Programming and Debug Tools v11.7 Release Notes

Starting with v11.7, Microsemi introduces a new Programming and Debug Tools installer. This installer is intended for laboratory and production environments where Libero is not installed, and allows you to install the following tools:

- FlashPro/FlashPro Express v11.7
- SmartDebug Standalone v11.7
- Job Manager v11.7

All the above tools also available with the full Libero SoC v11.7 release.

FlashPro enables programming support for RT4G150 production devices.

SmartDebug v11.7 includes probe select and display UI enhancements, and expanded support for SERDES.

Job Manager v11.7 is a necessary component of Microsemi's Secure Production Programming Solution (SPPS), which enables customers to prevent overbuilding of their systems.

To access Datasheets and Silicon User Guides, visit www.microsemi.com, select your Product, then click the Documents tab. Tutorials, Application Notes, Development Kits and Starter Kits are listed in the Design Resources tab.

Contents

What's New in v11.7

Silicon Feature Support

RTG4150 Programming and Debug Support
FlashPro v11.7 enables Programming and Debug support for the RTG4150 production device. SmartDebug support for SERDES is also available in this release.

Software Enhancements

Unless otherwise noted, Software Enhancements apply to all SmartFusion2, IGLOO2, and RTG4 devices.

SmartDebug

SmartDebug v11.7 introduces a redesigned Debug FPGA Array probe management User Interface. A new netlist hierarchy browser helps you navigate through your design to manage Live Probes, Active Probes and Probe Insertion. Active Probes can be also organized using the new Probe Grouping feature. New for v11.7 are Device Status Report, eNVM Page Status enhancements for SmartFusion2 and IGLOO2 devices and SERDES Debug enhancements for SmartFusion2, IGLOO2 and RTG4 devices. Also included in this release are run time improvements.

Starting in v11.7, SmartDebug can be run in as a standalone tool for SmartFusion2, IGLOO2 and RTG4 devices. SmartDebug in standalone mode is launched outside of the Libero Design Flow; it is intended to be used in debug environments – lab setups for instance - where the full Libero SoC tools suite may not be installed. The SmartDebug standalone tool can be installed using the new Program and Debug Tools installer, which also contains FlashPRO, FlashPRO Express, and Job Manager.

Microsemi's Secure Production Programming Solution (SPPS)

SPPS enables you to prevent overbuilding of your Microsemi FPGAs, using Thales e-Security FIPS140-2 level 3 certified hardware security modules (HSMs), custom firmware and the state-of-the-art security protocols built into every Microsemi SmartFusion2 SoC FPGA and IGLOO2 FPGA. See the SPPS User Guide for details.

Resolved Issues

Issues Resolved in v11.7

SAR69162: VERIFY_DIGEST always fails in master file/job when external digest check is restricted

This issue has been resolved in FlashPro v11.7; the VERIFY_DIGEST action now succeeds in the case where the external digested check is restricted.

Customer Reported SARs Resolved in Programming and Debug Tools v11.7

Customer Case Number	Description
	Unable to change PMA settings directly from GUI
	Add BER(bit-error rate) status to SERDES SmartDebug GUI
493642-1972801421	Confusing Error message (SF2 programming failure)
493642-1827819781	SVF export with customize TCK - FlashPro only
	SPPS: Allow user to overwrite security policy in Job Manager
	Introduce RTG4 and G4M MDDR/FDDR register read/write commands (TCL only)
	Implement G4M SERDES read/write TCL commands
	Probe point selection GUI and TCL should support wild card search.
	11.6 Alpha: Issue with upgrading core version of a DirectCore instantiated to multiple SD components
493642-1857320475	PDB file generated from Libero is not updating the PDB file from previous run if the PDB file is opened in Flashpro.
493642-1772077521	FlashPro Software Creates not standard STAPL function INT (hex number) when exporting
	SPPS: Enforce the overbuild protection by making a tcl parameter as required

Known Limitations, Issues and Workarounds

Installation

C++ installation error can be ignored. Required files will install successfully.

On some machines, the InstallShield Wizard displays a message stating:

The installation of Microsoft Visual C++ Redistributable Package (x86) appears to have failed. Do you want to continue the installation?

Click **Yes** and the installation will complete successfully.

Antivirus Software Interaction

Many antivirus and HIPS (Host-based Intrusion Prevention System) tools will flag executables and prevent them from running. To eliminate this problem, you must modify their security setting by adding exceptions for specific executables. This is configured in the antivirus tool. Contact the tool provider if you need assistance.

Many users are running Programming and Debug Tools successfully with no modification to their antivirus software. Microsemi is aware of issues for some antivirus tool settings when using Symantec, McAfee, Avira, Sophos, and Avast tools. The combination of operating system, antivirus tool version and security settings all contribute to the end result. Depending on your environment, the operation of Microsemi Software, ModelSim ME and/or Synplify Pro ME may or may not be affected.

All public releases of Libero and Programming and Debug Tools are tested with several antivirus tools before they are released to ensure that they are not infected. In addition, Microsemi's software development and testing environment is protected by antivirus tools and other security measures.

Documentation

Web-based Documentation
Starting with v11.7, most Users Guides for SmartFusion2, IGLOO2, and RTG4 will be published on the Microsemi web site. Programming/Debug tools will include links to the web site.

If the machine on which you have installed Programming and Debug Tools does not have access to the internet, you (or a site administrator) can download all 11.7 Users Guides from Microsemi's Libero SoC documentation site.

Linux: Firefox requirement for Online Help and Users Guides
v11.7 requires the "firefox" executable to be in your PATH variable on Linux. Alternatively, you can access the Reference Manuals on the Microsemi web site, or by clicking "Help -> Reference Manuals" in Libero.

System Requirements

Refer to System Requirements on the Microsemi website for more information regarding operating systems support and minimum system requirements. A 64-bit OS is required for designs targeting SmartFusion2, IGLOO2 and RTG4 devices.

Setup Instructions for Linux can be found on the Libero SoC Documents web page.

OS Support

Supported
Windows 7, Windows 8.1

RHEL 5* and RHEL 6, CentOS 5* and CentOS 6

* RHEL 5 and CentOS 5 do not support programming using FlashPro5.

Discontinued

32-bit operating systems are no longer supported. Windows XP is no longer supported.

Download Programming and Debug Tools v11.7

Installation requires Admin privileges.

Program Debug v11.7 Windows download

Program Debug v11.7 Linux download

Installation Note

After installation of Programming and Debug Tools on Linux, any attempt to run the udev_install script for FlashPro setup will fail.

When running the script, you will see the following:

```
% ./udev_install
/bin/sh^M: bad interpreter: No such file or directory
```

Problem:

The script uses Windows CR/LF line termination instead of UNIX/Linux LF only line termination and, as such, is not a valid shell script.

Workaround:

You must run dos2unix on the script to convert CR/LF line termination to LF only line termination:

```
% dos2unix udev_install
% ./udev_install
```

If dos2unix is not available, you may need to run the following command, and then run dos2unix:

```
% sudo yum install dos2unix
```

Product Support

Microsemi SoC Products Group backs its products with various support services, including Customer Service, Customer Technical Support Center, a website, electronic mail, and worldwide sales offices. This appendix contains information about contacting Microsemi SoC Products Group and using these support services.

Customer Service

Contact Customer Service for non-technical product support, such as product pricing, product upgrades, update information, order status, and authorization.

From North America, call **800.262.1060**
From the rest of the world, call **650.318.4460**
Fax, from anywhere in the world, **650.318.8044**

Customer Technical Support Center

Microsemi SoC Products Group staffs its Customer Technical Support Center with highly skilled engineers who can help answer your hardware, software, and design questions about Microsemi SoC Products. The Customer Technical Support Center spends a great deal of time creating application notes, answers to common design cycle questions, documentation of known issues, and various FAQs. So, before you contact us, please visit our online resources. It is very likely we have already answered your questions.

Technical Support

For Microsemi SoC Products Support, visit http://www.microsemi.com/products/fpga-soc/design-support/fpga-soc-support.

Website

You can browse a variety of technical and non-technical information on the Microsemi SoC Products Group home page, at www.microsemi.com/soc.

Contacting the Customer Technical Support Center

Highly skilled engineers staff the Technical Support Center. The Technical Support Center can be contacted by email or through the Microsemi SoC Products Group website.

Email

You can communicate your technical questions to our email address and receive answers back by email, fax, or phone. Also, if you have design problems, you can email your design files to receive assistance. We constantly monitor the email account throughout the day. When sending your request to us, please be sure to include your full name, company name, and your contact information for efficient processing of your request.

The technical support email address is soc_tech@microsemi.com.

My Cases

Microsemi SoC Products Group customers may submit and track technical cases online by going to My Cases.

Outside the U.S.

Customers needing assistance outside the US time zones can either contact technical support via email (soc_tech@microsemi.com) or contact a local sales office. Sales office listings can be found at www.microsemi.com/soc/company/contact/default.aspx.

ITAR Technical Support

For technical support on RH and RT FPGAs that are regulated by International Traffic in Arms Regulations (ITAR), contact us via soc_tech_itar@microsemi.com. Alternatively, within My Cases, select **Yes** in the ITAR drop-down list. For a complete list of ITAR-regulated Microsemi FPGAs, visit the ITAR web page.

About Microsemi

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; 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**.

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