



AOCC Release Notes

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Chapter 1: New Features/Enhancements

Here is a list of new features and/or enhancements:

- Based on LLVM 17.0.6 release (llvm.org, Nov 2023)
- Optimized support for AMD “Zen5” architecture
- Improved SLP and loop vectorization
- Improved LICM and loop optimizations
- Enhanced control/data flow optimizations
- Zen5 tuned AOCL-LibM 5.0 (AMD Math Library)
- -fPIC and -fPIE options made default since AOCC 4.1
- Default optimization level is -O2 since AOCC 4.1

 **Note:** As -fPIC and -fPIE options are default since AOCC 4.1, it will generate location independent code by default. With AOCC 4.1 or later, static libraries that are statically linked and not using -fPIC options so far must be rebuilt with AOCC with these default options. Else, it could display a linker error. Alternatively, use the options -fno-PIC/-fno-PIE with AOCC to disable generating location independent code.

Chapter 2: Bug Fixes

This release includes the following bug fixes:

- Fixed issues on Fortran 2008 standards
- Fixed performance issues impacting C, C++, and Fortran HPC applications

Appendix A: Additional Resources and Legal Notices

A.1 Revision History

Date	Revision	Description
October 2024	5.0	Created this doc for the 5.0 release.

Appendix B: Notices

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