



IP Release Notes Guide

XTP025 (v1.4) September 19, 2008

Xilinx Intellectual Property (IP) cores including LogiCORE™ IP cores are delivered through software updates available from the [Xilinx Download Center](#). The latest versions of IP products have been tested and are delivered with the current IP release. In some cases, the version number of the core is unchanged, because no modifications have been made from one release to the next. For cores whose version number has not changed, the latest release notes apply to the current version. Please note that this hypertext document is intended for online use only.

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List of IP Cores

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- FlexRay™
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- Content Addressable Memory (CAM)
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- UCF Generator for PCI/PCI-X
- Serial RapidIO

Wireless

- CPRI™
- OBSAI

CORE Generator Software Known Issues

| Release Version | Release Note |
|-----------------|-----------------------|
| 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 |
|---------|-----------------------|------------------|------------------|
| 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™

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| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------|----------|
| v1.1 | 25142 | 9.1i IP Update 3 | May 2007 |

MOST® NIC

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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 |

Communications and Networking

Aurora (Virtex®-II Pro FPGA, Virtex-4 FX Family)

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| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------------|--------------------|
| 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 |

Virtex-5 FPGA Aurora

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| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------------|------------------|
| 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 |
|---------|-----------------------|------------------------|--------------------|
| 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 |

Tri-Mode Ethernet MAC

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| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------------|--------------------|
| 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

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| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------------|--------------------|
| 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 |
|---------|-----------------------|---------------------------------------|--------------------|
| 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 V5 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 |

10-Gigabit Ethernet MAC

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| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------------|--------------------|
| v8.6 | 31513 | 10.1 IP Update 3 | September 19, 2008 |
| 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 |

XAUI
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| Version | Release Note | Initial Release | Date |
|---------|-----------------------|---------------------------------------|--------------------|
| 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 V5 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)**
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| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------------|-------------------|
| 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 Embedded Tri-Mode Ethernet MAC Wrapper

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| Version | Release Note | Initial Release | Date |
|---------|-----------------------|---------------------------------------|--------------------|
| 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 |
| v1.1 | 24042 | 8.2i IP Update 2 V5 LXT Supplement | October 26, 2006 |

Ethernet Statistics

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| Version | Release Note | Initial Release | Date |
|---------|-----------------------|---------------------------------------|------------------|
| 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 V5 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

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| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------|--------------------|
| v1.1 | 31512 | 10.1 IP Update 3 | September 19, 2008 |

Fibre Channel Pt. to Pt.

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| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------------|-------------------|
| 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

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| 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

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| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------------|--------------------|
| 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 |
| 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[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------|------------------|
| 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[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------|-----------------|
| 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[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------|-----------------|
| 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 |

CPRI™[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------------|----------------|
| 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 |
|---------|-----------------------|------------------------|----------------|
| 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 |

All DSP IP (Horizontal, Digital Communications, MVI)

Each DSP core has a single master Answer Record that contains release note information for the latest version and all previous versions of the product. Because of the quantity of DSP cores, only the latest version of each core is listed in the following tables, but you can click on that version's Answer Record to find release notes for previous versions.

DSP Horizontal

- [Cascaded Integrator Comb Compiler \(CIC Compiler\)](#)
- [Complex Multiplier](#)
- [CORDIC](#)
- [DDS Compiler \(Direct Digital Synthesizer Compiler\)](#)
- [Divider](#)
- [Discrete Fourier Transform \(DFT\)](#)
- [Distributed Arithmetic FIR Filter \(DA FIR\)](#)
- [Fast Fourier Transform \(FFT\)](#)
- [FIR Compiler](#)
- [Floating-Point Operators](#)
- [Multiplier](#)
- [Sine-Cosine Look-Up Table \(Sin Cos LUT\)](#)
- [VLYNQ™](#)

DSP Digital Communications

- [3GPP Downlink Chip Rate](#)
- [3GPP LTE Turbo Decoder \(3GPP LTE TCC\)](#)
- [3GPP LTE Turbo Encoder \(3GPP LTE TCC\)](#)
- [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](#)
- [DVB-S.2 FEC Encoder](#)
- [Interleaver/De-interleaver](#)
- [LDPC 802.16 Encoder](#)
- [LTE DL Channel Encoder](#)
- [LTE UL Channel Decoder](#)
- [Reed-Solomon Decoder](#)
- [Reed-Solomon Encoder](#)
- [Turbo Product Code \(TPC\) Decoder](#)
- [Viterbi Decoder](#)

DSP MVI

- [MPEG-4 Part 2 Simple Profile Decoder \(MPEG-4 Part 2 SP\)](#)
- [MPEG-4 Part 2 Simple Profile Encoder \(MPEG-4 Part 2 SP\)](#)
- [H.264 Deblocking Filter](#)
- [H.264 CABAC Encoder](#)
- [H.264 Motion Estimation Engine](#)
- [RGB to YCrCb Color-Space Converter \(RGB2YCrCb\)](#)
- [YCrCb to RGB Color-Space Converter \(YCrCb2RGB\)](#)

DSP Horizontal

Cascaded Integrator Comb Compiler (CIC Compiler)

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| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------------|----------------|
| v1.2 | 29297 | 10.1 IP Update 1 | April 25, 2008 |
| v1.1 | 29297 | 10.1 Initial IP Update | March 24, 2008 |

Complex Multiplier

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| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------|----------------|
| v2.1 | 21591 | 7.1i IP Update 0 | April 28, 2005 |

CORDIC

[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------|--------------|
| v3.0 | 29570 | 6.3i IP Update 1 | May 21, 2004 |

DDS Compiler (Direct Digital Synthesizer Compiler)

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| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------------|----------------|
| v2.1 | 29976 | 10.1 Initial IP Update | March 24, 2008 |

Divider

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| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------|------------------|
| 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)

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| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------------|----------------|
| v3.0 | 29978 | 10.1 IP Update 2 | June 27, 2008 |
| v2.1 | 29978 | 10.1 Initial IP Update | March 24, 2008 |

Distributed Arithmetic FIR Filter (DA FIR)

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| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------|----------------|
| v9.0 | 29391 | 7.1i IP Update 1 | April 28, 2005 |

Fast Fourier Transform (FFT)

[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------|--------------------|
| v6.0 | 29209 | 10.1 IP Update 3 | September 19, 2008 |
| v5.0 | 29209 | 9.2i IP Update 2 | October 17, 2007 |

FIR Compiler

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| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------|------------------|
| v4.0 | 29138 | 10.1 IP Update 2 | June 27, 2008 |
| v3.2 | 29138 | 9.2i IP Update 2 | October 17, 2007 |

Floating-Point Operators

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| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------|-----------------|
| v4.0 | 29598 | 10.1 IP Update 1 | April 25, 2008 |
| v3.0 | 29598 | 8.1i IP Update 2 | October 3, 2006 |

Multiplier[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------|----------------|
| v10.1 | 30160 | 10.1 IP Update 1 | April 25, 2008 |
| v10.0 | 30160 | 9.1i IP Update 2 | April 2, 2007 |

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 |
|---------|-----------------------|------------------------|----------------|
| v1.3 | 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 Turbo Decoder (3GPP LTE TCC)

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| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------|----------------|
| v1.0 | 30630 | 10.1 IP Update 1 | April 25, 2008 |

3GPP LTE Turbo Encoder (3GPP LTE TCC)

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| 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

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

3GPP Searcher

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

3GPP Turbo Convolutional Code Decoder

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| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------|--------------|
| v3.1 | 30166 | 9.1i IP Update 3 | May 17, 2007 |

3GPP Turbo Convolutional Code Encoder

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| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------------|----------------|
| v3.1 | 30167 | 10.1 Initial IP Update | March 24, 2008 |

3GPP2 Turbo Convolutional Code Decoder

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

3GPP2 Turbo Convolutional Code Encoder

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| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------|---------------|
| v2.0 | 30169 | 9.1i IP Update 2 | April 2, 2007 |

802.16E Convolutional Turbo Code (CTC) Decoder

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| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------|--------------------|
| v3.1 | 29447 | 10.1 IP Update 3 | September 19, 2008 |
| v3.0 | 29447 | 9.2i IP Update 2 | October 17, 2007 |

802.16E Convolutional Turbo Code (CTC) Encoder

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| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------|---------------|
| v2.1 | 30170 | 9.1i IP Update 2 | April 2, 2007 |

Additive White Gaussian Noise Generator (AWGN)

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

Convolutional Encoder

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| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------|--------------|
| v6.1 | 30172 | 9.1i IP Update 3 | May 17, 2007 |

DVB-S.2 FEC Encoder

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| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------|---------------|
| v1.4 | 30173 | 10.1 IP Update 2 | June 27, 2008 |
| v1.3 | 30173 | 9.1i IP Update 3 | May 17, 2007 |

Interleaver/De-interleaver

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| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------------|----------------|
| v5.1 | 30174 | 10.1 Initial IP Update | March 24, 2008 |

LDPC 802.16 Encoder

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

LTE DL Channel Encoder

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| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------|--------------------|
| v1.0 | 31421 | 10.1 IP Update 3 | September 19, 2008 |

LTE UL Channel Decoder

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| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------|--------------------|
| v1.0 | 31422 | 10.1 IP Update 3 | September 19, 2008 |

Reed-Solomon Decoder

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| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------|--------------|
| v6.1 | 30176 | 9.1i IP Update 3 | May 17, 2007 |

Reed-Solomon Encoder

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| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------|--------------|
| v6.1 | 30177 | 9.1i IP Update 3 | May 17, 2007 |

Turbo Product Code (TPC) Decoder

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| 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 |
|---------|-----------------------|------------------|------------------|
| v6.2 | 29448 | 9.2i IP Update 2 | October 17, 2007 |

DSP MVI

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

[Product Page](#)

| 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)

[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|-----------------|-------------------|
| v1.1 | 30158 | Stand Alone | December 15, 2006 |

H.264 Deblocking Filter

[Product Page](#)

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

H.264 CABAC Encoder

[Product Page](#)

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

H.264 Motion Estimation Engine

[Product Page](#)

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

RGB to YCrCb Color-Space Converter (RGB2YCrCb)[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------------|----------------|
| v1.0 | 29982 | 10.1 Initial IP Update | March 24, 2008 |

YCrCb to RGB Color-Space Converter (YCrCb2RGB)[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------------|----------------|
| v1.0 | 29980 | 10.1 Initial IP Update | March 24, 2008 |

Embedded IP

Embedded IP Master Answer Records

| Release Note | Initial Release | Date |
|-----------------------|-----------------|--------------------|
| 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 |

FPGA Features and Design

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 |
|---------|-----------------------|--------------------------|--------------------|
| v2.0 | 31517 | 10.1 IP Update 3 | September 19, 2008 |
| v1.9 | 30955 | 10.1 Initial IP Update 2 | June 27, 2008 |
| v1.8 | 30575 | 10.1 Initial IP Update | March 24, 2008 |
| 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 |
|---------|-----------------------|------------------------|--------------------|
| v1.5 | 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 |

Memories and Storage Elements

Block Memory Generator

[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------------|--------------------|
| 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 | 25449 | 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)

[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 |
|---------|-----------------------|------------------------|-----------------|
| v3.4 | 30057 | 10.1 Initial IP Update | March 24, 2008 |
| v3.3.1 | 29247 | 9.1i IP Update 2 | April 2, 2007 |
| v3.3 | 25449 | 9.1i IP Update 1 | March 5, 2007 |
| v3.2 | 24555 | 8.2i IP Update 2 | October 3, 2006 |
| v3.1 | 24555 | 8.2i IP Update 1 | July 19, 2006 |

FIFO Generator

[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------------|--------------------|
| 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 | 23489 | 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

[Product Page](#)

| 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)

[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------------|--------------------|
| v2.3 | 31402 | 10.1 IP Update 3 | September 19, 2008 |
| 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

Endpoint Block Plus Wrapper for PCI Express

[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------------------|--------------------|
| 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 (V5 LXT) | October 26, 2006 |

Endpoint Block Wrapper for PCI Express

[Product Page](#)

| 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 |
|---------|-----------------------|------------------|------------------|
| v3.6 | 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 |
|---------|-----------------------|------------------|------------------|
| v1.7 | 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 |
|---------|-----------------------|------------------------|--------------------|
| v3.166 | 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 |
| 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 (Virtex-5 FPGA)

[Product Page](#)

| Version | Release Note | Initial Release | Date |
|---------|-----------------------|------------------------|--------------------|
| 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 |
|---------|-----------------------|------------------------|--------------------|
| v5.1 | 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 |

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 3GPP LTE 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. |