Libero 2025.1 Programming and Debug Tools Release Notes

Introduction (Ask a Question)

The Programming and Debug Tools stand-alone software is intended for laboratory and production environments where Libero® SoC Design Suite is not installed. The installer allows you to install the following tools:

- FlashPro Express programming software for Windows® and Linux®
- SmartDebug device debug tool for PolarFire® SoC, PolarFire, SmartFusion® 2, IGLOO® 2, and RTG4™
- Job Manager for Secured Production Programming Solution

Note: Libero SoC Design Suite includes FlashPro Express programming software, Job Manager, and SmartDebug by default.

Download Programming and Debug Tools v2025.1 Software (Ask a Question)

You can download the Programming and Debug Tools v2025.1 software from the Programming and Debug Tools page. You will need administrative privileges for installing or configuring the Programming and Debug Tools v2025.1 software on the Windows operating system.

System Requirements (Ask a Question)

This section provides information on supported operating systems, system memory requirements, and other recommendations.

Supported Operating Systems (Ask a Question)

Libero SoC Design Suite supports the following 64-bit operating systems:

- Microsoft® Windows 10.0 and Windows 11.0
- Red Hat® Enterprise Linux (RHEL) 8.0-8.10, AlmaLinux® 8.3-8.10
- Ubuntu® 20.04.6 LTS

Attention:

- Libero SoC v2025.1 is the last release to support Windows 10.
- Siemens ModelSim Pro does not directly support the Ubuntu platform. However, users can successfully install and run ModelSim Pro and QuestaSim Pro ME on Ubuntu by installing the necessary libraries. Libero provides the script *check_linux_req.sh* to install required system packages for Ubuntu.
- Libero SoC design suite has been tested on x86 and x64 processor-based machines only.

System Memory Requirements (Ask a Question)

A minimum of 32 GB of Random-Access Memory (RAM) is recommended for implementing designs on MPF500T, MPFS460T, and RT PolarFire FPGA and SoC devices. For all other devices, a minimum of 16 GB of RAM is recommended.

Table of Contents

1. New in This Version (Ask a Question)

This section contains information about new features, new devices, and enhancements introduced in the Libero SoC Design Suite v2025.1.

1.1. New Device Support (Ask a Question)

1.1.1. PolarFire (Ask a Question)

1.1.1.1. New PolarFire FPGA Core Devices (Ask a Question)

Programming and Debug Tools v2025.1 adds programming support for following PolarFire devices:

- MPF050TC
- MPF100TC
- MPF200TC
- MPF300TC
- MPF500TC

1.1.2. PolarFire SoC (Ask a Question)

1.1.2.1. New PolarFire SoC Core Devices (Ask a Question)

Programming and Debug Tools v2025.1 adds programming support for following PolarFire SoC devices:

- MPFS025TC
- MPFS095TC
- MPFS160TC
- MPFS250TC
- MPFS460TC

1.1.3. RT PolarFire SoC (Ask a Question)

Programming and SmartDebug support have been added for RTPFS460ZT/ZTS/ZTL/ZTLS and RTPFS160ZT/TS/TL/TLS devices.

1.2. Software Features and Enhancements (Ask a Question)

1.2.1. Added STAPL Support to Program Micron MT25QL01G SPI-Flash (Ask a Question)

Libero SoC v2025.1 supports the export of STAPL files to program Micron MT25QL01G and MT25QL02G SPI-flash devices.

1.2.2. Enhanced the Automatic Programmer Detection Functionality (Ask a Question)

The Libero SoC 2025.1 release enhanced the programmer detection functionality in batch mode to automatically use the single programmer that is connected to the machine without having to explicitly specify it in TCL commands.

2. PolarFire, PolarFire SoC, RT PolarFire, and RT PolarFire SoC (Ask a Question)

2.1. New SPI-Flash Programming Support (Ask a Question)

Starting with the Libero SoC v2025.1 release, SPI-Flash programming support has been added for the space-grade MRAM part number, AS302G208-0108X0MCEY, from Avalanche Technology.

3. RTG4, SmartFusion2, and IGLOO2 (Ask a Question)

3.1. RTG4 Report State of System Controller Suspend Mode Setting in the Programming Bitstream (Ask a Question)

The Libero SoC 2025.1 release enables the System Controller Suspend Mode project setting used in the design bitstream to be a part of all reports for the following tool actions for RTG4 devices:

- Generate Bitstream
- Export Bitstream
- Export FlashPro Express job
- Run PROGRAM action
- FlashPro Express when running PROGRAM action

4. Resolved Issues (Ask a Question)

The following table lists the customer-reported defects and enhancement requests resolved in Libero SoC v2025.1 that have case numbers. Resolution of previously reported “Known Issues and Limitations” are also noted in this table.

Table 4-1. Customer-reported Defects and Enhancement Requests with Case Numbers

Case Number	Summary	Resolution
135492	New STAPL feature support is added to program Micron MT25QL01G SPI-Flash devices.	A new feature has been added to export STAPL files to program Micron MT25QL01G and MT25QL02G devices.
137134	New SPI Flash Device support with FlashPro 6.	Added support for Space Grade QSPI MRAM AS302G208-0108X0MCEY.
138474	**Generate bitstream** was failing when content was filled with zeros greater than 37 KB present.	The software has been updated to efficiently check if first page of eNVM is filled with zeroes.
139180	System Controller Suspend Mode information was missing in the logs.	The System Controller suspend mode information have now been added to the logs.
139341	Libero did not error out for invalid SPI-Flash stage 3 key binding in combinations with custom security settings.	Libero now errors out for invalid combinations of SPI-Flash stage 3 key binding with respect to custom security settings.
140041	'Generate bitstream' was failing when using an eNVM client memory file filled with 0s which exceeds 37KB size.	The software has been updated to efficiently check if the first page of eNVM is filled with zeroes.

The following table lists the customer-reported defects and enhancement requests resolved in Libero SoC v2025.1 that do not have case numbers. Resolution of previously reported “Known Issues and Limitations” are also noted in this table.

Table 4-2. Customer-reported Defects and Enhancement Requests (No Case Numbers)

Summary	Resolution
Programmer Detection should be automatic for new projects and TCL script.	The parameter `-programmer`for command `auto_construct_job_project` is now optional. If the parameter is omitted and a single programmer is connected to the host machine, the command executes successfully.

5. Known Issues and Limitations (Ask a Question)

For information on the currently known issues and limitations related to the Programming and Debug tools, visit Libero SoC Design Suite Release Notes - Known Issues and Limitations.

6. Revision History (Ask a Question)

The revision history describes the changes that were implemented in the document. The changes are listed by revision, starting with the most current publication.

Revision	Date	Description
A	05/2025	Initial Revision

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