# Intel® oneAPI Toolkits

https://www.intel.com/content/www/us/en/developer/tools/oneapi/toolkits.html#base-kit

Release 2022.1

Build, analyze, and optimize high-performance, cross-architecture applications on CPUs and XPUs with best-in-class compilers, performance libraries, frameworks, and analysis and debug tools.

# 选择合适你的工具

## For most developers

[**Intel® oneAPI Base Toolkit**](https://www.intel.com/content/www/us/en/developer/tools/oneapi/toolkits.html#base-kit)

**Use Case:**Develop performant, data-centric applications across Intel® CPUs, GPUs, and FPGAs with this foundational toolset.

## For HPC developers

[**Intel® oneAPI HPC Toolkit**](https://www.intel.com/content/www/us/en/developer/tools/oneapi/toolkits.html#hpc-kit)

**Use Case:**Build, analyze, and scale applications across shared- and distributed-memory computing systems.

## For data scientists and AI developers

[**Intel® oneAPI AI Analytics Toolkit**](https://www.intel.com/content/www/us/en/developer/tools/oneapi/toolkits.html#analytics-kit)

**Use Case:**Accelerate end-to-end data science and machine learning pipelines using Python\* tools and frameworks.

## For deep learning inference developers

[**Intel® Distribution of OpenVINO toolkit (Powered by oneAPI)**](https://www.intel.com/content/www/us/en/developer/tools/oneapi/toolkits.html#openvino-kit)

**Use Case:** Deploy high-performance inference applications from edge to cloud.

## For visual creators, scientists, and engineers

[**Intel® oneAPI Rendering Toolkit**](https://www.intel.com/content/www/us/en/developer/tools/oneapi/toolkits.html#rendering-kit)

**Use Case:** Create high-fidelity, photorealistic experiences that push the boundaries of visualization.

For edge device and IoT developers

[**Intel® oneAPI IoT Toolkit**](https://www.intel.com/content/www/us/en/developer/tools/oneapi/toolkits.html#iot-kit)

**Use Case:** Fast-track development of applications and solutions that run at the network's edge.

For system engineers

[**Intel® System Bring-up Toolkit**](https://www.intel.com/content/www/us/en/developer/tools/oneapi/toolkits.html#bring-up-kit)

**Use Case:** Strengthen system reliability with hardware and software insight, and optimize power and performance.

# What's Inside Each Toolkit

**Intel® oneAPI Base Toolkit**

**General Compute**

* Intel® oneAPI Collective Communications Library
* Intel® oneAPI Data Analytics Library
* Intel® oneAPI Deep Neural Networks Library
* Intel® oneAPI DPC++/C++ Compiler
* Intel® oneAPI DPC++ Library
* Intel® oneAPI Math Kernel Library
* Intel® oneAPI Threading Building Blocks
* Intel® oneAPI Video Processing Library
* Intel® Advisor
* Intel® Distribution for GDB\*
* Intel® Distribution for Python\*
* Intel® DPC++ Compatibility Tool
* Intel® FPGA Add-on for oneAPI Base Toolkit
* Intel® Integrated Performance Primitives
* Intel® VTune™ Profiler

[Learn More](https://www.intel.com/content/www/us/en/developer/tools/oneapi/base-toolkit.html)

**Intel® oneAPI HPC Toolkit**

**High-Performance Computing**

This toolkit complements the Intel® oneAPI Base Toolkit and includes:

* Intel® oneAPI DPC++/C++ Compiler
* Intel® C++ Compiler Classic
* Intel® Cluster Checker
* Intel® Fortran Compiler
* Intel® Fortran Compiler Classic
* Intel® Inspector
* Intel® MPI Library
* Intel® Trace Analyzer and Collector

[Learn More](https://www.intel.com/content/www/us/en/developer/tools/oneapi/hpc-toolkit.html)

**Intel® oneAPI AI Analytics Toolkit**

**End-to-End AI and Machine Learning Acceleration**

* Intel® Distribution for Python\* including highly-optimized scikit-learn and XGBoost libraries
* Intel® Optimization for PyTorch\*
* Intel® Optimization for TensorFlow\*
* Intel® Optimization of Modin\* (available through Anaconda only)
* Intel® Neural Compressor
* Model Zoo for Intel® Architecture

[Learn More](https://www.intel.com/content/www/us/en/developer/tools/oneapi/ai-analytics-toolkit.html)

**Intel® oneAPI IoT Toolkit**

**Internet of Things**

This toolkit complements the Intel® oneAPI Base Toolkit and includes:

* Intel® oneAPI DPC++/C++ Compiler
* Intel® C++ Compiler Classic
* Intel® Inspector
* OpenEmbedded meta-intel Layer for Yocto Project\*

[Learn More](https://www.intel.com/content/www/us/en/developer/tools/oneapi/iot-toolkit.html)、

**Intel® oneAPI Rendering Toolkit**

**Rendering and Ray Tracing**

* Intel® Embree
* Intel® Open Volume Kernel Library
* Intel® Open Image Denoise
* Intel® OpenSWR
* Intel® OSPRay
* Intel® OSPRay Studio
* Intel® OSPRay for Hydra\*

[Learn More](https://www.intel.com/content/www/us/en/developer/tools/oneapi/rendering-toolkit.html)

**Intel® Distribution of OpenVINO™ Toolkit**

(Powered by oneAPI)

**Deep Learning Inference Deployment**

* Model Optimizer
* Deep Learning Workbench
* Inference Engine
* Deployment Manager
* OpenCV\*
* DL Streamer
* Post Training Optimization Tool

[Learn More](https://www.intel.com/content/www/us/en/developer/tools/openvino-toolkit/overview.html)

**Intel® System Bring-up Toolkit**

**System Power and Performance**

* Intel® SoC Watch
* Intel® System Debugger
* Intel® VTune™ Profiler

[Learn More](https://www.intel.com/content/www/us/en/developer/tools/oneapi/system-bring-up-toolkit.html)