">54528</a>	Vivado 2013.1	April 3, 2013
v5.00.a	<a href="#">33751</a>	14.2/Vivado 2012	July 25, 2012
v4.00.a	<a href="#">33751</a>	14.1	May 8, 2012
v3.0	<a href="#">33751</a>	13.3	October 26, 2011
v2.0	<a href="#">33751</a>	13.1	March 1, 2011
v1.1	<a href="#">33751</a>	12.3	October 5, 2010
v1.0	<a href="#">33751</a>	11.4	December 2, 2009

## MPEG-4 Part 2 Simple Profile Decoder (MPEG-4 Part 2 SP)

**Note:** This core has been discontinued.

Version	Release Note	Initial Release	Date
v1.1	<a href="#">30157</a>	Stand Alone	April 4, 2006

## MPEG-4 Part 2 Simple Profile Encoder (MPEG-4 Part 2 SP)

**Note:** This core has been discontinued.

Version	Release Note	Initial Release	Date
v1.1	<a href="#">30158</a>	Stand Alone	December 15, 2006

## Object Segmentation

[Product Page](#)

Version	Release Note	Initial Release	Date
v3.0	<a href="#">54529</a>	Vivado 2013.1	April 3, 2013
v2.0	<a href="#">38992</a>	13.3	October 26, 2011
v1.0	<a href="#">38992</a>	13.1	March 1, 2011

## RGB to YCrCb Color-Space Converter (RGB2YCrCb)

[Product Page](#)

Version	Release Note	Initial Release	Date
v7.0	<a href="#">54530</a>	Vivado 2013.1	April 3, 2013
v6.01.a	<a href="#">29982</a>	14.3/Vivado 2012.3	October 23, 2012
v6.00.a	<a href="#">29982</a>	14.2/Vivado 2012.2	July 25, 2012
v5.00.a	<a href="#">29982</a>	14.1	May 8, 2012

Version	Release Note	Initial Release	Date
v4.0	<a href="#">29982</a>	13.3	October 26, 2011
v3.0	<a href="#">29982</a>	12.2	July 23, 2010
v2.0	<a href="#">29982</a>	11.1	April 27, 2009
v1.0	<a href="#">29982</a>	10.1 Initial IP Update	March 24, 2008

### SMPTE SD/HD/3G-SDI

[Product Page](#)

Version	Release Note	Initial Release	Date
v2.0	<a href="#">54531</a>	Vivado 2013.1	April 3, 2013
v1.0	<a href="#">50905</a>	14.2/Vivado 2012.2	July 25, 2012

### SMPTE2022-5/6 Video Over IP Receiver

[Product Page](#)

Version	Release Note	Initial Release	Date
v3.0	<a href="#">54534</a>	Vivado 2013.1	April 3, 2013
v2.0	<a href="#">47208</a>	14.2/Vivado 2012.2	July 25, 2012
v1.0	<a href="#">47208</a>	14.1	May 8, 2012

### SMPTE2022-5/6 Video Over IP Transmitter

[Product Page](#)

Version	Release Note	Initial Release	Date
v3.0	<a href="#">54535</a>	Vivado 2013.1	April 3, 2013
v2.0	<a href="#">47207</a>	14.2/Vivado 2012.2	July 25, 2012
v1.0	<a href="#">47207</a>	14.1	May 8, 2012

### Spartan-6 FPGA Triple-Rate SDI

[Product Page](#)

Version	Release Note	Initial Release	Date
v1.0	<a href="#">42805</a>	13.2	July 6, 2011

### Virtex-6 FPGA Triple-Rate SDI

[Product Page](#)

Version	Release Note	Initial Release	Date
v1.0	<a href="#">40473</a>	13.1	March 1, 2011

### Video Deinterlacer

[Product Page](#)

Version	Release Note	Initial Release	Date
v4.0	<a href="#">54537</a>	Vivado 2013.1	April 3, 2013
v3.00.a	<a href="#">41969</a>	14.3/Vivado 2012.3	October 23, 2012
v2.00.a	<a href="#">41969</a>	14.1	May 8, 2012

Version	Release Note	Initial Release	Date
v1.0	<a href="#">41969</a>	13.3	October 26, 2011

## Video Into AXI4-Stream

[Product Page](#)

Version	Release Note	Initial Release	Date
v3.0	<a href="#">54538</a>	Vivado 2013.1	April 3, 2013
v2.01.a	<a href="#">47210</a>	14.3/Vivado 2012.3	October 23, 2012
v2.00.a	<a href="#">47210</a>	14.2/Vivado 2012.2	July 25, 2012
v1.0	<a href="#">47210</a>	14.1	May 8, 2012

## Video Scaler

[Product Page](#)

Version	Release Note	Initial Release	Date
v8.0	<a href="#">54540</a>	Vivado 2013.1	April 3, 2013
v7.01.a	<a href="#">31958</a>	14.3/Vivado 2012.3	October 23, 2012
v7.00.a	<a href="#">31958</a>	14.2/Vivado 2012.2	July 25, 2012
v6.00.a	<a href="#">31958</a>	14.1	May 8, 2012
v5.0	<a href="#">31958</a>	13.3	October 26, 2011
v4.0	<a href="#">31958</a>	13.1	March 1, 2011
v3.0	<a href="#">31958</a>	12.3	October 5, 2010
v2.1	<a href="#">31958</a>	12.1	May 3, 2010
v2.0	<a href="#">31958</a>	11.3	September 16, 2009
v1.0	<a href="#">31958</a>	11.1	April 27, 2009

## Video Timing Controller

[Product Page](#)

Version	Release Note	Initial Release	Date
v6.0	<a href="#">54541</a>	Vivado 2013.1	April 3, 2013
v5.01.a	<a href="#">32754</a>	14.3/Vivado 2012.3	October 23, 2012
v5.00.a	<a href="#">32754</a>	14.2/Vivado 2012.2	July 25, 2012
v4.00.a	<a href="#">32754</a>	14.1	May 8, 2012
v3.0	<a href="#">32754</a>	13.2	July 6, 2011
v2.1	<a href="#">32754</a>	12.3	October 5, 2010
v2.0	<a href="#">32754</a>	11.4	December 2, 2009
v1.0	<a href="#">32754</a>	11.2	June 24, 2009

## Video Direct Memory Access

[Product Page](#)

Version	Release Note	Initial Release	Date
v1.1	<a href="#">33256</a>	12.3	October 5, 2010
v1.0	<a href="#">33256</a>	11.3	September 16, 2009

## Video On-Screen Display

[Product Page](#)

Version	Release Note	Initial Release	Date
v6.0	<a href="#">54539</a>	Vivado 2013.1	April 3, 2013
v5.00.a	<a href="#">33257</a>	14.2/Vivado 2012.2	July 25, 2012
v4.00.a	<a href="#">33257</a>	14.1	May 8, 2012
v3.0	<a href="#">33257</a>	13.3	October 26, 2011
v2.0	<a href="#">33257</a>	13.1	March 7, 2011
v1.0	<a href="#">33257</a>	11.3	September 16, 2009

## YCrCb to RGB Color-Space Converter (YCrCb2RGB)

[Product Page](#)

Version	Release Note	Initial Release	Date
v7.0	<a href="#">54542</a>	Vivado 2013.1	April 3, 2013
v6.01.a	<a href="#">29980</a>	14.3/Vivado 2012.3	October 23, 2012
v6.00.a	<a href="#">29980</a>	14.2/Vivado 2012.2	July 25, 2012
v5.00.a	<a href="#">29980</a>	14.1	May 8, 2012
v4.0	<a href="#">29980</a>	13.3	October 26, 2011
v3.0	<a href="#">29980</a>	12.2	July 23, 2010
v2.0	<a href="#">29980</a>	11.1	April 27, 2009
v1.0	<a href="#">29980</a>	10.1 Initial IP Update	March 24, 2008

## Embedded IP

### Embedded IP Master Answer Records

Release Note	Initial Release	Date
<a href="#">47392</a>	14.3	October 23, 2012
<a href="#">47392</a>	14.2	July 25, 2012
<a href="#">47392</a>	14.1	May 8, 2012
<a href="#">39843</a>	13.4	January 18, 2012
<a href="#">39843</a>	13.3	October 26, 2011
<a href="#">39843</a>	13.2	July 7, 2011
<a href="#">39843</a>	13.1	March 1, 2011
<a href="#">34609</a>	12.4	December 10, 2010
<a href="#">34609</a>	12.3	October 5, 2010
<a href="#">34609</a>	12.2	July 23, 2010
<a href="#">34609</a>	12.1	April 23, 2010
<a href="#">32168</a>	11.4	December 2, 2009
<a href="#">32168</a>	11.3	September 16, 2009
<a href="#">32168</a>	11.2	June 24, 2009
<a href="#">32168</a>	11.1	April 27, 2009
<a href="#">30704</a>	10.1 EDK SP3	September 19, 2008
<a href="#">30704</a>	10.1 EDK SP2	June 27, 2008
<a href="#">30704</a>	10.1 EDK SP1	April 25, 2008
<a href="#">29760</a>	9.2i EDK SP2	December 17, 2007
<a href="#">29760</a>	9.2i EDK SP1	November 1, 2007
<a href="#">29254</a>	9.2i EDK	October 22, 2007
<a href="#">25239</a>	9.1i EDK SP2	May 14, 2007
<a href="#">24309</a>	8.2i EDK SP2	October 30, 2006
<a href="#">23313</a>	8.1i EDK SP2	April 21, 2006
<a href="#">25091</a>	7.1i EDK SP2	July 12, 2005

For information on which devices are supported by Embedded IP, see:

[Derivative Family Support](#)

### MicroBlaze Microprocessor Control System

[Product Page](#)

Version	Release Note	Initial Release	Date
v2.0	<a href="#">54414</a>	Vivado 2013.1	April 3, 2013
v1.2	<a href="#">46420</a>	14.2	July 25, 2012
v1.0	<a href="#">46420</a>	13.4	January 18, 2012

## FPGA Features and Design

### 7 Series FPGA Transceiver Wizard

[Product Page](#)

Version	Release Note	Initial Release	Date
v2.6	<a href="#">56454</a>	14.6	June 19, 2013
v2.5	<a href="#">55163</a>	14.5	April 3, 2013
v2.5	<a href="#">54691</a>	Vivado 2013.1	April 3, 2013
v2.4	<a href="#">53396</a>	14.4/Vivado 2012.4	December 18, 2012
v2.3	<a href="#">52263</a>	14.3/Vivado 2012.3	October 23, 2012
v2.2	<a href="#">50827</a>	14.2/Vivado 2012.2	July 25, 2012
v2.1	<a href="#">47477</a>	14.1/Vivado 2012.1	May 8, 2012
v1.6	<a href="#">45685</a>	13.4	January 18, 2012
v1.5	<a href="#">44463</a>	13.3	October 26, 2011
v1.4	<a href="#">42809</a>	13.2	July 6, 2011
v1.3	<a href="#">40748</a>	13.1	March 1, 2011

### Clocking Wizard

[Product Page](#)

Version	Release Note	Initial Release	Date
v4.5	<a href="#">54102</a>	Vivado 2013.1	April 3, 2013
v4.4	<a href="#">53157</a>	Vivado 2012.4	December 18, 2012
v4.3	<a href="#">52090</a>	Vivado 2012.3	October 23, 2012
v3.6/v4.2	<a href="#">50719</a>	14.2/Vivado 2012.2	July 25, 2012
v3.5	<a href="#">47620</a>	14.1	May 8, 2012
v3.3	<a href="#">44517</a>	13.4	January 18, 2012
v3.2	<a href="#">44517</a>	13.3	October 26, 2011
v1.4	<a href="#">33910</a>	11.4	December 8, 2009

### RocketIO™ GT11 Transceiver Wizard (Virtex-4 FX Family)

[Product Page](#)

Version	Release Note	Initial Release	Date
v1.7	<a href="#">31519</a>	10.1 IP Update 3	September 19, 2008
v1.6	<a href="#">30576</a>	10.1 Initial IP Update	March 24, 2008
v1.5	<a href="#">25437</a>	9.2i IP Update 1	August 15, 2007

### RocketIO GTP Transceiver Wizard (Virtex-5 LXT or SXT Platform)

[Product Page](#)

Version	Release Note	Initial Release	Date
v1.10	<a href="#">31517</a>	11.2	June 24, 2009
v1.9	<a href="#">30955</a>	10.1 Initial IP Update 2	June 27, 2008
v1.8	<a href="#">30575</a>	10.1 Initial IP Update	March 24, 2008

Version	Release Note	Initial Release	Date
v1.7	<a href="#">29368</a>	9.2i IP Update 2	October 17, 2007
v1.6	<a href="#">25475</a>	9.1i IP Update 1	March 5, 2007

### RocketIO GTX Transceiver Wizard (Virtex-5 FXT Platform)

[Product Page](#)

Version	Release Note	Initial Release	Date
v1.6	<a href="#">32748</a>	11.2	June 24, 2009
v1.5	<a href="#">31518</a>	10.1 IP Update 3	September 19, 2008
v1.4	<a href="#">30954</a>	10.1 IP Update 2	June 27, 2008
v1.3	<a href="#">30636</a>	10.1 IP Update 1	April 25, 2008
v1.2	<a href="#">30577</a>	10.1 Initial IP Update	March 24, 2008

### SelectIO Interface Wizard

[Product Page](#)

Version	Release Note	Initial Release	Date
v5.0	<a href="#">54649</a>	Vivado 2013.1	April 3, 2013
v4.2/v4.1	<a href="#">47635</a>	14.2/Vivado 2012.2	July 25, 2012
v4.1	<a href="#">47635</a>	14.1	May 8, 2012
v3.3	<a href="#">44514</a>	13.4	January 18, 2012
v3.2	<a href="#">41644</a>	13.3	October 26, 2011
v1.2	<a href="#">33911</a>	11.4	December 8, 2009

### Virtex-6 FPGA GTX Transceiver Wizard

[Product Page](#)

Version	Release Note	Initial Release	Date
v1.12	<a href="#">45686</a>	13.4	January 18, 2012
v1.11	<a href="#">44489</a>	13.3	October 26, 2011
v1.10	<a href="#">42806</a>	13.2	July 6, 2011
v1.9	<a href="#">40739</a>	13.1	March 1, 2011
v1.8	<a href="#">39757</a>	12.4	December 20, 2010
v1.7	<a href="#">38396</a>	12.3	October 5, 2010
v1.4	<a href="#">33864</a>	11.4	December 2, 2009
v1.3	<a href="#">33469</a>	11.3	September 16, 2009
v1.2	<a href="#">32746</a>	11.2	June 24, 2009

### Virtex-6 FPGA GTH Transceiver Wizard

[Product Page](#)

Version	Release Note	Initial Release	Date
v1.11	<a href="#">47478</a>	14.1	May 8, 2012
v1.7 Rev 3	<a href="#">47479</a>	14.1	May 8, 2012
v.1.10	<a href="#">45660</a>	13.4	January 18, 2012

Version	Release Note	Initial Release	Date
v1.9	<a href="#">44488</a>	13.3	October 26, 2011
v1.8	<a href="#">41518</a>	13.2	July 6, 2011
v1.7	<a href="#">40746</a>	13.1	March 1, 2011
v1.6	<a href="#">39758</a>	12.4	December 20, 2010
v1.5	<a href="#">38397</a>	12.3	October 5, 2010
v1.2	<a href="#">33866</a>	11.4	December 2, 2009
v1.1	<a href="#">33470</a>	11.3	September 16, 2009

## Spartan-6 FPGA GTP Transceiver Wizard

[Product Page](#)

Version	Release Note	Initial Release	Date
v1.11	<a href="#">44490</a>	13.3	October 26, 2011
v1.10	<a href="#">42807</a>	13.2	July 7, 2011
v1.9	<a href="#">40745</a>	13.1	March 1, 2011
v1.8	<a href="#">39755</a>	12.4	December 20, 2010
v1.7	<a href="#">38398</a>	12.3	October 5, 2010
v1.4	<a href="#">33865</a>	11.4	December 2, 2009
v1.3	<a href="#">33468</a>	11.3	September 16, 2009
v1.2	<a href="#">32747</a>	11.2	June 24, 2009

## System Monitor Wizard

[Product Page](#)

Version	Release Note	Initial Release	Date
v2.1	<a href="#">40949</a>	13.1	March 1, 2011
v1.0	<a href="#">24512</a>	9.1i	March 5, 2007

## XADC Wizard

[Product Page](#)

Version	Release Note	Initial Release	Date
v3.0	<a href="#">54260</a>	Vivado 2013.1	April 3, 2013
v2.4	<a href="#">53158</a>	Vivado 2012.4	December 18, 2012
v2.3	<a href="#">52088</a>	Vivado 2012.3	October 23, 2012
v4.1/v2.1	<a href="#">50720</a>	14.2/Vivado 2012.2	July 25, 2012
v1.4	<a href="#">40906</a>	13.4	January 18, 2012
v1.3	<a href="#">40906</a>	13.3	October 26, 2011
v1.0	<a href="#">40906</a>	13.1	March 1, 2011



## Memories and Storage Elements

### Block Memory Generator

[Product Page](#)

Version	Release Note	Initial Release	Date
v8.0	<a href="#">54662</a>	Vivado 2013.1	April 3, 2013
v7.3	<a href="#">50918</a>	14.3/Vivado 2012.3	October 23, 2012
v7.2	<a href="#">50960</a>	14.2/Vivado 2012.2	July 25, 2012
v7.1	<a href="#">47736</a>	14.1	May 8, 2012
v6.3	<a href="#">45701</a>	13.4	August 18, 2012
v6.2	<a href="#">42712</a>	13.2	July 6, 2011
v6.1	<a href="#">40591</a>	13.1	March 1, 2011
v4.3	<a href="#">38076</a>	12.3	October 5, 2010
v4.2	<a href="#">36456</a>	12.2	July 23, 2010
v4.1	<a href="#">35523</a>	12.1	April 23, 2010
v3.3	<a href="#">33298</a>	11.3	September 16, 2009
v3.2	<a href="#">32770</a>	11.2	June 24, 2009
v3.1	<a href="#">32202</a>	11.1	April 27, 2009
v2.8	<a href="#">31556</a>	10.1 IP Update 3	September 19, 2008
v2.7	<a href="#">30055</a>	10.1 Initial IP Update	March 24, 2008
v2.6	<a href="#">29247</a>	9.2i IP Update 2	October 17, 2007
v2.5	<a href="#">25459</a>	9.2i IP Update 1	August 15, 2007
v2.4.1	<a href="#">24555</a>	9.1i IP Update 2	April 2, 2007
v2.4	<a href="#">24555</a>	9.1i IP Update 1	March 5, 2007
v2.3	<a href="#">24229</a>	8.2i IP Update 3	December 7, 2006
v2.2	<a href="#">23849</a>	8.2i IP Update 2	October 3, 2006
v2.1	<a href="#">23849</a>	8.2i IP Update 1	July 19, 2006

### Content Addressable Memory (CAM)

**Note:** This Core has been discontinued.

[Product Page](#)

Version	Release Note	Initial Release	Date
v6.1	<a href="#">31558</a>	10.1 IP Update 3	September 19, 2008

### Distributed Memory Generator

[Product Page](#)

Version	Release Note	Initial Release	Date
v8.0	<a href="#">54661</a>	Vivado 2013.1	April 3, 2013
v7.2	<a href="#">50961</a>	14.2/Vivado 2012.2	July 25, 2012
v7.1	<a href="#">47737</a>	14.1	May 8, 2012
v6.3	<a href="#">45703</a>	13.4	January 18, 2012
v6.2	<a href="#">42716</a>	13.2	July 6, 2011
v4.2	<a href="#">33299</a>	11.3	September 16, 2009

Version	Release Note	Initial Release	Date
v4.1.1	<a href="#">32771</a>	11.2	June 24, 2009
v4.1	<a href="#">32203</a>	11.1	April 27, 2009
v3.4	<a href="#">30057</a>	10.1 Initial IP Update	March 24, 2008
v3.3.1	<a href="#">24553</a>	9.1i IP Update 2	April 2, 2007
v3.3	<a href="#">24553</a>	9.1i IP Update 1	March 5, 2007
v3.2	<a href="#">23848</a>	8.2i IP Update 2	October 3, 2006
v3.1	<a href="#">23491</a>	8.2i IP Update 1	July 19, 2006

## FIFO Generator

[Product Page](#)

Version	Release Note	Initial Release	Date
v10.0	<a href="#">54663</a>	Vivado 2013.1	April 3, 2013
v9.3	<a href="#">50917</a>	14.3/Vivado 2012.3	October 23, 2012
v9.2	<a href="#">50959</a>	14.2/Vivado 2012.2	July 25, 2012
v9.1	<a href="#">47735</a>	14.1	May 8, 2012
v8.4	<a href="#">45700</a>	13.4	January 18, 2012
v8.3	<a href="#">44594</a>	13.3	October 26, 2011
v8.2	<a href="#">42715</a>	13.2	July 6, 2011
v8.1	<a href="#">40592</a>	13.1	March 1, 2011
v7.2	<a href="#">37976</a>	12.3	October 5, 2010
v6.2	<a href="#">36426</a>	12.2	July 23, 2010
v6.1	<a href="#">35524</a>	12.1	April 23, 2010
v5.3	<a href="#">33297</a>	11.3	September 16, 2009
v5.2	<a href="#">32769</a>	11.2	June 24, 2009
v5.1	<a href="#">32201</a>	11.1	April 27, 2009
v4.4	<a href="#">31557</a>	10.1 IP Update 3	September 19, 2008
v4.3	<a href="#">30056</a>	10.1 Initial IP Update	March 24, 2008
v4.2	<a href="#">29246</a>	9.2i IP Update 2	October 17, 2007
v4.1	<a href="#">25458</a>	9.2i IP Update 1	August 15, 2007
v3.3.1	<a href="#">24552</a>	9.1i IP Update 2	April 2, 2007
v3.3	<a href="#">24552</a>	9.1i IP Update 1	March 5, 2007
v3.2	<a href="#">23847</a>	8.2i IP Update 2	October 3, 2006
v3.1	<a href="#">23490</a>	8.2i IP Update 1	July 19, 2006
v2.2	<a href="#">21848</a>	7.1i IP Update 3	August 31, 2006

## Packet Queue

**Note:** This core has been discontinued.

Version	Release Note	Initial Release	Date
v2.2	<a href="#">25463</a>	9.2i IP Update 1	August 15, 2007
v2.1	<a href="#">24562</a>	9.1i IP Update 1	March 5, 2007
v1.2	<a href="#">22842</a>	8.2i IP Update 1	July 19, 2006

## Memory Interface Generator (MIG) 7 Series

[Product Page](#)

Version	Release Note	Initial Release	Date
V1.9	<a href="#">54025</a>	Vivado 2013.1	April 3, 2013
V1.9	<a href="#">45195</a>	14.5	April 3, 2013
v1.8	<a href="#">45195</a>	14.4/Vivado 2012.4	December 18, 2012
v1.7	<a href="#">45195</a>	14.3/Vivado 2012.3	October 23, 2012
v1.6	<a href="#">45195</a>	14.2	July 25, 2012
v1.5	<a href="#">45195</a>	14.1	May 8, 2012
v1.4	<a href="#">45195</a>	13.4	January 18, 2012
v1.3	<a href="#">45195</a>	13.3	October 26, 2011
v1.2	<a href="#">45195</a>	13.2	July 6, 2011
v1.1	<a href="#">45195</a>	13.1	March 1, 2011

## Memory Interface Generator (MIG) Virtex-6 and Spartan-6

[Product Page](#)

Version	Release Note	Initial Release	Date
v3.92	<a href="#">50642</a>	14.1	May 8, 2012
v3.91	<a href="#">45194</a>	13.4	January 18, 2012
v3.9	<a href="#">43130</a>	13.3	October 26, 2011
v3.8	<a href="#">41347</a>	13.2	July 6, 2011
v3.7	<a href="#">39128</a>	13.1	March 1, 2011
v3.61	<a href="#">38951</a>	12.4	December 20, 2010
v3.6	<a href="#">37173</a>	12.3	October 5, 2010
v3.5	<a href="#">36211</a>	12.2	July 23, 2010
v3.4	<a href="#">34587</a>	12.1	April 23, 2010
v3.3	<a href="#">33706</a>	11.4	December 2, 2009
v3.2	<a href="#">33249</a>	11.3	September 16, 2009
v3.1	<a href="#">32641</a>	11.2	June 24, 2009

## Memory Interface Generator (MIG)

[Product Page](#)

Version	Release Note	Initial Release	Date
v3.61	<a href="#">38951</a>	12.4	December 20, 2010
v3.6	<a href="#">37173</a>	12.3	October 5, 2010
v3.5	<a href="#">36211</a>	12.2	July 23, 2010
v3.4	<a href="#">34587</a>	12.1	April 23, 2010
v3.3	<a href="#">33706</a>	11.4	December 2, 2009
v3.2	<a href="#">33249</a>	11.3	September 16, 2009
v3.1	<a href="#">32641</a>	11.2	June 24, 2009
v3.0	<a href="#">32090</a>	11.1	April 27, 2009
v2.3	<a href="#">31402</a>	10.1 IP Update 3	September 19, 2008

Version	Release Note	Initial Release	Date
v2.2	<a href="#">30411</a>	10.1 IP Update 1	April 25, 2008
v2.1	<a href="#">29911</a>	10.1 Initial IP Update	March 24, 2008
v2.0	<a href="#">29312</a>	9.2i IP Update 2	October 17, 2007
v1.73	<a href="#">25406</a>	9.1i IP Update 3	May 17, 2007
v1.72	<a href="#">25056</a>	9.1i IP Update 1	March 5, 2007
v1.7	<a href="#">24541</a>	NA	March 21, 2007
v1.6	<a href="#">23787</a>	NA	July 28, 2006
v1.5	<a href="#">22937</a>	NA	February 15, 2006
v1.4	<a href="#">21971</a>	NA	November 4, 2005

## Standard Bus Interfaces

### 7 Series Integrated Block for PCI Express

[Product Page](#)

Version	Release Note	Initial Release	Date
v2.0	<a href="#">54643</a>	Vivado 2013.1	April 3, 2013
v1.9	<a href="#">40469</a>	14.5	April 3, 2013
v1.8	<a href="#">40469</a>	14.4/Vivado 2012.4	December 18, 2012
v1.7	<a href="#">40469</a>	14.3/Vivado 2012.3	October 23, 2012
v1.6	<a href="#">40469</a>	14.2/Vivado 2012.2	July 25, 2012
v1.4	<a href="#">40469</a>	14.1	May 8, 2012
v1.3	<a href="#">40469</a>	13.4	January 18, 2012
v1.2	<a href="#">40469</a>	13.3	October 26, 2011
v1.1 Rev 1	<a href="#">40469</a>	13.2	July 6, 2011
v1.1	<a href="#">40469</a>	13.1	March 1, 2011

### AXI Bridge for PCI Express

[Product Page](#)

Version	Release Note	Initial Release	Date
v2.0	<a href="#">54646</a>	Vivado 2013.1	April 3, 2013
v1.07.a	<a href="#">44969</a>	14.5	April 3, 2013
v1.06.a	<a href="#">44969</a>	14.4/Vivado 2012.4	December 18, 2012
v1.05.a	<a href="#">44969</a>	14.3/Vivado 2012.3	October 23, 2012
v1.04.a	<a href="#">44969</a>	14.2	July 25, 2012
v1.03.a	<a href="#">44969</a>	14.1	May 8, 2012
v1.02.a	<a href="#">44969</a>	13.4	January 18, 2012

### Virtex-6 FPGA Integrated Block for PCI Express

[Product Page](#)

Version	Release Note	Initial Release	Date
v2.5	<a href="#">45723</a>	13.4	January 18, 2012
v2.4	<a href="#">42756</a>	13.2	July 7, 2011
v2.3	<a href="#">40445</a>	13.1	March 1, 2011
v1.7	<a href="#">40446</a>	13.1	March 1, 2011
v2.2	<a href="#">39353</a>	12.4	December 20, 2010
v2.1	<a href="#">37937</a>	12.3	October 5, 2010
v1.6	<a href="#">37936</a>	12.3	October 5, 2010
v1.5	<a href="#">35322</a>	12.1	April 23, 2010
v1.4	<a href="#">33763</a>	11.4	December 2, 2009
v1.3	<a href="#">33276</a>	11.3	September 16, 2009
v1.2	<a href="#">32742</a>	11.2	June 24, 2009

## Virtex-7 FPGA Gen3 Integrated Block for PCI Express

[Product Page](#)

Version	Release Note	Initial Release	Date
v2.0	<a href="#">54645</a>	Vivado 2013.1	April 3, 2013
v1.5	<a href="#">47441</a>	14.5	April 3, 2013
v1.4	<a href="#">47441</a>	14.4/Vivado 2012.4	December 18, 2012
v1.3	<a href="#">47441</a>	14.3/Vivado 2012.3	October 23, 2012
v1.2	<a href="#">47441</a>	14.2/Vivado 2012.2	July 25, 2012
v1.1	<a href="#">47441</a>	14.1	May 8, 2012

## Spartan-6 FPGA Integrated Block for PCI Express

[Product Page](#)

Version	Release Note	Initial Release	Date
v2.5	<a href="#">45702</a>	13.4	January 18, 2012
v2.3	<a href="#">42569</a>	13.2	July 6, 2011
v2.2	<a href="#">39371</a>	12.4	December 20, 2010
v2.1	<a href="#">37939</a>	12.3	October 5, 2010
v1.4	<a href="#">37938</a>	12.3	October 5, 2010
v1.3	<a href="#">35323</a>	12.1	April 23, 2010
v1.2	<a href="#">33277</a>	11.3	September 16, 2009
v1.1	<a href="#">32743</a>	11.2	June 24, 2009

## Endpoint Block Plus Wrapper for PCI Express

[Product Page](#)

Version	Release Note	Initial Release	Date
v1.15	<a href="#">42760</a>	13.2	July 6, 2011
v1.14	<a href="#">35321</a>	12.1	April 23, 2010
v1.13	<a href="#">33762</a>	11.4	December 2, 2009
v1.12	<a href="#">33278</a>	11.3	September 16, 2009
v1.11	<a href="#">32741</a>	11.2	June 24, 2009
v1.10	<a href="#">32274</a>	11.1	April 27, 2009
v1.9	<a href="#">31572</a>	10.1 IP Update 3	September 19, 2008
v1.8	<a href="#">30980</a>	10.1 IP Update 2	June 27, 2008
v1.7	<a href="#">30632</a>	10.1 IP Update 1	April 25, 2008
v1.6	<a href="#">30120</a>	10.1 Initial IP Update	March 24, 2008
v1.5	<a href="#">29468</a>	9.2i IP Update 2	October 17, 2007
v1.4	<a href="#">25493</a>	9.2i IP Update 1	August 15, 2007
v1.3	<a href="#">25162</a>	9.1i IP Update 3	May 17, 2007
v1.2	<a href="#">24603</a>	9.1i IP Update 1	March 5, 2007
v1.1	<a href="#">23985</a>	8.2i IP Update 2 (Virtex-5 LXT)	October 26, 2006

## Endpoint Block Wrapper for PCI Express

**Note:** This core has been discontinued.

Version	Release Note	Initial Release	Date
v1.7	<a href="#">30121</a>	10.1 Initial IP Update	March 24, 2008
v1.6	<a href="#">29470</a>	9.2i IP Update 2	October 17, 2007
v1.5	<a href="#">25494</a>	9.2i IP Update 1	August 15, 2007
v1.4	<a href="#">25163</a>	9.1i IP Update 3	May 17, 2007
v1.3	<a href="#">24604</a>	9.1i IP Update 2	April 2, 2007
v1.2	<a href="#">24046</a>	9.1i IP Update 1	March 5, 2007

## Endpoint for PCI Express (Soft IP Implementation)

[Product Page](#)

Version	Release Note	Initial Release	Date
v3.7	<a href="#">35324</a>	12.1	April 23, 2010
v3.6	<a href="#">29469</a>	9.2i IP Update 2	October 17, 2007
v3.5	<a href="#">25160</a>	9.1i IP Update 3	May 17, 2007
v3.4	<a href="#">24601</a>	9.1i IP Update 1	March 5, 2007
v3.3	<a href="#">22320</a>	8.2i IP Update 2	October 3, 2006
v3.2	<a href="#">22320</a>	8.1i IP Update 1	July 19, 2006
v3.1	<a href="#">22320</a>	8.1i IP Update 1	January 18, 2006

## Endpoint PIPE for PCI Express (Soft IP Implementation)

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Version	Release Note	Initial Release	Date
v1.8	<a href="#">36645</a>	12.2	July 23, 2010
v1.7	<a href="#">25161</a>	9.2i IP Update 2	October 17, 2007
v1.6	<a href="#">24602</a>	9.1i IP Update 3	May 17, 2007
v1.5	<a href="#">22232</a>	9.1i IP Update 1	March 5, 2007
v1.4	<a href="#">22322</a>	8.2i IP Update 2	October 3, 2006
v1.3	<a href="#">22322</a>	8.1i IP Update 1	July 19, 2006
v1.2	<a href="#">21847</a>	7.1i IP Update 3	August 31, 2005

## Initiator/Target for PCI™ v3

[Product Page](#)

Version	Release Note	Initial Release	Date
v3.167	<a href="#">32324</a>	11.1	April 27, 2009
v3.166	<a href="#">31567</a>	10.1 IP Update 3	September 19, 2008
v3.165	<a href="#">30116</a>	10.1 Initial IP Update	March 24, 2008
v3.164	<a href="#">29471</a>	9.2i IP Update 2	October 17, 2007
v3.163	<a href="#">25495</a>	9.1i IP Update 1	August 15, 2007
v3.162	<a href="#">25164</a>	9.1i IP Update 3	May 17, 2007

Version	Release Note	Initial Release	Date
v3.161	<a href="#">24605</a>	9.1i IP Update 1	March 5, 2007
v3.160	<a href="#">22321</a>	8.2i IP Update 2	October 3, 2006

## Initiator/Target for PCI v4

[Product Page](#)

Version	Release Note	Initial Release	Date
v5.0	<a href="#">54651</a>	Vivado 2013.1	April 3, 2013
v4.18	<a href="#">52452</a>	14.3/Vivado 2012.3	October 23, 2012
v4.17	<a href="#">50888</a>	14.2/Vivado 2012.2	July 25, 2012
v4.16	<a href="#">45583</a>	13.4	January 18, 2012
4.15	<a href="#">44584</a>	13.3	October 26, 2011
4.14	<a href="#">42761</a>	13.2	July 6, 2011
4.13	<a href="#">36646</a>	12.2	July 23, 2010
4.12	<a href="#">35334</a>	12.1	April 23, 2010
4.11	<a href="#">33764</a>	11.4	December 2, 2009
4.10	<a href="#">33279</a>	11.3	September 16, 2009
v4.9	<a href="#">32744</a>	11.2	June 24, 2009
v4.8	<a href="#">31568</a>	10.1 IP Update 3	September 19, 2008
v4.7	<a href="#">30633</a>	10.1 IP Update 1	April 25, 2008
v4.6	<a href="#">30117</a>	10.1 Initial IP Update	March 24, 2008
v4.5	<a href="#">29472</a>	9.2i IP Update 2	October 17, 2007
v4.4	<a href="#">25496</a>	9.2i IP Update 1	August 15, 2007
v4.3	<a href="#">25165</a>	9.1i IP Update 3	May 17, 2007
v4.2	<a href="#">24606</a>	9.1i IP Update 1	March 5, 2007
v4.1	<a href="#">22321</a>	8.2i IP Update 2	October 3, 2006

## Initiator/Target for PCI-X™ v5

[Product Page](#)

Version	Release Note	Initial Release	Date
v5.166	<a href="#">31569</a>	10.1 IP Update 3	September 19, 2008
v5.165	<a href="#">30118</a>	10.1 Initial IP Update	March 24, 2008
v5.164	<a href="#">29473</a>	9.2i IP Update 2	October 17, 2007
v5.163	<a href="#">25497</a>	9.2i IP Update 1	August 15, 2007
v5.162	<a href="#">25166</a>	9.1i IP Update 3	May 17, 2007
v5.161	<a href="#">24607</a>	9.1i IP Update 1	March 5, 2007
v5.160	<a href="#">22321</a>	8.2i IP Update 2	October 3, 2006



**Initiator/Target for PCI-X v6 (Virtex-5 FPGA)**[Product Page](#)

Version	Release Note	Initial Release	Date
v6.8	<a href="#">31570</a>	10.1 IP Update 3	September 19, 2008
v6.7	<a href="#">30634</a>	10.1 IP Update 1	April 25, 2008
v6.6	<a href="#">30119</a>	10.1 Initial IP Update	March 24, 2008
v6.5	<a href="#">29474</a>	9.2i IP Update 2	October 17, 2007
v6.4	<a href="#">25498</a>	9.2i IP Update 1	August 15, 2007
v6.3	<a href="#">25167</a>	9.1i IP Update 3	May 17, 2007
v6.2	<a href="#">24608</a>	9.1i IP Update 1	March 5, 2007
v6.1	<a href="#">22321</a>	8.2i IP Update 2	October 3, 2006

**UCF Generator for PCI/PCI-X**

Version	Release Note	Initial Release	Date
v2.8	<a href="#">31571</a>	10.1 IP Update 3	September 19, 2008
v2.7	<a href="#">30635</a>	10.1 IP Update 1	April 25, 2008
v2.6	<a href="#">30122</a>	10.1 Initial IP Update	March 24, 2008
v2.5	<a href="#">29475</a>	9.2i IP Update 2	October 17, 2007
v2.4	<a href="#">25499</a>	9.2i IP Update 1	August 15, 2007
v2.3	<a href="#">25168</a>	9.1i IP Update 3	May 17, 2007
v2.2	<a href="#">24609</a>	9.1i IP Update 1	March 5, 2007
v2.1	<a href="#">22321</a>	8.2i IP Update 2	October 3, 2006

**Serial RapidIO**[Product Page](#)

Version	Release Note	Initial Release	Date
v5.6	<a href="#">40519</a>	13.1	March 1, 2011
v5.5	<a href="#">35157</a>	12.1	May 5, 2010
v5.4	<a href="#">33312</a>	11.3	September 16, 2009
v5.3	<a href="#">32768</a>	11.2	June 24, 2009
v5.2	<a href="#">32196</a>	11.1	April 27, 2009
v5.1	<a href="#">31573</a>	10.1 IP Update 3	September 19, 2008
v4.4	<a href="#">30941</a>	10.1 IP Update 2	June 27, 2008
v4.3	<a href="#">30059</a>	10.1 Initial IP Update	March 24, 2008
v4.2	<a href="#">25462</a>	9.2i IP Update 2	October 17, 2007
v4.1	<a href="#">23850</a>	9.1i IP Update 1	March 5, 2007

**Serial RapidIO Gen2**[Product Page](#)

Version	Release Note	Initial Release	Date
v2.0	<a href="#">54648</a>	Vivado 2013.1	April 3, 2013
v1.7	<a href="#">55339</a>	14.5	April 3, 2013

Version	Release Note	Initial Release	Date
v1.6	<a href="#">52797</a>	14.4/Vivado 2012.4	December 18, 2012
v1.5	<a href="#">50829</a>	14.2/Vivado 2012.2	July 25, 2012
v1.4	<a href="#">47190</a>	14.1	May 8, 2012
v1.3	<a href="#">45708</a>	13.4	January 18, 2012
v1.2	<a href="#">44605</a>	13.3	October 26, 2011

## Revision History

The following table shows the revision history for this document.

Date	Version	Revision
11/21/07	1.0	Initial Xilinx release.
03/24/08	1.1	Added Wireless category, which includes CPRI and OBSAI. Updated for 10.1 Initial IP Update. Added revision summary to first page. Corrected FlexRay table. Added individual DSP core entries.
04/25/08	1.2	Added ARs for 10.1 IP Update 1 cores. Added new Turbo Decoder and 3GPP LTE Turbo Encoder cores. Updated Multiplier core naming. Updated FPGA reference naming and trademark information.
06/27/08	1.3	Added CORE Generator Software Known Issues, updated for 10.1 IP Update 2, and corrected typographical errors.
09/19/08	1.4	Updated for 10.1 IP Update 3.
04/27/09	1.5	Updated for 11.1.
06/24/09	1.6	Updated for 11.2.
06/30/09	1.6.1	Minor updates; added link to " <a href="#">Ethernet Statistics</a> " on page 1, and added discontinued notice to " <a href="#">SPI-3 PHY</a> " per CR# 525998.
09/16/09	1.7	Updated for 11.3.
12/02/09	1.8	Updated for 11.4.
05/03/10	1.9	Updated for 12.1
05/04/10	1.9.1	Fixed broken link
05/06/10	2.0	Updated FIFO Generator and Block Memory Generator. Updated links
07/23/10	2.1	Updated for 12.2
08/05/10	2.2	Added DUC/DDC Compiler and LTE Fast Fourier Transform (FFT). Other Minor Edits
10/05/10	2.3	Updated for 12.3
12/20/10	2.4	Updated for 12.4
03/01/11	2.5	Updated for 13.1
03/02/11	2.6	Updated links to System Monitor Wizard and XADC Wizard
05/02/11	2.7	Added LogiCORE Video Deinterlacer, v1.0
07/06/11	2.8	Updated for 13.2
10/26/11	2.9	Updated for ISE 13.3 software release
01/18/12	3.0	Updated for ISE 13.4 software release
02/23/12	3.1	Added MicroBlaze Microprocessor Control System core
05/08/12	3.2	Updated for ISE 14.1 software release
05/17/12	3.3	Updated Soft Error Mitigation

Date	Version	Revision
07/25/12	3.4	Updated for ISE 14.2 and Vivado 2012.2 Design Suite releases
07/31/12	3.5	Minor updates to ISE 14.2 and Vivado 2012.2 IP release notes
10/23/12	3.6	Updated for ISE 14.3 and Vivado 2012.3 Design Suite releases
10/26/12	3.7	Minor update to Digital Pre-Distortion (DPD) (AXI)
12/18/12	3.8	Updated for ISE 14.4 and Vivado 2012.4 Design Suite releases
04/03/13	3.9	Updated for Vivado 2013.1 Design Suite release
04/04/13	4.0	Minor update to version 3.9
05/07/13	4.1	Fix to two broken links
6/19/13	4.2	Updated for ISE Design Suite 14.6
10/21/13	4.3	Updated DPD table on page 26