10G Ethernet IP

IP Version: v3.4.0

Release Notes

FPGA-RN-02031-1.3

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Contents

1. Introduction

This document contains the Release Notes for the 10G Ethernet IP. For specific details about the IP, refer to the following:

- 10G Ethernet IP User Guide (FPGA-IPUG-02245)
- 2.5G, 10G, and 25G Ethernet Driver API Reference (FPGA-TN-02375)

10G Ethernet IP v3.4.0

Software	Software Version	Summary of Changes
Lattice Radiant™	2025.2	• Enabled Avant™ G/X30 device support. • Enabled SDC flow and updated timing constraints for easier integration by replacing set_clock_groups with set_false_paths.

10G Ethernet IP v3.3.1

Software	Software Version	Summary of Changes
Lattice Radiant	2025.1.1	• Enabled the FCFEC mode on the PHY for Avant devices. • Changed the Loopback mode naming on Avant devices, from *Fabric loopback* to *Far End Parallel Loopback* and *Near PMA loopback* to *Near End Parallel Loopback* to match MPPHY Foundation naming notation. • Updated the Avant PHY-based PMA setting and GUI to allow for RX/TXEQ tuning. • Removed MDIO interface. • Reverted IP name in the Radiant software from 10Gb Ethernet MAC + PHY to 10G Ethernet. • Removed MachXO5™-NX device support.

10G Ethernet IP v3.3.0

Software	Software Version	Summary of Changes
Lattice Radiant	2025.1	• Enabled MachXO5-NX (LFMXO5-55T, LFMXO5-100T) device support. • Enabled CertusPro-NX device support for MAC + PHY configuration. • Enabled lane-merging support for Avant devices.

10G Ethernet IP Earlier Versions

IP Version	Summary of Changes
3.2.0	• Enabled SyncE support. • Enhanced the statistic counter by adding a counter for cumulative number of bytes transmitted or received. • Enabled the Continuous mode for hardware example design. • Fixed the IPv6 packet reception to enable the ability to detect 0x8100 or 0x88A8. • Enhanced the Time Stamp Unit, which impacts MAC + PHY + 1588 configuration only. • Changed the IP name in the Radiant software from 10Gb Ethernet to 10G Ethernet MAC + PHY.
3.1.0	• Added Driver codes. • IP Name only updates to match the catalog.
3.0.0	Added PTP1588 support for CertusPro-NX devices. Enabled MAC-only mode.
2.1.2	Radiant software v2024.2 support (Avant ES version).
2.1.1	Added driver codes for Avant ES (engineering sample) version.
2.0.1	Radiant software v2024.1 support for Avant ES version.

IP Version	Summary of Changes
2.0.0	Initial release.

References

- 10G Ethernet IP User Guide (FPGA-IPUG-02245)
- 2.5G, 10G, and 25G Ethernet Driver API Reference (FPGA-TN-02375)
- Avant-G web page
- Avant-X web page
- CertusPro-NX web page
- 10Gb Ethernet MAC + PHY IP Core web page
- Lattice Solutions IP Cores web page
- Lattice Solutions Reference Designs web page
- Lattice Solutions Boards web page
- Lattice Solutions Demonstrations web page
- Lattice Propel Design Environment web page
- Lattice Radiant Software web page
- Lattice Insights for Lattice Semiconductor training courses and learning plans

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