



## SPI Target IP

IP Version: v2.4.0

## Release Notes

FPGA-RN-02014-1.1

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## 1. Introduction

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

- [SPI Target IP User Guide \(FPGA-IPUG-02070\)](#)

### SPI Target IP v2.4.0

Software	Software Version	Summary of Changes
Lattice Radian™	2025.1	<ul style="list-style-type: none"><li>• Added support for LFMXO5-35, LFMXO5-35T, LFMXO5-65, and LFMXO5-65T devices.</li><li>• Added support for LFD2NX-15, LFD2NX-25, LFD2NX-35, and LFD2NX-65 devices.</li></ul>

### SPI Target IP v2.3.0

Software	Software Version	Summary of Changes
Lattice Radian	2024.2	<ul style="list-style-type: none"><li>• Added support for Certus™-N2 device (LN2-CT-20).</li><li>• Added support for Certus-NX devices (LFD2NX-9 and LFD2NX-28).</li><li>• Added timing requirement from ss_i assertion to first edge of sclk_o in testbench and IP User Guide.</li></ul>

### SPI Target 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 Target.
1.5.1	Added driver version number and inline comments.
1.5.0	Added Avant support.
1.4.0	Added IP driver and Propel™ 2.2 support.
1.3.0	<ul style="list-style-type: none"><li>• Modified minimum value of Tx/Rx_FIFO_Almost_Full/Empty_Flag to 1.</li><li>• Added static value attributes for setting the miso_o to a static value when Tx_FIFO is empty.</li></ul>
1.2.0	Added LFMXO5 support.
1.1.0	Added LFCPNX support.
1.0.1	<ul style="list-style-type: none"><li>• Added LFD2NX support.</li><li>• Fixed RTL Bug related to Daisy Chain.</li><li>• Reduced AHB-Lite and APB Read Latency from 2 to 1 clock cycle.</li></ul>
1.0.0	Initial release.

## References

- [SPI Target IP User Guide \(FPGA-IPUG-02070\)](#)
- [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 Target 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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