I2C Controller IP

IP Version: v2.4.1

Release Notes

FPGA-RN-02027-1.3

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1. Introduction

This document contains the Release Notes for the I2C Controller IP. For specific details about the IP, refer to the following:

- I2C Controller IP User Guide (FPGA-IPUG-02071)

I2C Controller IP v2.4.1

Software	Software Version	Summary of Changes
Lattice Radiant Lattice Propel Builder	2026.1	Added an auto-generated *constraint.pdc* file to the *eval* folder for the user-specified clock frequency during IP generation. **Note:** There are no updates to the IP user guide for this release. Refer to the I2C Controller IP User Guide (FPGA-IPUG-02071, v2.1) for the applicable documentation.

Corrections to Previous Release Notes

- In IP v2.4.0, support was added for *MachXO4* devices instead of *MachXO4-NX*.
- The following IP versions were not included in the *I2C Controller IP Earlier Versions* section:
  - IP v2.1.1 – Updated the driver file.
  - IP v2.1.0 – Added the *I2C SDA Register Depth* attribute and updated the driver for register mapping and I2C Rx FIFO read.

I2C Controller IP v2.4.0

Software	Software Version	Summary of Changes
Lattice Radiant Lattice Propel Builder	2025.2	Added support for MachXO4-NX devices.

Corrections to Previous Release Notes

- All IP versions listed below are supported by the Lattice Propel Builder software.

I2C Controller IP v2.3.0

Software	Software Version	Summary of Changes
Lattice Radiant	2025.1	• Added support for MachXO5-NX devices (LFMXO5-35, LFMXO5-35T, LFMXO5-65, and LFMXO5-65T). • Added support for Certus-NX devices (LFD2NX-15, LFD2NX-25, LFD2NX-35, and LFD2NX-65).

I2C Controller IP v2.2.0

Software	Software Version	Summary of Changes
Lattice Radiant	2024.2	• Added support for the Lattice Certus-N2 devices. • Added the LFD2NX-9 and LFD2NX-28 devices to supported devices.

I2C Controller IP Earlier Versions

IP Version	Summary of Changes
2.0.1	Updated the driver file version.
2.0.0	Standardized terminologies to use *Controller* and *Target*.

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IP Version	Summary of Changes
1.5.0	Added support for Lattice Avant devices.
1.4.0	• Modified the minimum value for *Tx/Rx_FIFO_Almost_Full/Empty_Flag* to 1. • Added support for Certus-NX-RT and CertusPro-NX-RT devices.
1.3.0	Added support for MachXO5-NX devices.
1.2.0	Added support for CertusPro-NX devices.
1.1.1	Added IP driver for the Lattice Propel software.
1.1.0	Added support for the Lattice Propel software.
1.0.3	• Reduced read latency from 2 clock cycles to 1 clock cycle. • Added support for Certus-NX devices.
1.0.2	Updated compatibility for the Lattice Radiant 2.0 Service Pack 1.
1.0.1	Initial release.
1.0.0	Preliminary release.

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References

- I2C Controller IP User Guide (FPGA-IPUG-02071)
- 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
- MachXO4 web page
- MachXO5-NX web page
- I2C Controller IP Core web page
- Lattice Propel Design Environment web page
- Lattice Radiant Software web page
- Lattice Solutions IP Cores web page
- Lattice Solutions Reference Designs web page
- Lattice Insights web page for Lattice Semiconductor training courses and learning plans

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