



Intel® Math Kernel Library Link Line Advisor

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[Translate](#)

Introduction

The Intel® Math Kernel Library (Intel® MKL) is designed to run on multiple processors and operating systems. It is also compatible with several compilers and third party libraries, and provides different interfaces to the functionality. To support these different environments, tools, and interfaces Intel MKL provides multiple libraries from which to choose.

To see what libraries are recommended for a particular use case, specify the parameters in the drop down lists below.

Intel® Math Kernel Library (Intel® MKL) Link Line Advisor v4.7

Reset

Select Intel® product:	Intel(R) MKL 2018.0 ▼
Select OS:	Linux* ▼
Select usage model of Intel® Xeon Phi™ Coprocessor:	None ▼
Select compiler:	Intel(R) C/C++ ▼
Select architecture:	Intel(R) 64 ▼
Select dynamic or static linking:	Static ▼
Select interface layer:	64-bit integer ▼
Select threading layer:	OpenMP threading ▼
Select OpenMP library:	Intel(R) (libiomp5) ▼
Select cluster library:	<input type="checkbox"/> Cluster PARDISO (BLACS required) <input type="checkbox"/> CDFT (BLACS required) <input checked="" type="checkbox"/> ScaLAPACK (BLACS required) <input checked="" type="checkbox"/> BLACS
Select MPI library:	Intel(R) MPI ▼
Select the Fortran 95 interfaces:	<input type="checkbox"/> BLAS95 <input type="checkbox"/> LAPACK95
Link with Intel® MKL libraries explicitly:	<input type="checkbox"/>

Use this link line:

```

${MKLR00T}/lib/intel64/libmkl_scalapack_ilp64.a -Wl,--start-group
${MKLR00T}/lib/intel64/libmkl_intel_ilp64.a
${MKLR00T}/lib/intel64/libmkl_intel_thread.a
${MKLR00T}/lib/intel64/libmkl_core.a
${MKLR00T}/lib/intel64/libmkl_blacs_intelmpi_ilp64.a -Wl,--end-group -
liomp5 -lpthread -lm -ldl

```

Compiler options:

```
-DMKL_ILP64 -I${MKLR00T}/include
```

Notes:

- o Set the INCLUDE, MKLROOT, LD_LIBRARY_PATH, LIBRARY_PATH, CPATH and NLSPATH environment variables in the command shell using one of mklvars script files in the 'bin' subdirectory of the Intel(R) MKL installation directory. Please see also the Intel(R) MKL User Guide.
- o Please be sure that you have used the recommended compiler options for the selected interface layer. Caution: linking Intel(R) MKL libraries with your objects compiled for different interface layer may lead to run-time errors.
- o If you are using a non-default MPI, assign the same appropriate value to MKL_BLACS_MPI on all nodes. Set MKL_BLACS_MPI variable to one of the following values: INTEL MPI, MPICH2 or MSMPI.

For more complete information about compiler optimizations, see our [Optimization Notice \(/en-us/articles/optimization-notice#opt-en\)](/en-us/articles/optimization-notice#opt-en).
[Notify me about changes to this article. \(/en-us/notifications/subscription/add/382566/0\)](/en-us/notifications/subscription/add/382566/0).

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