
XTP025 (v4.3) October 21, 2013

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. 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). 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

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- "AXI Direct Memory Access (DMA)"
- "AXI Interconnect"
- "AXI Video Direct Memory Access (VDMA)"
- "AXI Virtual FIFO Controller"
- "ChipScope AXI Monitor"

Communications and Networking

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- "Embedded Tri-Mode Ethernet MAC Wrapper (Virtex-4 FX Family)"
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- "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)"
- "VLINQ™"

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 | 40493 |
| 12.1 | 35214 |
| 11.3 | 32288 |
| 11.2 | 32288 |
| 11.1 | 32288 |
| 10.1 | 30291 |
| 9.2i | 29193 |
| 9.1i | 24408 |
| 8.2i | 23396 |
| 8.1i | 22609 |
| 7.1i | 20491 |

Automotive IP

CAN

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| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------|------------------|
| v5.0 | 54449 | Vivado 2013.1 | April 3, 2013 |
| v4.1 | 37994 | 12.3 | October 5, 2010 |
| v3.2 | 35176 | 12.1 | May 3, 2010 |
| v2.1 | 32262 | 11.1 | April 27, 2009 |
| v1.5 | 25451 | 9.2i IP Update 1 | August 15, 2007 |
| v1.4 | 23876 | 8.2i IP Update 2 | October 3, 2006 |
| v1.3 | 22342 | 8.1i IP Update 1 | January 18, 2006 |
| v1.2* | 22412 | 7.1i IP Update 3 | August 31, 2005 |
| v1.1 | 21937 | 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 | 25142 | 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 | 31555 | 10.1 IP Update 3 | September 19, 2008 |
| v1.2 | 25452 | 9.2i IP Update 1 | August 2007 |
| v1.1 | 25141 | 9.1i IP Update 3 | May 2007 |

AXI Infrastructure

AXI4-Stream Interconnect

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| Version | Release Note | Initial Release | Date |
|---------|-----------------------|-----------------|---------------|
| v1.1 | 54813 | Vivado 2013.1 | April 3, 2013 |
| v1.1 | 47407 | 14.2 | July 25, 2012 |
| v1.0 | 47407 | 14.1 | May 8, 2012 |

AXI Bus Function Model (BFM)

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| Version | Release Note | Initial Release | Date |
|---------|-----------------------|--------------------|---------------|
| v4.0 | 54678 | Vivado 2013.1 | April 3, 2013 |
| v2.1 | 47649 | 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 | 54685 | Vivado 2013.1 | April 3, 2013 |
| v3.03.a | 47650 | 14.1 | May 8, 2012 |

AXI DataMover

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

AXI Direct Memory Access (DMA)

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

AXI Interconnect

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| Version | Release Note | Initial Release | Date |
|---------|-----------------------|--------------------|---------------|
| v1.06.a | 54453 | Vivado 2013.1 | April 3, 2013 |
| v1.06.a | 47653 | 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 | 54448 | Vivado 2013.1 | April 3, 2013 |
| v5.03.a | 47654 | 14.3/Vivado 2012.3 | October 23, 2012 |
| v5.02.a | 47654 | 14.2 | July 25, 2012 |
| v5.01.a | 47654 | 14.1 | May 8, 2012 |

AXI Virtual FIFO Controller

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| Version | Release Note | Initial Release | Date |
|---------|-----------------------|--------------------|---------------|
| v2.0 | 54809 | Vivado 2013.1 | April 3, 2013 |
| v1.1 | 47655 | 14.2/Vivado 2012.2 | June 25, 2012 |

ChipScope AXI Monitor

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| Version | Release Note | Initial Release | Date |
|---------|-----------------------|-----------------|---------------|
| v3.05.a | 47656 | 14.2 | July 25, 2012 |
| v5.01.a | 47656 | 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 | 32234 | 11.1 | April 27, 2009 |
| v3.0 | 31521 | 10.1 IP Update 3 | September 19, 2008 |
| v2.9 | 31396 | 10.1 Initial IP Update | March 24, 2008 |
| v2.8 | 29367 | 9.2i IP Update 2 | October 17, 2007 |
| v2.7 | 25067 | 9.1i IP Update 3 | May 17, 2007 |
| v2.6 | 24596 | 9.1i IP Update 1 | March 5, 2007 |

Aurora 8B10B (AXI)

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

Aurora 8B10B

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

Aurora 64B/66B

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| Version | Release Note | Initial Release | Date |
|---------|-----------------------|--------------------|------------------|
| v8.0 | 54367 | Vivado 2013.1 | April 3, 2013 |
| v7.3 | 52313 | 14.3/Vivado 2012.3 | October 23, 2012 |

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------------|--------------------|
| v7.2 | 50615 | Vivado 2012.2 | July 25, 2012 |
| v7.1 | 47704 | 14.1/Vivado 2012.1 | May 8, 2012 |
| v6.2 | 45671 | 13.4 | January 18, 2012 |
| v6.1 | 42804 | 13.2 | July 6, 2011 |
| v4.2 | 42624 | 13.1 | March 1, 2011 |
| v4.1 | 35371 | 12.1 | May 3, 2010 |
| v3.1 | 33248 | 11.3 | September 16, 2009 |
| v2.1 | 32233 | 11.1 | April 27, 2009 |
| v1.3 | 31520 | 10.1 IP Update 3 | September 19, 2008 |
| v1.2 | 31085 | 10.1 IP Update 2 | June 27, 2008 |
| v1.1 | 30670 | 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 | 30640 | 10.1 IP Update 3 | September 19, 2008 |
| v2.1 | 30640 | 10.1 IP Update 1 | April 25, 2008 |

Soft Error Mitigation

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

Tri-Mode Ethernet MAC

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

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------------|--------------------|
| v4.6 | 47694 | 14.1 | May 8, 2012 |
| v4.5 | 40623 | 13.1 | March 1, 2011 |
| v4.4 | 35279 | 12.1 | April 23, 2010 |
| v4.3 | 33307 | 11.3 | September 16, 2009 |
| v4.2 | 32762 | 11.2 | June 24, 2009 |
| v4.1 | 32204 | 11.1 | April 27, 2009 |
| v3.5 | 30146 | 10.1 Initial IP Update | March 24, 2008 |
| v3.4 | 25488 | 9.2i IP Update 1 | August 15, 2007 |
| v3.31 | 24591 | 9.1i IP Update 2 | April 2, 2007 |
| v3.3 | 24591 | 9.1i IP Update 1 | March 5, 2007 |
| v3.2 | 23921 | 8.2i IP Update 2 | October 3, 2006 |
| v3.1 | 23500 | 8.2i IP Update 1 | July 19, 2006 |
| v2.2 | 22328 | 8.1i IP Update 1 | January 18, 2006 |
| v2.1 | 21044 | 7.1i IP Update 1 | May 12, 2005 |
| v1.2 | 19882 | 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 | 32205 | 11.1 | April 27, 2009 |
| v8.4 | 30145 | 10.1 Initial IP Update | March 24, 2008 |
| v8.3 | 25487 | 9.2i IP Update 1 | August 15, 2007 |
| v8.2.1 | 23919 | 9.1i IP Update 2 | April 2, 2007 |
| v8.2 | 23919 | 9.1i IP Update 1 | March 5, 2007 |
| v8.1 | 23919 | 8.2i IP Update 2 | October 3, 2006 |
| v8.0 | 23498 | 8.2i IP Update 1 | July 19, 2006 |
| v7.0 | 22326 | 8.1i IP Update 1 | January 18, 2006 |
| v6.0 | 21043 | 7.1i IP Update 1 | May 12, 2005 |
| v5.0 | 19878 | 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 | 54667 | Vivado 2013.1 | April 3, 2013 |
| v11.5 | 47524 | 14.4/Vivado 2012.4 | December 18, 2012 |
| v11.4 | 47524 | 14.2/Vivado 2012.2 | July 25, 2012 |
| v11.3 | 47524 | 14.1 | May 8, 2012 |
| v11.2 | 45677 | 13.4 | January 18, 2012 |
| v11.1 | 40625 | 13.1 | March 1, 2011 |
| v10.5 | 36674 | 12.2 | July 23, 2010 |

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

QSGMII

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

10-Gigabit Ethernet MAC

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

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

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

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

RXAUI

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

XAUI

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| Version | Release Note | Initial Release | Date |
|---------|-----------------------|--------------------|------------------|
| v11.0 | 54666 | Vivado 2013.1 | April 3, 2013 |
| v10.4 | 47684 | 14.2/Vivado 2012.2 | July 25, 2012 |
| v10.3 | 47684 | 14.1 | May 8, 2012 |
| v10.2 | 45705 | 13.4 | January 18, 2012 |

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

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

[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------------|-------------------|
| v4.8 | 34940 | 12.1 | April 23, 2010 |
| v4.7 | 32209 | 11.1 | April 27, 2009 |
| v4.6 | 30148 | 10.1 Initial IP Update | March 24, 2008 |
| v4.5 | 25439 | 9.2i IP Update 1 | August 15, 2007 |
| v4.4 | 24587 | 9.1i IP Update 1 | March 5, 2007 |
| v4.3 | 23922 | 8.2i IP Update 2 | October 26, 2006 |
| v4.2 | 23503 | 8.2i IP Update 1 | July 19, 2006 |
| v4.1 | 22332 | 8.1i IP Update 1 | January 18, 2006 |
| v3.1 | 21903 | 7.1i IP Update 3 | August 31, 2005 |
| v2.1 | 21049 | 7.1i IP Update 1 | May 12, 2005 |
| v1.0 | 20193 | 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 | 40632 | 13.1 | March 1, 2011 |
| v1.7 | 34968 | 12.1 | April 23, 2010 |
| v1.6 | 32210 | 11.1 | April 27, 2009 |
| v1.5 | 31511 | 10.1 IP Update 3 | September 19, 2008 |
| v1.4 | 30149 | 10.1 Initial IP Update | March 24, 2008 |
| v1.3 | 25441 | 9.2i IP Update 1 | August 15, 2007 |
| v1.2 | 24593 | 9.1i IP Update 1 | March 5, 2007 |

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|---|------------------|
| v1.1 | 24042 | 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 | 47365 | 14.1 | May 8, 2012 |
| v2.2 | 44428 | 13.3 | October 26, 2011 |
| v2.1 | 40634 | 13.1 | March 1, 2011 |
| v1.6 | 47362 | 14.1 | May 8, 2012 |
| v1.5 | 40633 | 13.1 | March 1, 2011 |
| v1.4 | 34972 | 12.1 | April 23, 2010 |
| v1.3 | 33309 | 11.3 | September 16, 2009 |
| v1.2 | 32755 | 11.2 | June 24, 2009 |

Ethernet Statistics

[Product Page](#)

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

Ethernet AVB Endpoint

[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|-----------------|--------------------|
| v3.1 | 40636 | 13.1 | March 1, 2011 |
| v2.4 | 36676 | 12.2 | July 23, 2010 |
| v2.3 | 35203 | 12.1 | April 23, 2010 |
| v2.2 | 33305 | 11.3 | September 16, 2009 |
| v2.1 | 32760 | 11.2 | June 24, 2009 |
| v1.2 | 32212 | 11.1 | April 27, 2009 |

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------|--------------------|
| v1.1 | 31512 | 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 | 35263 | 12.1 | April 23, 2010 |
| v3.4 | 32213 | 11.1 | April 27, 2009 |
| v3.3 | 30150 | 10.1 Initial IP Update | March 24, 2008 |
| v3.2 | 25454 | 9.2i IP Update 1 | August 15, 2007 |
| v3.1 | 24584 | 9.1i IP Update 1 | March 5, 2007 |
| v2.1 | 22323 | 8.1i IP Update 1 | January 18, 2006 |
| v2.0 | 21048 | 7.1i IP Update 1 | May 12, 2005 |
| v1.0 | 19527 | 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 | 30151 | 10.1 Initial IP Update | March 24, 2008 |
| v2.2 | 25455 | 9.2i IP Update 1 | August 15, 2007 |
| v2.1 | 24585 | 9.1i IP Update 1 | March 5, 2007 |
| v1.1 | 22324 | 8.1i IP Update 1 | January 18, 2006 |

SPI-4.2

[Product Page](#)

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

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------|------------------|
| v8.2 | 23846 | 8.2i IP Update 3 | December 7, 2007 |
| v8.1 | 23487 | 8.2i IP Update 1 | July 19, 2006 |
| v7.4 | 22300 | 8.1i IP Update 1 | January 18, 2006 |
| v7.3 | 21918 | 7.1i IP Update 3 | August 31, 2005 |
| v7.2 | 21032 | 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 | 22301 | 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 | 35138 | 12.1 | May 3, 2010 |
| v5.1 | 32767 | 11.2 | June 24, 2009 |
| v4.4 | 32198 | 11.1 | April 27, 2009 |
| v4.3 | 30970 | 10.1 IP Update 2 | June 27, 2008 |
| v4.2.1 | 24556 | 9.1i IP Update 3 | May 17, 2007 |
| v4.2 | 24556 | 9.1i IP Update 1 | March 5, 2007 |
| v4.1 | 23488 | 8.2i IP Update 1 | July 19, 2006 |
| v3.1 | 22390 | 8.1i IP Update 1 | January 18, 2006 |
| v3 | 21919 | 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 | 39377 | 12.4 | December 10, 2010 |
| v7.2 | 35141 | 12.1 | May 3, 2010 |
| v7.1 | 33779 | 11.4 | December 2, 2009 |
| v6.1 | 33314 | 11.3 | September 16, 2009 |
| v5.2 | 32199 | 11.1 | April 27, 2009 |
| v5.1 | 25461 | 9.1i IP Update 1 | March 5, 2007 |
| v4.1 | 22382 | 8.2i IP Update 1 | July 19, 2006 |
| v4 | 21921 | 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 | 32200 | 11.1 | April 27, 2009 |
| v5.1 | 25460 | 9.1i IP Update 1 | March 5, 2007 |
| v4.1 | 22381 | 8.2i IP Update 1 | July 19, 2006 |
| v4 | 21920 | 7.1i IP Update 3 | August 31, 2005 |

Wireless

CPRI™

[Product Page](#)

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

OBSAI

[Product Page](#)

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

DSP Horizontal

Accumulator

[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|-----------------|----------------|
| v12.0 | 54492 | Vivado 2013.1 | April 3, 2013 |
| v11.0 | 32138 | 11.1 | April 27, 2009 |

Adder/Subtractor

[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|-----------------|----------------|
| v12.0 | 54491 | Vivado 2013.1 | April 3, 2013 |
| v11.0 | 32139 | 11.1 | April 27, 2009 |

Binary Counter

[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|-----------------|----------------|
| v12.0 | 54493 | Vivado 2013.1 | April 3, 2013 |
| v11.0 | 32140 | 11.1 | April 27, 2009 |

Cascaded Integrator Comb Compiler (CIC Compiler)

[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------------|--------------------|
| v4.0 | 54494 | Vivado 2013.1 | April 3, 2013 |
| v3.0 | 29297 | 13.2 | July 6, 2011 |
| v2.0 | 29297 | 12.1 | April 23, 2010 |
| v1.3 | 29297 | 11.3 | September 16, 2009 |
| v1.2 | 29297 | 10.1 IP Update 1 | April 25, 2008 |
| v1.1 | 29297 | 10.1 Initial IP Update | March 24, 2008 |

Complex Multiplier

[Product Page](#)

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

CORDIC[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------|------------------|
| v6.0 | 54497 | Vivado 2013.1 | April 3, 2013 |
| v5.0 | 29570 | 13.3 | October 26, 2011 |
| v4.0 | 29570 | 11.1 | April 27, 2009 |
| v3.0 | 29570 | 6.3i IP Update 1 | May 21, 2004 |

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

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------------|--------------------|
| v6.0 | 54498 | Vivado 2013.1 | April 3, 2013 |
| v5.0 | 29976 | 12.3 | October 5, 2010 |
| v4.0 | 29976 | 11.3 | September 16, 2009 |
| v3.0 | 29976 | 11.2 | June 24, 2009 |
| v2.1 | 29976 | 10.1 Initial IP Update | March 24, 2008 |

Divider[Product Page](#)

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

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

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------------|------------------|
| v4.0 | 54475 | Vivado 2013.1 | April 3, 2013 |
| v3.1 | 29978 | 11.4 | December 2, 2009 |
| v3.0 | 29978 | 10.1 IP Update 2 | June 27, 2008 |
| v2.1 | 29978 | 10.1 Initial IP Update | March 24, 2008 |

DSP48 Macro[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|-----------------|------------------|
| v3.0 | 54500 | Vivado 2013.1 | April 3, 2013 |
| v2.1 | 33537 | 13.1 | March 1, 2011 |
| v2.0 | 33537 | 11.4 | December 2, 2009 |

DUC/DDC Compiler[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|-----------------|-----------------|
| v3.0 | 54476 | Vivado 2013.1 | April 3, 2013 |
| v2.0 | 36823 | 13.2 | July 6, 2011 |
| v1.1 | 36823 | 12.3 | October 5, 2010 |
| v1.0 | 36823 | 12.2 | July 23, 2010 |

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

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

FIR Compiler[Product Page](#)

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

Floating-Point Operator[Product Page](#)

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

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

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|-----------------|---------------|
| v2.0 | 54882 | Vivado 2013.1 | April 3, 2013 |
| v1.0 | 36977 | 12.2 | July 23, 2010 |

Multiplier[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------|--------------------|
| v12.0 | 54506 | Vivado 2013.1 | April 3, 2013 |
| v11.2 | 30160 | 11.3 | September 16, 2009 |
| v11.0 | 30160 | 11.1 | April 27, 2009 |
| v10.1 | 30160 | 10.1 IP Update 1 | April 25, 2008 |
| v10.0 | 30160 | 9.1i IP Update 2 | April 2, 2007 |

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

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|-----------------|----------------|
| v3.0 | 54509 | Vivado 2013.1 | April 3, 2013 |
| v2.0 | 30161 | 11.1 | April 27, 2009 |

Multiply Adder[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|-----------------|----------------|
| v3.0 | 54507 | Vivado 2013.1 | April 3, 2013 |
| v2.0 | 32141 | 11.1 | April 27, 2009 |

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

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|-----------------|----------------|
| v12.0 | 54508 | Vivado 2013.1 | April 3, 2013 |
| v11.0 | 32142 | 11.1 | April 27, 2009 |

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

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------|--------------|
| v5.0 | 30162 | 6.3i IP Update 1 | May 21, 2004 |

VLYNQ™

[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------------|----------------|
| v1.4 | 23509 | 11.1 | April 27, 2009 |
| v1.3 | 23509 | 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 | 30163 | 9.2i IP Update 1 | August 15, 2007 |

3GPP LTE Channel Estimator

[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|-----------------|------------------|
| v2.0 | 54467 | Vivado 2013.1 | April 3, 2013 |
| v1.1 | 38011 | 13.3 | October 26, 2011 |
| v1.0 | 38011 | 12.3 | October 5, 2010 |

3GPP LTE MIMO Decoder

[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|-----------------|-------------------|
| v3.0 | 54468 | Vivado 2013.1 | April 3, 2013 |
| v2.1 | 33758 | 13.2 | July 6, 2011 |
| v2.0 | 33758 | 12.4 | December 20, 2010 |
| v1.0 | 33758 | 11.4 | December 2, 2009 |

3GPP LTE MIMO Encoder

[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|-----------------|--------------------|
| v4.0 | 54469 | Vivado 2013.1 | April 3, 2013 |
| v3.0 | 33266 | 13.4 | January 18, 2012 |
| v2.0 | 33266 | 11.3 | September 16, 2009 |

3GPP LTE Turbo Decoder

[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------|----------------|
| v2.0 | 54470 | Vivado 2013.1 | April 3, 2013 |
| v2.0 | 30630 | 11.2 | June 24, 2009 |
| v1.0 | 30630 | 10.1 IP Update 1 | April 25, 2008 |

3GPP LTE Turbo Encoder

[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|-----------------|----------------|
| v5.0 | 54472 | Vivado 2013.1 | April 3, 2013 |
| v3.1 | 30631 | 12.1 | April 23, 2010 |
| v3.0 | 30631 | 11.1 | April 27, 2009 |

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------|--------------------|
| v2.0 | 30631 | 10.1 IP Update 3 | September 19, 2008 |
| v1.0 | 30631 | 10.1 IP Update 1 | April 25, 2008 |

3GPP RACH Preamble Detector

[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------|-----------------|
| v1.0 | 30164 | 9.2i IP Update 1 | August 15, 2007 |

3GPP Searcher

[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------|-----------------|
| v1.0 | 30165 | 9.2i IP Update 1 | August 15, 2007 |

3GPP Turbo Convolutional Code Decoder

[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------|---------------|
| v4.1 | 30166 | Vivado 2012.2 | July 25, 2012 |
| v4.0 | 30166 | 11.2 | June 24, 2009 |
| v3.1 | 30166 | 9.1i IP Update 3 | May 17, 2007 |

3GPP Turbo Convolutional Code Encoder

[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------------|----------------|
| v4.0 | 30167 | 11.2 | June 24, 2009 |
| v3.1 | 30167 | 10.1 Initial IP Update | March 24, 2008 |

3GPP2 Turbo Convolutional Code Decoder

[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------|---------------|
| v2.1 | 30168 | 9.1i IP Update 1 | March 5, 2007 |

3GPP2 Turbo Convolutional Code Encoder

[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------|---------------|
| v2.0 | 30169 | 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 | 29447 | 11.2 | June 24, 2009 |
| v3.1 | 29447 | 10.1 IP Update 3 | September 19, 2008 |

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------|------------------|
| v3.0 | 29447 | 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 | 30170 | 11.1 | April 27, 2009 |
| v2.1 | 30170 | 9.1i IP Update 2 | April 2, 2007 |

Additive White Gaussian Noise Generator (AWGN)

[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|-----------------|------------------|
| v1.0 | 30171 | Stand Alone | October 30, 2002 |

Convolutional Encoder

[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------|------------------|
| v9.0 | 54496 | Vivado 2013.1 | April 3, 2013 |
| v8.0 | 30172 | 13.4 | January 18, 2012 |
| v7.0 | 30172 | 11.2 | June 24, 2009 |
| v6.1 | 30172 | 9.1i IP Update 3 | May 17, 2007 |

Digital Pre-Distortion (DPD) (AXI)

[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|-----------------|------------------|
| v6.0 | 33521 | 14.3 | 10/16/2012 |
| v5.0 | 33521 | 13.2 | July 6, 2011 |
| v4.0 | 33521 | 12.3 | October 25, 2010 |
| v3.1 | 33521 | 12.1 | April 23, 2010 |

DVB-S.2 FEC Encoder

[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------|------------------|
| v2.0 | 30173 | 11.4 | December 2, 2009 |
| v1.4 | 30173 | 10.1 IP Update 2 | June 27, 2008 |
| v1.3 | 30173 | 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 | 54479 | Vivado 2013.1 | April 3, 2013 |

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|--------------------|------------------|
| v1.0 | 52189 | 14.3/Vivado 2012.3 | October 23, 2012 |

JESD204

[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|-----------------|------------------|
| v4.0 | 54480 | Vivado 2013.1 | April 3, 2013 |
| v2.1 | 44405 | 14.1 | May 8, 2012 |
| v1.1 | 44405 | 13.3 | October 26, 2011 |

Interleaver/De-interleaver

[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------------|------------------|
| v8.0 | 54503 | Vivado 2013.1 | April 3, 2013 |
| v7.1 | 30174 | 2012.2 | July 25, 2012 |
| v7.0 | 30174 | 13.4 | January 18, 2012 |
| v6.0 | 30174 | 12.1 | April 23, 2010 |
| v5.1 | 30174 | 10.1 Initial IP Update | March 24, 2008 |

Linear Algebra Toolkit

[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|-----------------|---------------|
| v2.0 | 54505 | Vivado 2013.1 | April 3, 2013 |
| v1.0 | 40040 | 13.1 | March 1, 2011 |

LDPC 802.16 Encoder

[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------|---------------|
| v1.0 | 30175 | 8.2i IP Update 1 | July 19, 2006 |

LTE DL Channel Encoder

[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------|--------------------|
| v3.0 | 54481 | Vivado 2013.1 | April 3, 2013 |
| v2.2 | 31421 | Vivado 2012.2 | July 25, 2012 |
| v2.1 | 31421 | 12.1 | April 23, 2010 |
| v2.0 | 31421 | 11.1 | April 27, 2009 |
| v1.0 | 31421 | 10.1 IP Update 3 | September 19, 2008 |

LTE UL Channel Decoder[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------|--------------------|
| v4.0 | 54484 | Vivado 2013.1 | April 3, 2013 |
| v3.0 | 31422 | 13.2 | July 6, 2011 |
| v2.0 | 31422 | 11.2 | June 24, 2009 |
| v1.0 | 31422 | 10.1 IP Update 3 | September 19, 2008 |

LTE UL PUCCH Receiver[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|-----------------|---------------|
| v2.0 | 54483 | Vivado 2013.1 | April 3, 2013 |
| v1.0 | 39974 | 13.1 | March 1, 2011 |

LTE RACH Detector[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|-----------------|----------------|
| v2.0 | 54487 | Vivado 2013.1 | April 3, 2013 |
| v1.0 | 35106 | 12.1 | April 23, 2010 |

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

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|-----------------|------------------|
| v2.0 | 55471 | Vivado 2013.1 | April 3, 2013 |
| v1.0 | 45594 | 13.4 | January 18, 2012 |

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

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|-----------------|------------------|
| v4.0 | 54486 | Vivado 2013.1 | April 3, 2013 |
| v3.0 | 33760 | 13.2 | July 6, 2011 |
| v2.0 | 33760 | 11.4 | December 2, 2009 |

Reed-Solomon Decoder[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------|------------------|
| v9.0 | 54510 | Vivado 2013.1 | April 3, 2013 |
| v8.0 | 30176 | 13.3 | October 26, 2011 |
| v7.1 | 30176 | 12.2 | July 23, 2010 |
| v7.0 | 30176 | 11.2 | June 24, 2009 |
| v6.1 | 30176 | 9.1i IP Update 3 | May 17, 2007 |

Reed-Solomon Encoder

[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------|------------------|
| v9.0 | 54511 | Vivado 2013.1 | April 3, 2013 |
| v8.0 | 30177 | 13.4 | January 18, 2012 |
| v7.1 | 30177 | 12.2 | July 23, 2010 |
| v7.0 | 30177 | 11.2 | June 24, 2009 |
| v6.1 | 30177 | 9.1i IP Update 3 | May 17, 2007 |

Turbo Product Code (TPC) Decoder

[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|-----------------|------------------|
| v1.1 | 30178 | Stand Alone | January 21, 2003 |

Turbo Product Code (TPC) Encoder

[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|-----------------|------------------|
| v1.0 | 30179 | Stand Alone | October 30, 2002 |

Viterbi Decoder

[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------|------------------|
| v9.0 | 54512 | Vivado 2013.1 | April 3, 2013 |
| v8.0 | 29448 | 13.4 | January 18, 2012 |
| v7.0 | 29448 | 11.2 | June 24, 2009 |
| v6.2 | 29448 | 9.2i IP Update 2 | October 17, 2007 |

DSP MVI

Asynchronous Sample Rate Converter

[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|-----------------|---------------|
| v2.0 | 54516 | Vivado 2013.1 | April 3, 2013 |
| v1.0 | 47209 | 14.1 | May 8, 2012 |

AXI4-Stream to Video Out

[Product Page](#)

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

Chroma Resampler

[Product Page](#)

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

Color Correction Matrix

[Product Page](#)

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

Color Filter Array Interpolation

[Product Page](#)

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

Defective Pixel Correction

[Product Page](#)

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

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|-----------------|----------------|
| v1.0 | 32134 | 11.1 | April 27, 2009 |

DisplayPort

[Product Page](#)

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

Gamma Correction

[Product Page](#)

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

H.264 Deblocking Filter

Note: This core has been discontinued.

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|-----------------|--------------|
| v1.0 | 25253 | Stand Alone | May 31, 2007 |

H.264 CABAC Encoder

Note: This core has been discontinued.

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|-----------------|--------------|
| v1.0 | 25254 | Stand Alone | May 31, 2007 |

H.264 Motion Estimation Engine

Note: This core has been discontinued.

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|-----------------|------------------|
| v1.0 | 29129 | Stand Alone | October 24, 2007 |

Image Characterization

[Product Page](#).

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|-----------------|------------------|
| v3.0 | 54524 | Vivado 2013.1 | April 3, 2013 |
| v2.0 | 34574 | 13.3 | October 26, 2011 |
| v1.1 | 34574 | 12.3 | October 5, 2010 |
| v1.0 | 34574 | 12.1 | May 3, 2010 |

Image Edge Enhancement

[Product Page](#)

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

Image Noise Reduction

[Product Page](#)

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

Image Processing Pipeline

Note: This core has been discontinued.

[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|-----------------|----------------|
| v1.0 | 32136 | 11.1 | April 27, 2009 |

Image Statistics Engine

[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|--------------------|------------------|
| v6.0 | 54527 | Vivado 2013.1 | April 3, 2013 |
| v5.01.a | 33748 | 14.3/Vivado 2012.3 | October 23, 2012 |
| v5.00.a | 33748 | 14.2/Vivado 2012.2 | July 25, 2012 |

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|-----------------|------------------|
| v4.00.a | 33748 | 14.1 | May 8, 2012 |
| v3.0 | 33748 | 14.1 | May 8, 2012 |
| v3.0 | 33748 | 13.3 | October 26, 2011 |
| v2.0 | 33748 | 13.1 | March 1, 2011 |
| v1.0 | 33748 | 11.4 | December 2, 2009 |

Motion Adaptive Noise Reduction

[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------|------------------|
| v6.0 | 54528 | Vivado 2013.1 | April 3, 2013 |
| v5.00.a | 33751 | 14.2/Vivado 2012 | July 25, 2012 |
| v4.00.a | 33751 | 14.1 | May 8, 2012 |
| v3.0 | 33751 | 13.3 | October 26, 2011 |
| v2.0 | 33751 | 13.1 | March 1, 2011 |
| v1.1 | 33751 | 12.3 | October 5, 2010 |
| v1.0 | 33751 | 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 | 30157 | 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 | 30158 | Stand Alone | December 15, 2006 |

Object Segmentation

[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|-----------------|------------------|
| v3.0 | 54529 | Vivado 2013.1 | April 3, 2013 |
| v2.0 | 38992 | 13.3 | October 26, 2011 |
| v1.0 | 38992 | 13.1 | March 1, 2011 |

RGB to YCrCb Color-Space Converter (RGB2YCrCb)

[Product Page](#)

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

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------------|------------------|
| v4.0 | 29982 | 13.3 | October 26, 2011 |
| v3.0 | 29982 | 12.2 | July 23, 2010 |
| v2.0 | 29982 | 11.1 | April 27, 2009 |
| v1.0 | 29982 | 10.1 Initial IP Update | March 24, 2008 |

SMPTE SD/HD/3G-SDI

[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|--------------------|---------------|
| v2.0 | 54531 | Vivado 2013.1 | April 3, 2013 |
| v1.0 | 50905 | 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 | 54534 | Vivado 2013.1 | April 3, 2013 |
| v2.0 | 47208 | 14.2/Vivado 2012.2 | July 25, 2012 |
| v1.0 | 47208 | 14.1 | May 8, 2012 |

SMPTE2022-5/6 Video Over IP Transmitter

[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|--------------------|---------------|
| v3.0 | 54535 | Vivado 2013.1 | April 3, 2013 |
| v2.0 | 47207 | 14.2/Vivado 2012.2 | July 25, 2012 |
| v1.0 | 47207 | 14.1 | May 8, 2012 |

Spartan-6 FPGA Triple-Rate SDI

[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|-----------------|--------------|
| v1.0 | 42805 | 13.2 | July 6, 2011 |

Virtex-6 FPGA Triple-Rate SDI

[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|-----------------|---------------|
| v1.0 | 40473 | 13.1 | March 1, 2011 |

Video Deinterlacer

[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|--------------------|------------------|
| v4.0 | 54537 | Vivado 2013.1 | April 3, 2013 |
| v3.00.a | 41969 | 14.3/Vivado 2012.3 | October 23, 2012 |
| v2.00.a | 41969 | 14.1 | May 8, 2012 |

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|-----------------|------------------|
| v1.0 | 41969 | 13.3 | October 26, 2011 |

Video Into AXI4-Stream

[Product Page](#)

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

Video Scaler

[Product Page](#)

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

Video Timing Controller

[Product Page](#)

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

Video Direct Memory Access

[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|-----------------|--------------------|
| v1.1 | 33256 | 12.3 | October 5, 2010 |
| v1.0 | 33256 | 11.3 | September 16, 2009 |

Video On-Screen Display

[Product Page](#)

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

YCrCb to RGB Color-Space Converter (YCrCb2RGB)

[Product Page](#)

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

Embedded IP

Embedded IP Master Answer Records

| Release Note | Initial Release | Date |
|-----------------------|-----------------|--------------------|
| 47392 | 14.3 | October 23, 2012 |
| 47392 | 14.2 | July 25, 2012 |
| 47392 | 14.1 | May 8, 2012 |
| 39843 | 13.4 | January 18, 2012 |
| 39843 | 13.3 | October 26, 2011 |
| 39843 | 13.2 | July 7, 2011 |
| 39843 | 13.1 | March 1, 2011 |
| 34609 | 12.4 | December 10, 2010 |
| 34609 | 12.3 | October 5, 2010 |
| 34609 | 12.2 | July 23, 2010 |
| 34609 | 12.1 | April 23, 2010 |
| 32168 | 11.4 | December 2, 2009 |
| 32168 | 11.3 | September 16, 2009 |
| 32168 | 11.2 | June 24, 2009 |
| 32168 | 11.1 | April 27, 2009 |
| 30704 | 10.1 EDK SP3 | September 19, 2008 |
| 30704 | 10.1 EDK SP2 | June 27, 2008 |
| 30704 | 10.1 EDK SP1 | April 25, 2008 |
| 29760 | 9.2i EDK SP2 | December 17, 2007 |
| 29760 | 9.2i EDK SP1 | November 1, 2007 |
| 29254 | 9.2i EDK | October 22, 2007 |
| 25239 | 9.1i EDK SP2 | May 14, 2007 |
| 24309 | 8.2i EDK SP2 | October 30, 2006 |
| 23313 | 8.1i EDK SP2 | April 21, 2006 |
| 25091 | 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 | 54414 | Vivado 2013.1 | April 3, 2013 |
| v1.2 | 46420 | 14.2 | July 25, 2012 |
| v1.0 | 46420 | 13.4 | January 18, 2012 |

FPGA Features and Design

7 Series FPGA Transceiver Wizard

[Product Page](#)

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

Clocking Wizard

[Product Page](#)

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

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

[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------------|--------------------|
| v1.7 | 31519 | 10.1 IP Update 3 | September 19, 2008 |
| v1.6 | 30576 | 10.1 Initial IP Update | March 24, 2008 |
| v1.5 | 25437 | 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 | 31517 | 11.2 | June 24, 2009 |
| v1.9 | 30955 | 10.1 Initial IP Update 2 | June 27, 2008 |
| v1.8 | 30575 | 10.1 Initial IP Update | March 24, 2008 |

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------|------------------|
| v1.7 | 29368 | 9.2i IP Update 2 | October 17, 2007 |
| v1.6 | 25475 | 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 | 32748 | 11.2 | June 24, 2009 |
| v1.5 | 31518 | 10.1 IP Update 3 | September 19, 2008 |
| v1.4 | 30954 | 10.1 IP Update 2 | June 27, 2008 |
| v1.3 | 30636 | 10.1 IP Update 1 | April 25, 2008 |
| v1.2 | 30577 | 10.1 Initial IP Update | March 24, 2008 |

SelectIO Interface Wizard

[Product Page](#)

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

Virtex-6 FPGA GTX Transceiver Wizard

[Product Page](#)

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

Virtex-6 FPGA GTH Transceiver Wizard

[Product Page](#)

| Version | Release Note | Initial Release | Date |
|------------|-----------------------|-----------------|------------------|
| v1.11 | 47478 | 14.1 | May 8, 2012 |
| v1.7 Rev 3 | 47479 | 14.1 | May 8, 2012 |
| v.1.10 | 45660 | 13.4 | January 18, 2012 |

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

Spartan-6 FPGA GTP Transceiver Wizard

[Product Page](#)

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

System Monitor Wizard

[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|-----------------|---------------|
| v2.1 | 40949 | 13.1 | March 1, 2011 |
| v1.0 | 24512 | 9.1i | March 5, 2007 |

XADC Wizard

[Product Page](#)

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

Memories and Storage Elements

Block Memory Generator

[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------------|--------------------|
| v8.0 | 54662 | Vivado 2013.1 | April 3, 2013 |
| v7.3 | 50918 | 14.3/Vivado 2012.3 | October 23, 2012 |
| v7.2 | 50960 | 14.2/Vivado 2012.2 | July 25, 2012 |
| v7.1 | 47736 | 14.1 | May 8, 2012 |
| v6.3 | 45701 | 13.4 | August 18, 2012 |
| v6.2 | 42712 | 13.2 | July 6, 2011 |
| v6.1 | 40591 | 13.1 | March 1, 2011 |
| v4.3 | 38076 | 12.3 | October 5, 2010 |
| v4.2 | 36456 | 12.2 | July 23, 2010 |
| v4.1 | 35523 | 12.1 | April 23, 2010 |
| v3.3 | 33298 | 11.3 | September 16, 2009 |
| v3.2 | 32770 | 11.2 | June 24, 2009 |
| v3.1 | 32202 | 11.1 | April 27, 2009 |
| v2.8 | 31556 | 10.1 IP Update 3 | September 19, 2008 |
| v2.7 | 30055 | 10.1 Initial IP Update | March 24, 2008 |
| v2.6 | 29247 | 9.2i IP Update 2 | October 17, 2007 |
| v2.5 | 25459 | 9.2i IP Update 1 | August 15, 2007 |
| v2.4.1 | 24555 | 9.1i IP Update 2 | April 2, 2007 |
| v2.4 | 24555 | 9.1i IP Update 1 | March 5, 2007 |
| v2.3 | 24229 | 8.2i IP Update 3 | December 7, 2006 |
| v2.2 | 23849 | 8.2i IP Update 2 | October 3, 2006 |
| v2.1 | 23849 | 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 | 31558 | 10.1 IP Update 3 | September 19, 2008 |

Distributed Memory Generator

[Product Page](#)

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

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

FIFO Generator

[Product Page](#)

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

Packet Queue

Note: This core has been discontinued.

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------|-----------------|
| v2.2 | 25463 | 9.2i IP Update 1 | August 15, 2007 |
| v2.1 | 24562 | 9.1i IP Update 1 | March 5, 2007 |
| v1.2 | 22842 | 8.2i IP Update 1 | July 19, 2006 |

Memory Interface Generator (MIG) 7 Series

[Product Page](#)

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

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

[Product Page](#)

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

Memory Interface Generator (MIG)

[Product Page](#)

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

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

Standard Bus Interfaces

7 Series Integrated Block for PCI Express

[Product Page](#)

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

AXI Bridge for PCI Express

[Product Page](#)

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

Virtex-6 FPGA Integrated Block for PCI Express

[Product Page](#)

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

Virtex-7 FPGA Gen3 Integrated Block for PCI Express

[Product Page](#)

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

Spartan-6 FPGA Integrated Block for PCI Express

[Product Page](#)

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

Endpoint Block Plus Wrapper for PCI Express

[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------------------------|--------------------|
| v1.15 | 42760 | 13.2 | July 6, 2011 |
| v1.14 | 35321 | 12.1 | April 23, 2010 |
| v1.13 | 33762 | 11.4 | December 2, 2009 |
| v1.12 | 33278 | 11.3 | September 16, 2009 |
| v1.11 | 32741 | 11.2 | June 24, 2009 |
| v1.10 | 32274 | 11.1 | April 27, 2009 |
| v1.9 | 31572 | 10.1 IP Update 3 | September 19, 2008 |
| v1.8 | 30980 | 10.1 IP Update 2 | June 27, 2008 |
| v1.7 | 30632 | 10.1 IP Update 1 | April 25, 2008 |
| v1.6 | 30120 | 10.1 Initial IP Update | March 24, 2008 |
| v1.5 | 29468 | 9.2i IP Update 2 | October 17, 2007 |
| v1.4 | 25493 | 9.2i IP Update 1 | August 15, 2007 |
| v1.3 | 25162 | 9.1i IP Update 3 | May 17, 2007 |
| v1.2 | 24603 | 9.1i IP Update 1 | March 5, 2007 |
| v1.1 | 23985 | 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 | 30121 | 10.1 Initial IP Update | March 24, 2008 |
| v1.6 | 29470 | 9.2i IP Update 2 | October 17, 2007 |
| v1.5 | 25494 | 9.2i IP Update 1 | August 15, 2007 |
| v1.4 | 25163 | 9.1i IP Update 3 | May 17, 2007 |
| v1.3 | 24604 | 9.1i IP Update 2 | April 2, 2007 |
| v1.2 | 24046 | 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 | 35324 | 12.1 | April 23, 2010 |
| v3.6 | 29469 | 9.2i IP Update 2 | October 17, 2007 |
| v3.5 | 25160 | 9.1i IP Update 3 | May 17, 2007 |
| v3.4 | 24601 | 9.1i IP Update 1 | March 5, 2007 |
| v3.3 | 22320 | 8.2i IP Update 2 | October 3, 2006 |
| v3.2 | 22320 | 8.1i IP Update 1 | July 19, 2006 |
| v3.1 | 22320 | 8.1i IP Update 1 | January 18, 2006 |

Endpoint PIPE for PCI Express (Soft IP Implementation)

[Product Page](#)

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

Initiator/Target for PCI™ v3

[Product Page](#)

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

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------|-----------------|
| v3.161 | 24605 | 9.1i IP Update 1 | March 5, 2007 |
| v3.160 | 22321 | 8.2i IP Update 2 | October 3, 2006 |

Initiator/Target for PCI v4

[Product Page](#)

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

Initiator/Target for PCI-X™ v5

[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------------|--------------------|
| v5.166 | 31569 | 10.1 IP Update 3 | September 19, 2008 |
| v5.165 | 30118 | 10.1 Initial IP Update | March 24, 2008 |
| v5.164 | 29473 | 9.2i IP Update 2 | October 17, 2007 |
| v5.163 | 25497 | 9.2i IP Update 1 | August 15, 2007 |
| v5.162 | 25166 | 9.1i IP Update 3 | May 17, 2007 |
| v5.161 | 24607 | 9.1i IP Update 1 | March 5, 2007 |
| v5.160 | 22321 | 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 | 31570 | 10.1 IP Update 3 | September 19, 2008 |
| v6.7 | 30634 | 10.1 IP Update 1 | April 25, 2008 |
| v6.6 | 30119 | 10.1 Initial IP Update | March 24, 2008 |
| v6.5 | 29474 | 9.2i IP Update 2 | October 17, 2007 |
| v6.4 | 25498 | 9.2i IP Update 1 | August 15, 2007 |
| v6.3 | 25167 | 9.1i IP Update 3 | May 17, 2007 |
| v6.2 | 24608 | 9.1i IP Update 1 | March 5, 2007 |
| v6.1 | 22321 | 8.2i IP Update 2 | October 3, 2006 |

UCF Generator for PCI/PCI-X

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

Serial RapidIO[Product Page](#)

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

Serial RapidIO Gen2[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|-----------------|---------------|
| v2.0 | 54648 | Vivado 2013.1 | April 3, 2013 |
| v1.7 | 55339 | 14.5 | April 3, 2013 |

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|--------------------|-------------------|
| v1.6 | 52797 | 14.4/Vivado 2012.4 | December 18, 2012 |
| v1.5 | 50829 | 14.2/Vivado 2012.2 | July 25, 2012 |
| v1.4 | 47190 | 14.1 | May 8, 2012 |
| v1.3 | 45708 | 13.4 | January 18, 2012 |
| v1.2 | 44605 | 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 " Ethernet Statistics " on page 1, and added discontinued notice to " SPI-3 PHY " 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 |