



# FIR Compiler MegaCore Function

April 2006, MegaCore Function Version 3.3.1

Release Notes

These release notes for the FIR Compiler MegaCore Function v3.3.1 contain the following information:

- System Requirements
- New Features & Enhancements
- Errata Fixed in This Release
- Obtain & Install the FIR Compiler MegaCore Function
- Contact Altera
- Revision History

## System Requirements

To use the FIR Compiler MegaCore Function v3.3.1, the following system requirements exist:

- A computer running any of the following operating systems:
  - Windows 2000/XP
  - Red Hat Enterprise Linux 3 or 4 WS (with support for 32-bit , AMD64, or Intel EM64T workstations)
  - Solaris 8 or 9 (32-bit or 64-bit)
- Quartus® II software version 6.0 or higher
- Adobe Reader version 5.0 or higher, for viewing PDF documentation
- Mozilla Firefox 1.0 or higher on computers running the RedHat Linux or Solaris operating systems for following web links

## New Features & Enhancements

This is a maintenance release. There are no new features in this release.

## Errata Fixed in This Release

The following errata were fixed in this release:

- Input & Output Data Bit Width Value Inconsistent for Signed Binary Fractional Settings
- IP Toolbench Wizard Incorrectly Truncates the MSB in the Bits to keep Field of the Output Number System Parameter
- `coef_set_in` Must Exceed `coef_we` by One Clock Cycle When Loading Multiple Coefficient Sets
- `zero.hex` File Description Incorrect in the FIR Compiler MegaCore Function User Guide

For existing up-to-date errata, refer to the *FIR Compiler MegaCore Function v3.3.1 Errata Sheet* on the errata page on the Altera web site at [www.altera.com/literature/es/es\\_fir\\_331.pdf](http://www.altera.com/literature/es/es_fir_331.pdf)

## Obtain & Install the FIR Compiler MegaCore Function

Before you can use the FIR Compiler MegaCore Function, you must obtain the files and install them on your computer. Altera MegaCore functions can be installed from the MegaCore IP Library CD-ROM during or after Quartus II installation, or downloaded individually from the Altera web site and installed separately.



The following instructions describe downloading and installing the FIR Compiler MegaCore Function. If you already have installed the FIR Compiler MegaCore Function from the MegaCore IP Library CD-ROM, skip these instructions.

### Download the FIR Compiler MegaCore Function

If you have Internet access, you can download the FIR Compiler MegaCore Function from Altera's website at [www.altera.com](http://www.altera.com). Follow the instructions below to obtain the FIR Compiler MegaCore Function from the Internet. If you do not have Internet access, contact your local Altera representative to obtain the MegaCore IP Library CD-ROM.

1. Point your web browser to [www.altera.com/ipmegastore](http://www.altera.com/ipmegastore).
2. Type `FIR Compiler` in the IP MegaSearch box.
3. Click **Go**.
4. Choose **FIR Compiler MegaCore Function** from the search results page. The product description web page displays.
5. Click **Download Free Evaluation** on the top right of the product description web page. Fill out the registration form and click **Submit Request**.
6. Read the Altera MegaCore license agreement. Turn on the **I have read the license agreement** check box and click **Proceed to Download Page**.
7. Follow the instructions on the FIR Compiler MegaCore Function download and installation page to download the FIR Compiler MegaCore Function and save it to your hard disk.



Ensure you download the MegaCore function for the operating system on which the MegaCore function will be running.

## Install the FIR Compiler MegaCore Function Files

The following instructions describe how you install the FIR Compiler MegaCore Function on computers running the Windows, Linux, and Solaris operating systems.

### *Windows*

Follow these steps to install the FIR Compiler MegaCore Function on a computer running a supported version of the Windows operating system:

1. Choose **Run** (Windows Start menu).
2. Type `<path name>\fir_compiler-v3.3.1.exe`, where `<path name>` is the location of the downloaded MegaCore function.
3. Click **OK**. The **FIR Compiler Installation** dialog box appears. Follow the on-screen instructions to finish installation.

### *Solaris & Linux*

Follow these steps to install the FIR Compiler MegaCore Function on a computer running supported versions of the Solaris and Linux operating systems:

1. Move the compressed files to the desired installation directory and make that directory your current directory.
2. Decompress the package by typing the following command:

```
gzip -d fir_compiler-v3.3.1_linux.tar.gz
```

or

```
gzip -d fir_compiler-v3.3.1_solaris.tar.gz
```

3. Extract the package by typing the following command:

```
tar xvf fir_compiler-v3.3.1_linux.tar
```

or

```
tar xvf fir_compiler-v3.3.1_solaris.tar
```

## Contact Altera

Although every effort has been made to ensure that this version of the FIR Compiler MegaCore Function works correctly, if problems occur, use the following contact information to communicate issues to the appropriate Altera representative.

For technical support or other information about Altera products, go to the Altera world-wide website at [www.altera.com](http://www.altera.com). You can also contact Altera through your local sales representative or any of the sources listed in [Table 1](#).

Information Type	USA & Canada	All Other Locations
Technical support	<a href="http://www.altera.com/mysupport/">www.altera.com/mysupport/</a>	<a href="http://www.altera.com/mysupport/">www.altera.com/mysupport/</a>
	800-800-EPLD (3753) 7:00 a.m. to 5:00 p.m. Pacific Time	+1 408-544-8767 7:00 a.m. to 5:00 p.m. (GMT -8:00) Pacific Time
Product literature	<a href="http://www.altera.com">www.altera.com</a>	<a href="http://www.altera.com">www.altera.com</a>
Altera literature services	<a href="mailto:literature@altera.com">literature@altera.com</a>	<a href="mailto:literature@altera.com">literature@altera.com</a>
Nontechnical customer service	800-767-3753	+ 1 408-544-7000 7:00 a.m. to 5:00 p.m. (GMT -8:00) Pacific Time
FTP site	<a href="ftp://ftp.altera.com">ftp.altera.com</a>	<a href="ftp://ftp.altera.com">ftp.altera.com</a>

## Revision History

[Table 2](#) shows the revision history for the FIR Compiler MegaCore Function.

Version	Date	Revision
3.3.1	April 2006	<ul style="list-style-type: none"> <li>Minor bug fixes.</li> </ul>
3.3.0	October 2005	<ul style="list-style-type: none"> <li>Symmetric optimization to reduce the number of multipliers used in MCV decimating FIR filters</li> <li>Channel indicator for multichannel FIR filters</li> <li>Verilog testbench generator.</li> <li>Preliminary support for Stratix II GX and HardCopy II devices</li> </ul>
3.1.0	June 2004	<ul style="list-style-type: none"> <li>Support for Cyclone II device family</li> <li>DSP Builder ready (with version 2.2.0 or higher)</li> <li>Taxonomy change - FIR Compiler now resides under DSP-Filters instead of Signal Processing-Filters</li> <li>Update to IP Toolbench 1.2.5</li> </ul>

**Table 2. FIR Compiler MegaCore Function Revision History**

Version	Date	Revision
3.0.1		<ul style="list-style-type: none"> <li>● Fixed bug in coefficient and data alignment for multi-channel multi-coefficient set structure.</li> <li>● Fixed bug in data initialize file zero.hex for multichannel MCV structure which only effect</li> <li>● Support for ModelSim simulation.</li> </ul>
3.0.0		<ul style="list-style-type: none"> <li>● New Java based GUI with Multi-Platform support (Windows, Solaris, Linux)</li> <li>● Added Support for Stratix II Ternary Adders (with single rate distributed arithmetic filters)</li> <li>● Dramatic speed increases and/or area reductions in Stratix II architecture</li> <li>● Serial FIR filters in Stratix II now achieve up to 350 MHz operation</li> <li>● Parallel Distributed Arithmetic FIR filters can achieve 320 MHz operation</li> <li>● Ternary adder structures combined with distributed arithmetic can</li> <li>● reduce area by 30%-50%</li> <li>● Added Atlantic based flow control and updated clock enable based flow control circuitry</li> <li>● Added Filter Design Assistant (more messages to indicate which configurations are supported and various error conditions)</li> <li>● Encrypted RTL Simulation is now replaced with IP Functional Simulation</li> <li>● Updated OpenCore Plus hardware evaluation encryption</li> <li>● Removed Visual IP Support</li> <li>● Removed all DSP Builder support</li> <li>● Removed support for older families (APEX, Mercury, ACEX, FLEX)</li> <li>● Updated report file - removed latency information</li> <li>● Auto scaling information (actual scaling factor) was displayed in an disabled edit box in the older GUI. This information is no longer available.</li> </ul>



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