

# CoreSysServices v3.2

Release Notes





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Microsemi Corporation (Nasdaq: MSCC) offers a comprehensive portfolio of semiconductor and system solutions for aerospace & defense, communications, data center 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; enterprise storage and communication solutions, 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 4,800 employees globally. Learn more at [www.microsemi.com](http://www.microsemi.com).

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# 1 Revision History

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## 1.1 Revision 4

Updated for CoreSysServices v3.2.

## 1.2 Revision 3

Updated for CoreSysServices v3.1.

## 1.3 Revision 2

Updated for CoreSysServices v3.0.

## 1.4 Revision 1

Revision 1.0 was the first publication of this document. Created for CoreSysServices v2.0.

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## 2 CoreSysServices Release Notes

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These release notes accompany the production release of CoreSysServices v3.2. This document provides details about the features and enhancements, system requirements, supported families, implementations, and known limitations and workarounds.

### 2.1 Key Features

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

- Provides the following system services:
  - Device and design information services
  - Cryptographic services
  - Differential Power Analysis (DPA)-Resistant Key-Tree services
  - Non-deterministic random bit generator (NRBG) services
  - Zeroization service
  - Digest Check service
  - Programming Service: In-application programming (IAP)
  - Physically Uncloneable function (PUF) Service
  - Tamper Control and Detect Service
  - Elliptic Curve Services
  - Asynchronous Messaging Service
  - Flash Freeze Service
- Provides shared request user interface for all system services
- Provides shared response user interface for all system services
- Provides advanced high-performance bus (AHB)-Lite master interface to the fabric interface controller (FIC)
- Provides support to high priority system services over on-going Low priority services

### 2.2 Delivery Types

No license is required to use CoreSysServices.

#### 2.2.1 RTL

Complete RTL source code is provided for the core.

### 2.3 Supported Families

- SmartFusion®2
- IGLOO®2

### 2.4 Supported Tool Flows

- CoreSysServices v3.2 requires Libero® System-on-Chip (SoC) software v11.0 or later.
- Supports Windows and Linux operating systems.

### 2.5 Installation Instructions

The CoreSysServices CPZ file must be installed into Libero software. This is done automatically through the Catalog update function in Libero, or the CPZ file can be manually added using the Add Core catalog feature. Once the CPZ file is installed in Libero, the core can be configured, generated, and instantiated within SmartDesign for inclusion in the Libero project. Refer, [Libero SoC online help](#) for instructions on core installation, licensing, and general use.

## 2.6 Documentation

This release contains a copy of the CoreSysServices Handbook. This handbook describes the core functionality, gives step-by-step instructions on how to synthesize, and place-and-route this core, and also provides implementation suggestions.

For updates and additional information about the software, devices, and hardware, visit the Intellectual Property pages on the Microsemi web site at: [www.microsemi.com/soc](http://www.microsemi.com/soc).

## 2.7 Supported Test Environments

The following test environment is supported:

- Verilog user testbench
- Verilog full verification testbench

## 2.8 Discontinued Features and Devices

There are no discontinued features or devices in the CoreSysServices v3.2 release.

## 2.9 Known Issues and Workarounds

VHDL Testbench is not supported. There are no other known issues or workarounds in CoreSysServices v3.2 release.

## 2.10 Resolved Issues in the v3.2 Release

**Table 1 • Resolved software action request (SARs) in CoreSysServices v3.2 Release**

SAR	Description
76145	The description of IAP operation in SERV_OPTIONS_MODE is updated in Handbook.

## 2.11 Resolved Issues in the v3.1 Release

**Table 2 • Resolved software action request (SARs) in CoreSysServices v3.1 Release**

SAR	Description
63573	IAP Verify is not working
63326	Request for timing diagrams for different services.

## 2.12 Resolved Issues in the v3.0 Release

**Table 3 • Resolved software action request (SARs) in CoreSysServices v3.0 Release**

SAR	Description
55790	Zeroization service SERV_ZERI_EN is not working.
54031	Fabric digest check is not working.
57414	Clarify MSS/HPMS and add device support table to HB.
58781	Incorrect Response code (SERV_STATUS_RESP) is read in Error Force Response and Unrecognized response scenarios.
55756	PoR service is not working.
56979	CoreSysService is hanging while performing device in services after Fabric Digest.

**Table 3 • Resolved software action request (SARs) in CoreSysServices v3.0 Release**

<b>SAR</b>	<b>Description</b>
53201	SERV_CMDBYTE_REQ is typed as SERV_CMDBYTE under timing diagram.