CoreRSENC v3.4 Release Notes

This document accompanies the production release of CoreRSENC v3.4. It describes the features and enhancements. It also contains the information on system requirements, supported families, implementations, known issues and workarounds, and resolved issues of previous version.

Features

CoreRSENC is a highly configurable core and has the following features:

- Generation of the Reed-Solomon parameterizable encoder
- Code symbol width from 3 to 8 bits
- Codeword length up to 255 symbols
- User-defined finite field primitive polynomial
- Error correction capacity up to 16 symbols
- CCSDS-16 and CCSDS-8 encoding support
- In the CCSDS mode support for data encoding presented in conventional or dual basis

Supported Interfaces

There are no standard interfaces available in the CoreRSENC core.

Delivery Types

CoreRSENC requires a register transfer level (RTL) license to be used and instantiated. Complete source code is provided for the core.

Supported Families

CoreRSENC supports the following families:

- IGLOO®
- IGLOOe
- IGLOO PLUS
- ProASIC®3
- ProASIC3E
- ProASIC3L
- Fusion
- SmartFusion®
- Axcelerator®
- RTAX-S
- RTAX-D
- ProASIC PLUS®
- SmartFusion®2
- IGLOO®2
- RTG4™

Supported Tool Flows

- CoreRSENC v3.4 requires Libero® software v9.0 or later
- Microsemi SoC Products Group Libero software v9.0 or higher can be used with CoreRSENC

Installation Instructions

Within the Libero SoC software, click **Add Core** in the Catalog to locate and install a local CPZ file, or use the automatic web update feature in Libero SoC. After the CPZ file is installed in the Libero SoC, the core can be instantiated, configured, and generated within SmartDesign for inclusion in the Libero SoC project.

For more information about core installation, licensing, and general use, refer to the *Libero SoC Online Help*.

Documentation

For more information about Microsemi Intellectual Property, visit: *http://www.microsemi.com/products/fpga-soc/design-resources/ip-cores*. For updates and additional information about Microsemi software, FPGAs, and hardware, visit: *www.microsemi.com*.

Supported Test Environments

The following test environments are supported:

- VHDL user testbench
- Verilog user testbench

Release History

Table 1 shows the release history for this document.

Table 1 • **Release History**

Version	Date	Changes
3.4	October 2015	The core version was updated from v3.3 to v3.4. As listed in Table 2.
3.3	April 2015	The core version was updated from v3.2 to v3.3.
3.2	February	Added support for SmartFusion2, IGLOO2, and RTG4 families.
3.1	June 2012	CCSDS-16 and CCSDS-8 encoding support.
3.0	February 2011	CCSDS support, maintenance, no longer requires or support CoreConsole.
2.0	August 2007	Initial release.

Resolved Issues in the v3.4 Release

Table 2 shows SARs resolved in the v3.4 release of CoreRSENC.

Table 2 • **Resolved SARs in CoreRSENC v3.4 Release**

SAR No.	Description
69802	CoreRSENC: CCSDS-8 first root should be 120.

Resolved Issues in the v3.3 Release

There are no resolved SARs in v3.3 release of CoreRSENC.

Resolved Issues in the v3.2 Release

There are no resolved SARs in v3.2 release of CoreRSENC.

Resolved Issues in the v3.1 Release

Table 3 shows SARs resolved in the v3.1 release of CoreRSENC.

Table 3 • **Resolved SARs in CoreRSENC v3.1 Release**

SAR No.	Description
17224	CCSDS support added.
31715	Handbook fix to remove incorrect CCSDS reference.

Discontinued Features and Devices

There are no discontinued features or devices.

Known Limitations and Workarounds

No known issues have been found in the CoreRSENC v3.4 release.

Microsemi Corporate Headquarters
One Enterprise, Aliso Viejo,
CA 92656 USA

Within the USA: +1 (800) 713-4113
Outside the USA: +1 (949) 380-6100
Sales: +1 (949) 380-6136
Fax: +1 (949) 215-4996

E-mail: sales.support@microsemi.com

Microsemi Corporation (Nasdaq: MSCC) offers a comprehensive portfolio of semiconductor and system solutions for communications, defense & security, aerospace and industrial markets. Products include high-performance and radiation-hardened analog mixed-signal integrated circuits, FPGAs, SoCs and ASICs; power management products; timing and synchronization devices and precise time solutions, setting the world's standard for time; voice processing devices; RF solutions; discrete components; security technologies and scalable anti-tamper products; Ethernet solutions; Power-over-Ethernet ICs and midspans; as well as custom design capabilities and services. Microsemi is headquartered in Aliso Viejo, Calif., and has approximately 3,600 employees globally. Learn more at **www.microsemi.com**.

51300051-5/10.15