SPI Controller IP

IP Version: v2.4.0

Release Notes

FPGA-RN-02015-1.1

July 2025

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Contents

1. Introduction

This document contains the Release Notes for the SPI Controller IP. For specific details about the IP, refer to the following:

- SPI Controller IP User Guide (FPGA-IPUG-02069)

SPI Controller IP v2.4.0

Software	Software Version	Summary of Changes
Lattice Radiant™	2025.1	• Added support for LFMXO5-35, LFMXO5-35T, LFMXO5-65, and LFMXO5-65T devices. • Added support for LFD2NX-15, LFD2NX-25, LFD2NX-35, and LFD2NX-65 devices.

SPI Controller IP v2.3.0

Software	Software Version	Summary of Changes
Lattice Radiant	2024.2	• Added support for Certus™-N2 device (LN2-CT-20). • Added support for Certus-NX devices (LFD2NX-9 and LFD2NX-28). • Fixed timing from ssn_o assertion to first sclk_o edge when *Clock Prescaler* is equal to 4 to ensure that receive data is correctly sampled.

SPI Controller IP Earlier Versions

IP Version	Summary of Changes
2.1.0	• Increased FIFO depth. • Added Avant™ G/X support.
2.0.0	Changed terminology to Controller.
1.4.2	Added driver version number, inline comments, and non-blocking transfer mode.
1.4.1	Updated to remove glitch in SS line when using SPI ENABLE register and Slave Select Pulse Mode = Non Pulse.
1.4.0	Added Avant support.
1.3.1	Added *SPI Enable Register* attribute (unchecked by default).
1.3.0	• Added IP driver and Propel™ 2.2 support. • Added SPI Enable Register. • Changed Clock Prescaler lower limit from 1 to 2.
1.2.0	Added LFMXO5 support.
1.1.0	Added LFCPNX support.
1.0.2	• Desired SCLK Frequency maximum value is now *System Clock Frequency*/2. • Reduced APB/AHB-Lite read latency from 2 to 1.
1.0.1	Added LFD2NX support.
1.0.0	Preliminary release.

References

- SPI Controller IP User Guide (FPGA-IPUG-02069)
- Avant-E web page
- Avant-G web page
- Avant-X web page
- Certus-N2 web page
- Certus-NX web page
- CertusPro-NX web page
- CrossLink-NX web page
- MachXO5-NX web page
- SPI Controller IP Core web page
- Lattice Radiant Software web page
- Lattice Propel Design Environment web page
- Lattice Solutions IP Cores web page
- Lattice Solutions Reference Designs web page
- Lattice Insights for Lattice Semiconductor training courses and learning plans

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For frequently asked questions, please refer to the Lattice Answer Database at www.latticesemi.com/Support/AnswerDatabase

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